

News from the Profession

ESA Research Network: Sociology of Science and Technology

At the 4th Conference of the European Sociological Association (ESA) in August 1999 the Sociology of Science and Technology Research Network (SSTNET) held its inaugural meeting. SSTNET received official approval by ESA's Executive Committee in October 1999. The area of Science and Technology Studies is characterized by a multidisciplinary and transdisciplinary research and discourse culture. SSTNET will offer a European platform for the sociologists to meet, exchange ideas and strengthen their specific profile for both the interdisciplinary collaboration and the internal visibility in the European sociology. The network aims at providing a European forum for the development, discussion and dissemination of research on all social aspects of science and technology ensuring an organizational frame for the organization of workshops at the bi-annual ESA

general conferences organizing focused research meetings and conferences between the ESA conferences setting up links to other academic and professional associations in the field of science and technology studies (national, European and international), facilitating research collaboration, joint research projects and publication among European scholars providing a platform for the dissemination of research reports, conference papers and conventional publications via the world wide web and electronic mail, creating and maintaining a www data base of the members of the network and the network's activities (<http://www.mpi-fg-koeln.mpg.de/sstnet>)

promoting the exchange of young scholars of science and technology between European countries.

Contact Raymund Werle, Max-Planck-Institut für Gesellschaftsforschung, Köln, Chairman of the SSTNET coordination committee.

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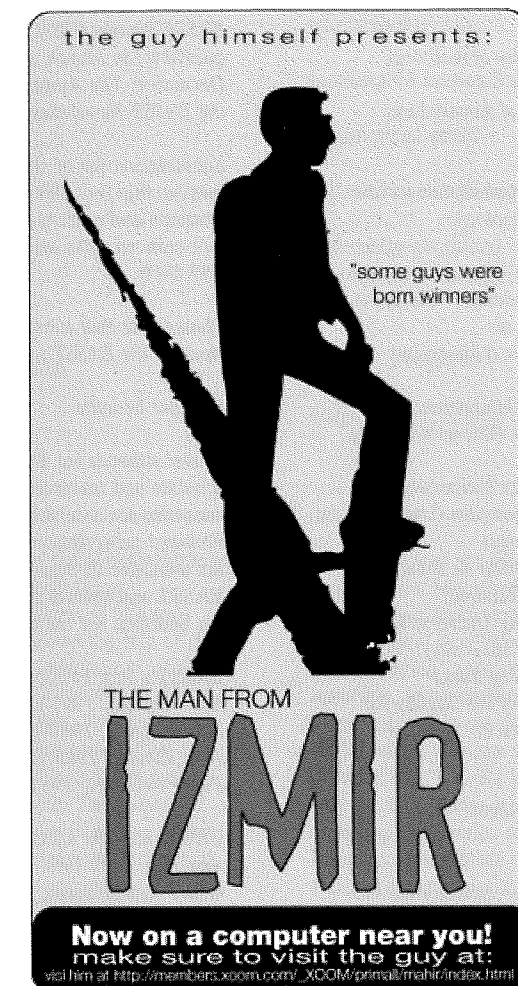
Front Page Illustration: An image inspired by the Mahir Cagri Internet sensation. Mr. Cagri of Izmir, Turkey shot to instant fame world-wide when his personal homepage attracted millions of hits in November 1999.

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The Dialectics of Sustainable Technology

by Andrew Jamison,
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Two distinct strategies seem to be crystallizing in relation to sustainable development, with characteristic patterns of public engagement, technical experimentation, and network building (see figure).

The Dialectics of Sustainable Technology

"Democratic"	"Authoritarian"
locally-based	transnational
not-for-profit invention	marketable innovation
collective ethos	commercial ethos
small-scale, artisanal	systemic, science-based
appropriate to context social learning "from below"	externally produced hierarchical management "from above"
horizontal network links	vertical integration
local empowerment	corporate expansion

On the one hand, in many of the various projects of so-called ecological modernization, participation is primarily conceived in a top-down way, with the public given the role of the environmentally-conscious consumer or offered opportunities for ecological employment. On the other hand, and opposed to this, are the bottom-up approaches emanating from locally-based initiatives, where forms of participation remain open-ended and highly diverse. The pursuit of environmental sustainability provides a catalyst in many of these cases for experimentation with new forms of sociality and community.

In the 1960s, as part of his two volume work

on *The Myth of the Machine*, the American writer Lewis Mumford made a distinction between two fundamental types, or modes, of technological development, which he called "authoritarian" and "democratic", and which resemble, in many ways, the two strategies that have emerged in the quest for sustainable development. Despite their being somewhat provocative, Mumford's terms can be a useful way to characterize what might be termed the emerging "dialectics of sustainable technics". Mumford's argument was that the two types of technics had coexisted throughout history, and that they each had their advantages and

disadvantages, but he felt that by the 1960s, the megamachine had become far too dominant. With the powerful "military-industrial complex" and the other large corporations dominating technological development, the opportunities for democratic technics were seriously threatened. And like many other writers and critics of the time, Lewis Mumford called for a reaffirmation, or reinvention, of democratic alternatives to the megamachine.

This idea of a democratic technics - which Mumford and other cultural critics, like Herbert Marcuse, Rachel Carson, Paolo Friere, Ivan Illich, Paul Goodman, and many others articulated in the 1960s - was one of the sources of inspiration for a wide range of activities that came to take place in the 1970s, within the environmental and other social movements that developed at the time. In many ways, the alternative technology movement of the 1970s - like so many social movements before and since - was a victim of its own success. Many innovations - in renewable energy, environmental technology, organic agriculture, and ecological design - that were made in movement workshops and production collectives, in alternative "grass roots" organizations, showed themselves to be profitable. And the temptation became too strong for the entrepreneurial types in the movement to commercialize their work, to set up companies, to go into business.

Others set out on a long march through the institutions, seeking ways to translate their ideas about democratic technological development into the more instrumental, or authoritarian, language of policy making and management. In Denmark and the Netherlands, the term that was used most often was technology assessment. The way to change technology development into more socially desirable directions, many seemed to feel, was to examine the consequences in advance. If you could predict what the negative effects would be of a new product or process, then you could perhaps make it less harmful, both to the environment and to the eventual users.

Still others were won over by the charms and attractions of the new technologies that were coming out of the laboratories of the big corporations - the personal computers and the fascinating new ways to manipulate genetic material. Many were the former critics who became enamored with the new "high"

technologies, arguing that they did not carry with them the same negative values and negative implications that nuclear technology and chemical technologies had. And so gradually, the alternative, or democratic, technology movement faded away, and a new "entrepreneurialism" emerged to take its place.

To return to Mumford's language, there came in the 1980s a new period of dominance for the megamachine, for authoritarian technics. As a result, the balance was once again lost, and the commercial ethos, or spirit, spread to other societal domains. But, with the call for a more sustainable development that began to be heard in the late 1980s, there are signs of new types of democratic technics emerging here and there. They are fragile to be sure, and it is not at all the same kind of movement that it was in the 1970s. Rather, as we have come to understand them in our project, the experiments in democratic technics that are taking place across Europe are quite limited and do not make up a coherent, or integrated movement, as the experiments in the 1970s seemed to many of us - both then and now in retrospect.

The contemporary experiments are much more fragmented, and many of them appear, on closer examination, to be more rhetorical than real. They are more talk about what could be done - or should be done - than practices that are actually taking place on a wide scale. Many of them go under the name of technology assessment, but often with a new prefix attached: constructive technology assessment or interactive technology assessment or participatory technology assessment. Particularly in the Netherlands, but also in Denmark, a number of policy makers and academic students of technology and society have carried out projects that have tried to involve various public groups in technological development. There is the sustainable technology program in the Netherlands, and the Infralab that has involved those who are affected by infrastructural projects in scenario workshops and various planning activities. There are lay panels that have been established to formulate their ideas about technological development projects, through the auspices of Offices for Technology Assessment, and there are the consensus conferences that have begun to spread as an export product from Denmark to other countries. Recently, both Korea and Australia have held their first consensus conferences.

What all of these activities have in common is a democratic ambition, but so far anyway, there is still an enormous distance between the technology assessment activity and the dominant, authoritarian centers of technological research, development and innovation. The technology assessment activities have become institutionalized and, to a certain extent, professionalized, but they have not yet entered into the real world of technological decision-making.

A very different kind of public participation has been taking place around Europe in the name of local Agenda 21. In many places, particularly when local environmental activists have been able to exercise some kind of control over the process, a number of things have started to happen that, at least to me, look more like a movement of democratic technology development. New kinds of links, or horizontal networks, are being established, through local Agenda 21, between people from different places - small businesses, environmental groups, local government, schools. It points to the fact that a movement for democratic technology development is not just about concrete technological development projects; even moreso it is about organization and finding new forms of working and interacting. Local Agenda 21 is one of the more visible sites of democratic experimentation. The danger is that it's done too much for show, too much because it is supposed to be done. This is called participation by mandate. Unlike the 1970s, there are not enough alternative public spaces to house and cultivate the seeds of experimentation that are being sewn in the name of local Agenda 21.

A central factor is the decline, or rather the changing role, of the environmental movement, and other public interest organizations. As with so many academics, who were part of the movements in the 1970s and then became professional experts, often in the name of technology assessment, the organizations have also changed, without too many new ones to take their place. Many environmental organizations have come to play a consulting role, and act to a large extent as business firms, in relation to Agenda 21, but also in relation to such things as environmental consumption. Other former environmental activists have become promoters of renewable energy, cleaner technology or ecological food, which is certainly a positive development, but is not necessarily a part of

democratic technology development.

A final personal conclusion, then, is that there are many activities that are taking place across Europe that can be interpreted as seeds of a more democratic technology development. But they are rather weak and uncoordinated in relation to the dominant forces of "authoritarian" technics. What PESTO has indicated is that there is a good deal that we, as academic students of technology and society, can do, both to analyze the conditions and criteria for a more democratic technological development, but also to shape new kinds of linkages between experts and lay people.¹

What was so central to the movements of the 1970s, I believe, was the fact that many academics stepped out of the universities and worked with labor groups and environmental groups and other kinds of activist organizations. Of course, it was a different social and political climate then, but it still should be possible to do more than is being done today. I think that we, who are at the universities, should think seriously about the roles that we play in relation to authoritarian technics, on the one hand, and democratic technics on the other. The fragile experiments in democratic technology development need some help if they are to survive and continue to grow. And, as we discuss science and technology policy options, we need to bring about a better balance between the democratic and authoritarian modes of technological development.

Note

1. Reference is made to the EU project, Public Engagement and Science and Technology Policy Options (PESTO), the main results of which have appeared as *Sustainable Development and Public Participation: Comparing European Experiences* (PESTO papers 1, 1997), edited by Andrew Jamison and Per Østby, and *Technology Policy Meets the Public* (PESTO papers 2, 1998), edited by Andrew Jamison, both published by Aalborg University Press. To order, contact Aalborg University Press, Bådehusvej 16, Dk-9000 Aalborg, Denmark (fax: +45-98134915). The final PESTO report is available for 100 Danish kroner from the Department of Development and Planning, Aalborg University (attn: Bente Jørgensen, email bentej@i4.auc.dk). It is also downloadable at <http://www.au.dk/cesam/publications>.

Preferring the Wild West

by Lynsey Dubbeld,
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Review of *Preferred placement: The hit economy, hyperlink diplomacy and web epistemology*, the Jan van Eyck Academy Design & Media symposium held at de Waag, Society for Old and New Media, Amsterdam, 16 October 1999.¹

Far and wide the claim can be heard that the WWW has become the Wild, Wild West. The analogy between the Internet and a rugged place full of entrepreneurial frontiersmen refers to the unprecedented possibilities for discovery, adventure and excitement on offer. It seems to me, however, that the use of the term Wild West is more appropriately understood as a reference to the screaming voices of the astounding number and variety of people who are touting their opinions and knowledge about the importance of the Internet. To apply the Wild West metaphor, it is not only the country sheriff who is occupied by the small town murder. The whole country, with its entire police force, governmental institutions, intellectual and scientific communities, and opiated citizenry, is involved. To put it bluntly, everyone is talking about the Net like crazy.

The recently held Symposium at De Waag in Amsterdam confirms this once more. The enticing title was "Preferred Placement: The hit economy, hyperlink diplomacy and web epistemology." The speakers included computer scientists, programmers, computer technicians, communication scientists, journalists, sociologists and the odd philosopher. Sitting through a day filled with the diverging presentations that the symposium offered truly was an exciting, freak-like show, in a nice sort of way. The Jan van Eyck Academy, the event organisers, lived up to the expectations by offering a variety of speakers, combining critical, theoretical viewpoints and visual,

¹ A second review of the exhibition, by Harro Maat, appears on p. 8.

practical approaches to a subject matter that is undeniably bothering us all. Preferred placement, as the title of the symposium indicates, is an important issue that affects the ways we navigate the Net, which information we find, who controls that information and how valuable and trustworthy that information is. In a sense, therefore, the practice of preferred placement influences the reliability of Net information retrieval and our Web presence.

Preferred placement refers to a shortly lived practice of a search engine (AltaVista) selling key words to companies that wanted their URLs returned when certain terms were queried. After much criticism, Alta Vista cancelled the service. Goto.com's search engine still uses, openly this time, the 'bid-for-placement' technique. The preferred placement incident raises some questions about the workings of the Web. First, the reliability and objectivity of search engines becomes uncertain. How trustworthy are the sites, presented to us in search engine results, if they derive not from algorithm but from commerce? Secondly, the apparent desire for preferred placement in the industry raises questions about the significance of Web presence more generally, and how it could be determined according to different logics. Nowadays, organisations achieve 'presence' by virtue of their appearance in search engine results, but also on portals, and other web sites, through links made to them. How is this presence to be analysed and defined?

These issues refer to a more general concern that is raised by preferred placement, namely the quality and reliability of Web information with 'presence'. The 'hit economy,' as the symposium calls it, has put into place notions of relevance synonymous with popularity; organisations assert that hit counts shows the popularity and thus relevance of their sites. Another way to consider relevance is through an understanding of 'hyperlink diplomacy,' organisations referring to each other, and thus establishing networks. Appearance in one of these networks, organised

around knowledge themes, would amount to another kind of presence, perhaps a more relevant and reliable indicator of meaningful presence. The notion of 'Web epistemology', one of the main concerns of the symposium, opens the discussion surrounding new practices and understandings of web presence; it looks into ways in which knowledge is being gained on and from the Net by "reading between the links".

The issue of web epistemology was taken up by a number of speakers during the day, in very different ways. The early morning appeared to be reserved for the charismatic and polemic speeches of two London intellectuals. Nick Durrant of MetaDesign (London) was supposed to present us with a reasonable defense of the hit economy, but he spent most of the time discussing the downsides of the Internet - the messy space it inevitably is, the meaningless metaphors that are attached to it, and the sorry state of most sites. His defence of the hit economy came down to an apology (and an implicit invitation). It has only existed for ten years and it has been designed by 25 year-olds in the Silicon Valley. Durrant's ideas of the Web as a media space or market place were then taken up by Korinna Patelis (Goldsmiths College) who argued against the use of market place and naturalistic metaphors for the Internet. The Internet is increasingly being promoted as a place of direct exchange, with the middleman cut out. The idea is flawed because it underestimates the importance of mediation and the structured experience. On-line navigating is inevitably structured by software, search engines, Internet service providers, etc. - contrary to what the market place model of direct exchange implies.

The second part of the morning was dedicated to more practical stories on mapping and path tracing, presenting us with programmes that help us navigate and understand the Web. Martin Dodge (University College London) showed different sorts of maps and their use for the individual navigator. Individual site maps offer an overview of a single site, and web maps indicate the various elements of a search result. The most interesting maps, however, seem to be the 'dynamic surf maps' that follow you around the Web and offer a graphical representation of the places you have been. This makes navigating through the Web, especially when using many hyperlinks, more understandable and less disorienting for the individual user. It makes

the surfer's path an object of study. Matthew Chalmers (University of Glasgow) mentioned the problems connected with this kind of mapping. First of all, it is difficult to find a logical and illuminating structure in the content of information - an issue that seems to be most pressing with individual site maps. The second difficulty is finding forms of representation that are in accordance with our perception; maps should be nice to look at, and appear to give a logical representation of the information structure. A third problem is posed by the complexity of the Web itself. It is difficult to make sense of its structure and the paths made by hyperlinks and taken by surfers. Another downside of mapping seems to be the increased possibilities for tracking - an issue that Matthew Chalmers addressed after discussing his Recer (or 'recommender') navigation tool. Recer traces the path of the surfer while taking into account subjectivity and context. Paths, like maps, can be a useful tool for the surfer visiting extensive numbers of sites. But they can also be useful for marketers tracking and monitoring the consumer. This possible threat opened the way to a more theoretical discussion of the issues of privacy and freedom on the Net. Internet bookstore Amazon already makes use of paths when recommending books to an individual buyer. Limitations of privacy and freedom of choice are, according to Chalmers, therefore often the downsides of good marketing and quality service. In the privacy debate, there should thus be an evaluation of the pros and cons of privacy protection to determine what we deem more important: protection of privacy or utility. The same choice has to be made between marketing and service.

The Jan van Eyck Academy presented some of its views in the early afternoon, introducing Richard Rogers, Noortje Marres, Stephanie Hankey, Ian Morris and Alex Bruce Wilkie as theorists and designers. The theoretical perspectives focused on the several issues posed by the symposium programme: strategy, authority and power relations influencing Web reliability and objectivity. The practice of rogue sites amusingly illustrates these issues. Rogue sites try to look as real as possible, imitating the style of the person or institution they attack. 'Fudging' (making small and easily overlooked changes in URLs) enables rogues to lure innocent surfers into their sites, and thus to introduce them to their ideas. Search engines are

often unable to discern between 'real' sites and the rogue ones, which results in uncertain and unreliable information and epistemology. As a counter-attack American businesses now buy up URLs and metatags as brand names to prevent rogues from using them. However, the 'look and feel' of sites are difficult to protect – and often easy to copy for rogues. The 'pluralising engine' that the Academy has designed offers a visual link language that shows how authority and reliability on the Web can be authored. The engine shows a graphical model of voices with different authoritative stance in various discourses – thus illuminating the power structures and actors within a social debate, like the issues connected with genetically manipulated food. Issues surrounding public discourse were taken up by the next speaker, Michael Murtaugh. He presented a 'public debate engine' used as an input device for policy-making, and other projects that help public dialogue that he has designed at newMetropolis Science & Technology Center (Amsterdam) and with his company, *Jam!* New Media for Public Dialog.

As the day drew to a close, there was more room for theoretical debate: Journalist Gerald

Wagner (Berlin) commented on the social theory that has been formed around the Internet over the past decades. The link epistemology that had been an important subject of the day's discussion is according to Wagner the most important breakthrough in communication theories of Internet. But this still raises the question what the social importance and advantages of Internet research amount to. Steve Woolgar (Brunel University) addressed this question from another perspective, focusing on the challenges that the Information and Communication Technologies (ICTs) pose to social theory. The new ICTs may force us to rethink some of the traditional and accepted topics of social theory. The Virtual Society? Programme that Woolgar is working on in the UK shows some of the new themes put forward by ICT.

Woolgar's talk was an appropriate way to finish off a day that had seen discussions of a variety of contemporary themes, both theoretical and practical. And to be fair, it was a good deal of sensible talk – nothing like the drunken boasting or the silly cowboy songs of the Wild West.

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Real issues in virtual space

By Harro Maat

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Review of Preferred placement: The hit economy, hyperlink diplomacy and web epistemology (see p. 6).

Why I went

At the bottom of the screen something changed. A quick glance told me 'new mail arrived'. Curiosity killed the cat, not the mouse. Symposium Announcement by the Design & Media Research Fellowship, Jan van Eyck Academy, the Netherlands. Preferred Placement: The Hit Economy, Hyperlink Diplomacy and Web Epistemology, excuse cross-postings. What is this? One of my lazy tricks to find out is to forward such messages to other group members and bring it up during lunch. Responses differed

from "web epistemology? Don't they have anything better to do?" to "authoritative voice, trust, crackpots. Fascinating! One of us should go!"

Why? What caught our interest most was the cause of the event – 'one of the everlasting challenges of the Web' as it was put. That challenge was how to deal with the 'democratic nature of the Net', authenticating the 'real source' and 'distinguishing between the eminent and the crackpot'. If that isn't thought provoking! What made me rush to Amsterdam, however, was not a strong concern for Web dictators and Cyber Soviets, but the analogy with a discussion in a rather different area, the new genetics and plant biotechnology. Like the Web

much of the new genetics is about information, transmitted through DNA. What is considered a challenge in plant genetics, however, is completely the opposite. Most plant-genetic information of food crops is stored in gene-banks that do not stand out for their democratic nature. The biotech industry is widely criticised for claiming authenticity over genetic information through patenting and a major aim of the critics is to allow 'crackpots' – mostly resource-poor farmers – access to the information, something now reluctantly admitted as being important by some of the big institutes. Is there an opposite democratic tendency in the control of cyber information and genetic information? And something that is crucial in such matter, what is the role of technologies in all this? So up I went over to the 16th century building to find out about the Hit Economy and Web Epistemology.

Waking up in a different world?

All presenters knew how to handle computer software to beef up their talks – lots of fancy frames and sexy slides, with one exception. The coffee breaks and lunch partitioned the presentations in pairs and that appeared to fit very well with what was presented.

The first couple, Nick Durrant and Korinna Patelis, were announced as defender and prosecutor of the Hit Economy. In the Hit Economy the scarce item is 'presence' and companies kill to get on top of hit lists. A real problem! Well, in fact Durrant's presentation was not about the hit economy but about web architecture. Architects have a reputation for disliking too much interference from housing committees and the like as well as abhorring the do-it-yourself enthusiasts. Durrant developed a similar position for the Web and his final plea was 'more design'. Like a real architect he preferred to mystify rather than to clarify what that would mean. Patelis's talk was a bit closer to the hit economy. She presented a political economy of the Web in which the major aim however was not to reveal the economic mechanisms, but the (dirty) political tricks that were played on Internet. Patelis provided some nice examples of Web politics, but she did not really put to the test whether the Web can be subjected to a straightforward politico-economic analysis. At least she left me somewhat puzzled about that. Exit the Hit Economy.

The second couple, Martin Dodge and Matthew Chalmers, discussed the issue of how to find

one's bearings in virtual space.¹ Dodge gave a very solid overview of the new cyber branch of cartography called Information Visualisation. What became particularly clear was that the options of visualising information seemed to be endless. That was precisely the problem Chalmers focused on in his presentation. In his view static structures to organise information are useless. The lingual and interactive character of the Web requires structures that follow the users. One of his examples was an attempt to map weather information on Swiss web pages. The analysis of links and visitors delivered a picture that had very little to do with Swiss meteorology, but was all about skiing. Besides these analytical observations it was also his provocative remarks – such as 'often I decide to simply switch off the machine' – that made me realise you cannot get a clear picture of the virtual world simply by staring at a computer screen. But what do we need?

Back with both feet on the ground

After lunch there was first a group of researchers from the Jan van Eyck Academy that presented the results of a Web analysis.² The way they made the connection with the real world can be labeled 'issue driven'. The chosen topic was the current debate over Genetically Modified Food. They had analysed references and cross-linkages of a selected number of websites of major players in the GM Food controversy and visualised the outcome in a nice piece of design. The analysis was meant to show 'how authority and reliability on the web may be authored'. But what about the real issue? Did the analysis also show how authority and reliability was authored off-line? That was not a key question in the analysis, but can the question be avoided? Well, that's the next symposium. First some words on the second presentation after lunch in which a link with the real world was made by 'simulation'. Michael Murtaugh showed some fine examples of how computers can play a role in public debate, 'as an input device for public policy-making'. His presentation contained several examples of software containing visualisations of issues, views of experts and politicians and the possibility for users to form an opinion and influence those of others. The software Murtaugh presented introduced the real world in cyberspace creating possibilities to enhance participation in decision making in the real world. Real interaction!

In the last two presentations of the day Gerald Wagner and Steve Woolgar gave their view on what the Web and the virtual world brought us in the past decades. Wagner was the only one who did not use any software support for his presentation and that is perhaps the best illustration for his main argument. The Internet affects modern society far less than all the web giants and media freaks want us to believe. At its best it might affect theories about communication, but for the moment there is even very little evidence for that. His main plea was to focus more on communication tools as an object for study. That was exactly what Woolgar and his impressive group of researchers did in the past couple of years. Woolgar presented some preliminary findings of the Virtual Society? Programme, delivering a sceptical but sharp picture of what's going on. The scepticism was best illustrated by several quotes that predicted radical changes after the introduction of ... the Internet? No, the telegraph (1840s), radio (1924), television (1952) and community video (1972). As a Dutch saying goes 'the soup is never eaten as hot as it is served'. Some interesting findings by Woolgar's group are that visual anonymity of the Web enhances identification with groups and reinforces existing social boundaries. It appeared that access to the Web is a social rather than a technical issue. And a huge amount of cyberspace is occupied by 'global wired welfare,' people finding relief by sharing their misery. Woolgar did not reveal what overall picture of society that would result in; 'keep monitoring' was his main message.

Satisfied?

I missed most of the general discussion at the end, but virtually it could have gone like this. Dividing the presentations in pairs is one way to do it, but we also might draw the line between Patelis, Chalmers, Wagner and Woolgar on the one hand and the rest of the presenters at the other. A clear difference between the two is that the latter are all actively involved in constructing information technology or making software. The others merely observe and register such processes. Would they have any recommendations or suggestions for software programmers and web architects? To come back to some questions raised before, can we analyse Internet by looking at websites and software or do we need to incorporate programmers, users and the social entities they belong to? How to

assess the role of cyberspace in issues like the GM food debate? Is a political economy as put forward by Patelis enough, will the 'analytic scepticism' and 'constant vigilance' of Woolgar do, or do we need to mix it up with some good-old German sociology and Scottish philosophy? This is crucial in my view not just to answer questions like whether we need more control on authenticity or to allow more crackpots to join in. What is important though is whether there are patterns in the distribution of the social and technical. Is it useful to talk about increasing participation of the lay audience in for example the GM food debate through Internet, or will 'audience' always be a particular audience - probably not differing very much from the ones already involved? In my view this is what Woolgar very nicely put forward as 'how to promote technographic sensibility'. Let's hope there will soon be a next symposium where he and others can provide some answers.

Notes

1. His presentation is on the Web - have a look at <http://www.casa.ucl.ac.uk/martin/amster.pdf>.
2. Richard Rogers, Ian Morris, Alex Wilkie, Noortje Marres and Stephanie Hankey. See <http://www.govcom.org>.

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Improving public understanding of technoscience? Assessing the assumptions, practices and effects of policies and projects

Call for participants and contributions for a Workshop in Lisbon

Public understanding of science is considered a key factor in modern political, economic and cultural life. Representatives of government, industry and social movements agree with this assessment. Pleas for investments in promoting public understanding of science therefore meet with widespread approval.

Upon closer inspection, however, people vary widely in what they see as adequate understanding of technoscience and the best ways to enhance it. Among students of science some equate studies of public understanding with surveying what knowledge people in various social strata and regions have of scientific theories, facts and methods. Often this is combined with an interest in basic ideas about science and its place in society. Others, critical of the previous view, contest that public understanding of science is best studied by looking at how various publics trust, and relate to scientific knowledge and expertise in everyday life and in controversies about environmental or public health risks, for example.

Both the widespread interest in issues of public understanding of technoscience as well as the differences in opinion with respect to policy priorities and research agenda call for reflection and discussion. On the one hand this reflection should concern ongoing empirical work, practical objectives to be achieved and objectives for future work and collaboration. On the other hand, the reflection should focus on the socio-theoretical and politico-philosophical underpinnings of our work. To promote such reflection and discussion a workshop will be organized in collaboration with the ISCTE at the University of Lisbon from 11 to 12 May 2000.

Against the general background just sketched the workshop will focus on two themes. The first theme concerns the connection between public understanding, decision making and "good" or democratic governance. What assumptions underpin our conceptions of the relations between high levels of public understanding, political participation in decision making and the rationality of the resulting policies and practices?

To what extent are these conceptions tested in empirical research and analytical investigations. Aren't people in STS promoting forms of grass root democracy relying on conceptions of decision making that are outdated from the perspective of globalizing markets and the increasing importance of supra-national agreements and negotiations? The second theme concerns the assessment of practices that seek to promote public understanding of science. On what bases could we argue that a particular sort of practice is better than another? In what respect is it possible to differentiate between countries in terms of the adequacy and effectiveness of their policies to promote public understanding?

The format of the conference will be such that only part of the time will be spent on the presentation and discussion of papers. This will allow us to have discussions about newly emerging topics, shifting theoretical challenges and possibilities for collaborative projects. Because of this format the number of participants will be restricted to a maximum of 35 people.

For more information, please contact the address below. If you wish to participate please write or email us and include a description of your research work and a summary of the sort of contribution you could make to the workshop. The deadline for the submission of proposals for papers is 1 March 2000.

M.E. Goncalves
ICSTE
Avenida das Forças Armadas
1600 Lisboa, Portugal
email: mebg@iscte.pt, phone 351.1.790.3008
fax 351.1.790.3068

WORLDS in TRANSITION

Technoscience, Citizenship and Culture in the 21st Century

4S/EASST Conference 2000
September 27 - 30, 2000 at the University of Vienna, Austria

Joint conference of the Society for Social Studies of Science (4S) and the European Association for the Study of Science and Technology (EASST)

Call for SESSIONS: January 15, 1999

Each session will be allotted a time-slot of 1.5 hours and should ideally contain not more than 3 papers (15 minutes of presentation and 15 minutes of discussion for each paper). Sessions with a larger number of participants will be split over several time-slots. Each session proposal should contain:

Name, address (as well as e-mail and phone number) and affiliation of the session organiser. Abstract of the session proposed (length: 250 words) - List of all participants, their respective affiliations, and the titles of their contributions.

Call for PAPERS: February 15, 2000

Each speaker will have about 15 minutes for her/his presentation and about the same amount of time for discussion. We will only accept one paper per participant.

Submission of proposals for papers should contain:

Name, address (as well as e-mail and phone number) and affiliation of the speaker(s). Abstract of the paper proposed (length: 250 words).

All proposals should be either e-mailed to 4SEASST@univie.ac.at (attached as RTF document) or sent by fax to +43 1 4277 9476; with the remarks 4S/EASST (Ulrike Felt) on the

fax cover page. Proposals received after this date will be considered on a space-available basis.

See
<http://www.univie.ac.at/Wissenschaftstheorie/conference2000/>

Local Organizer: Department of Philosophy of Science and Social Studies of Science, University of Vienna, Sensengasse 8/10, A-1090 Vienna.

Contact persons: Ulrike Felt, Judith Kroell or Tina Thiel at 4SEASST@univie.ac.at

Conferences and Calls for Papers

The Union of British Columbia Indian Chiefs' conference, entitled *Protecting Knowledge: Traditional Resource Rights in the New Millennium*, and hosted by the Union of BC Indian Chiefs with support from the Law Foundation of British Columbia and Legal Services Society of British Columbia will be held at the First Nations House of Learning, **University of British Columbia**, Vancouver, Canada on 24-26 February 2000. Contact Don Bain, research@ubcic.bc.ca, Phone: 1-604-684-0231, Fax: 1-604-684-5726, or see <http://www.ubcic.bc.ca/protect.htm>.

What is to be Done? History of Science in the New Millennium, a joint HSS/CSHPS/BSHS conference, has been announced. Following large and successful meetings in Manchester (1988), Toronto (1992), and Edinburgh (1996), the British Society for the History of Science, the Canadian Society for the History and Philosophy of Science, and the History of Science Society will be undertaking their fourth international joint meeting in **St. Louis, Missouri, August 3- 6, 2000**. Session proposals are invited on topics that address particularly: critical historiographical issues in the history of science, past, present and future; master narratives in the history of science, including reassessments of earlier narratives and presentations of new ones; evaluating the relationship between the history of science and other disciplines, such as sociology, literary studies, social history, cultural history, environmental history, natural science (the "science wars"); important absences in the history of science: what's been missed? what can't be said?; differing modes of investigation in the history of science, including museum and material culture studies, history of popular culture, history of printing and publishing, and others; re-examinations of particular chronological (e.g., Enlightenment or medieval science) and thematic fields (e.g., the history of biology, science and gender, science and popular culture); and the development of history of science as a discipline and as a profession, in particular to provide an international perspective

to the issues that the HSS is considering at its 75th anniversary meeting in 1999. The meeting will be organized into sessions of three or four papers with commentator. Proposals for complete sessions and individual papers are encouraged. Session organizers are urged to include speakers from more than one country. Electronic submissions via the Web site are preferred. Proposals, including abstracts of approximately 250 words for each paper, are due at the HSS Executive Office by 15 December 99, with notification of acceptance by early February 2000. Conference participants may expect to receive a program of published abstracts. For further details contact the HSS Executive office at hssexec@u.washington.edu or the program committee: Jon Agar, agar@fs4.ma.man.ac.uk; Bernie Lightman, lightman@yorku.ca; and Paul Theerman, paul_theerman@nlm.nih.gov. More information on St Louis, and paper and session proposal forms can be found at: <http://depts.washington.edu/hssexec/2000/joint2000.html>

The *2nd POSTI meeting* in collaboration with the ESST Annual Scientific Conference will be held on 27 - 28 May 2000. It is organised by the Bureau d'économie théorique et appliquée (BETA), **Université Louis Pasteur, Strasbourg** and Instituto Universitario de Administracion de Empresas (IADE), Universidad Autónoma de Madrid POSTI (Policies for Sustainable Technological Innovation in the 21st Century) is a project funded by the EC's Targeted Socio-economic Research Programme. The project aims at creating an European forum within the Science, Technology and Society (STS) field for interaction between young academics, their seniors, business and policy makers, and it consists of a database containing information about M.A., M.Sc. and Ph.D. dissertations, as well as a series of four workshops. This workshop is the second within this series and provides an opportunity for researchers to contribute to a knowledge building process in the field of sustainability and innovation by submitting papers, participating and debating. By sustainable innovation, we mean, as a first step,

two different things: 1. the sustainability-related preoccupations and measures incorporated in the innovation process or output; 2. the innovation process or output which aims directly at improving the present or future quality of the environment, in a broad sense. We want, in other words, on the one hand to identify and document various types of innovation (technical, methods-oriented, organisational and systemic) and the ways sustainability-related preoccupations and measures may be incorporated in these. We want to illuminate the pressures or restraining factors as well as the contexts and particular dynamics of such innovation processes. On the other hand there is also need for research which focuses on various dimensions of explicit outputs (e.g. "clean technologies" and "green" products). Presentations and papers should show original empirical findings on innovations (in a broad sense) and experiments, in addition to elements that could lead to the progressive construction of a theoretical framework and tools.

1st stream: Environmental considerations within the firm's strategy

This stream is devoted to a discussion of specific programmes or policies aimed at incorporation of environmental considerations into the innovation process. We are interested in studies based on international and national policies or guidelines (e.g. the ISO 14000 series, EMAS standards), and discussions of the "industrial ecology" concept. Operational guidelines such as ISO 14000 or EMAS standards may be considered as methodologies favourable to a general learning dynamic regarding the environmental consequences of technological innovation. Empirical findings and theoretical analysis should demonstrate the depth or superficiality of these claims. Similarly, is the industrial ecology concept a revolutionary concept for restructuring industries towards sustainability, or just another fashionable management tool? If it is the former, why, from an economic standpoint, has industrial ecology not been implemented earlier, though? Is there a danger that industrial ecology will reduce ecology and sustainability to technological recipes?

2nd stream: Globalisation processes and local concerns

Recent research on the overseas activities of multi-national corporations as well as research on development programmes (ODA) has

increasingly focused on whether such activities include a concern for the natural environment of the receiving countries or not. On the one hand there are undoubtedly resource extracting activities which contain little or no regard of such issues. On the other hand there appears to be private enterprises as well as ODA programmes which aim for profit-maximisation for the delivering firms at the same time as improvement of the local environment is being aimed for. This session focuses especially on the second type of activities. In what ways do such activities aim at reaching a state of compatibility between the two types of aims? And in what degree may one say that they have succeeded thus far? In addition, whenever a large, multinational corporation is present, several local small and medium-sized enterprises (SMEs) may play a new and specific role. We welcome also papers focussed on such SME-related issues. *3rd stream: Knowledge as a competitive factor.* Sustainability issues may be approached with a broader perspective in mind than queries focussed exclusively on ecological aspects. Societal sustainability becomes relevant in particular when knowledge becomes a key factor of competitiveness, and this has implications on, for example, equity and on training. If knowledge is becoming a crucial competitive factor for enterprises, it should follow that intellectual capital, intangibles and knowledge management are elements for the understanding of the entire modern industrial sphere. The stream will be devoted to theoretical, methodological and empirical papers in this broad and emerging area.

4th stream: Methodological issues in connection with research on sustainability and innovation

This is a special session devoted to the discussion of the numerous methodological issues one may encounter in connection with research on sustainability and innovation. Papers should be based on actual studies within the field utilising quantitative and/or qualitative data, but reflect explicitly on the methodological issues encountered. Papers may thus discuss specific methodologies such as, for example, statistical analysis, scenario study methodologies, discourse analysis or case study methodologies.

5th stream: Firms and society

Papers for this stream should focus explicitly on sustainability and innovation issues, while centering the concrete analysis on levels other than the firm level (regions, social groups, the

national or international level). Studies appropriate for this stream may thus involve private firms or public organisations, while being focused on democratic processes of social acceptance vs. rejection of allegedly "green" technological innovations on the societal level (e.g. studies of particular public hearings, international treaties, etc.).

Proposals for papers should consist of title, an outline of maximum 3 pages (ca. 1200 words) including references, and a 10-line CV. Submissions should be sent on-line www.esst.uio.no/posti/submit.html, accompanied with a hard copy (fax or ordinary mail). Proposals will be refereed by a committee lead by Prof. Paloma Sanchez (IADE-UAM, Madrid), Prof. Patrick Llerena (BETA-ULP, Strasbourg) and Dr. Terje Gronning (TIK, University of Oslo). Contact person: Prof. Patrick Llerena, (pllerena@cournot.u-strasbg.fr), 61, avenue de la Forêt Noire, 67 000 Strasbourg, France. Tel: (+33) (0) 3 90 41 41 65 Fax: (+33) (0) 3 90 41 40 50

Deadline for proposals: 17 January 2000. Note of acceptance given to the author: 7 February 2000. Issue of draft programme: 14 April 2000. Full papers due: 2 May 2000.

Virtual Methodology?, a workshop at CRICT (Centre for Research into Innovation, Culture and Technology), Brunel University, Uxbridge, Middlesex, UK, and organised in conjunction with the Virtual Society? Programme, will be held on the 5th February 2000. The aim of the meeting is to provide a forum for sharing thoughts on the relationship between the new technologies and research methods, and specifically considering whether the new information and communication technologies provide an occasion for rethinking approaches to methodology. Discussion will span both specific problems in applying research methods to online settings and ideas about the methodologies which are appropriate for considering the place of new technologies in society (and society in new technologies). There is a web site with more information about the meeting and a registration form at

http://www.brunel.ac.uk/depts/cric/vm_over.htm. The format will include keynote speakers in the morning and less formal sessions in the afternoon, and is aimed at attracting graduate students as well as more established researchers.

Knowledge Management: Concepts and Controversies will be held on 10-11, February, 2000 at the University of Warwick, Coventry, United Kingdom. Knowledge Management has been presented by some as a crucial element of organizational performance yet is dismissed by others as the latest management fad. If the debate on Knowledge Management is to keep pace with the practice, there is a need for substantive research to address the novel concepts and controversies of this emerging field. This conference will provide an opportunity to present and debate such research by; disseminating research findings from studies dealing with the management of knowledge in organizations; encouraging debate around the critical themes raised by knowledge management; helping to promote an active research community in this field comprised of both academics and practitioners. See <http://bprc.warwick.ac.uk/kmconf.html>.

Which Public Administration in the Information Society? is the title of a colloquium organised by the Laboratoire d'Etudes sur les Nouvelles Technologies de l'Information et de la Communication (LENTIC), University of Liege (Belgium), to be held in Brussels on 19-20 May 2000. The development and the evolution of the information and communication technologies, and the amount of researches over the past ten last years have contributed to notable progress within the field of the new media. It appears useful, in a context of a changing society, to propose to the public administrations and to the citizens-users new frames of reference. We need to think, among other things, about the way new media could have more meaning with regard to the quality of the social life and work relations. The main purpose of this colloquium is to draw up an assessment of the projects and technological applications at the level of the public administrations, as well as to think and to debate, through field experiences, the stakes and the priorities of the public administrations with regard to new media. The working languages will be both French and English. Information and registration available at <http://www.egss.ulg.ac.be/lentic/> Selected articles will be published in the journals Public Management (articles in English) and Gestion (articles in French). Other articles will

be published in Public Administration and Management (Cyber-journal on Internet)

ISTAS 2000: *University as a Bridge from Technology to Society* is the title of the International Symposium on Technology and Society to be held on September 6-8, 2000 in Rome, Italy. It is co-sponsored by the IEEE Society for Social Implications of Technology and Department of Electronic Engineering, La Sapienza, University of Rome, as well as the Associazione Elettrotecnica ed Elettronica Italiana (AEI). This is a call for papers. Technology is expanding at an unprecedented rate and influence on society reaches every aspect of the life of individuals and groups. However, human needs do not influence the development of technology, as people working in frontier areas of technological research become even more specialized. Focusing their own interest on restricted technical areas, research people lose a global view of the motivations and effects of their accomplishments. University, that by vocation is committed to look at human life and knowledge in a unified perspectives, can strongly contribute to fill the gap between technology and society. Contributions are encouraged for topics related to the general theme: How new technologies modify the production and transmission of knowledge; Social implications of technology and research managing; The teaching of social implications of technology: integrations with technical subject; Information technology as a service to community; How science and technology influence culture; Safety and health issues related to safe energy production, reliability of computer controlled systems in sensitive environments (e.g. healthcare and military); computerised workplaces; electromagnetic; pollution, etc.; Legal and social issues related to: telework, circulation of individual information and the right to privacy, computer crimes and their prevention. Papers are also welcome in traditional technology/policy areas: Environmental, health, safety and peace-related implications of technology; Social, economic and ethical issues involving energy, information, and telecommunications technologies; History of technology; Systems analysis in public policy decisions; e search methods for technology-policy analysis. The deadlines are as follows. Special Session Proposals: February 1, 2000 Proposals

shall include: session title and organizer(s) affiliation, address, e-mail, phone and fax; brief motivation for its organization, with references to the most relevant recent international literature in the area covered by the proposed session; list of authors who will be contacted. Proposals shall be sent by e-mail to the Special Sessions Chairman: Prof. Leonardo Cannavo, cannavo@uniroma1.it. Submission of extended abstracts: March 1, 2000. Prospective authors should send an extended abstract of 1000 to 1500 words by e-mail to the Program Committee Chairman Prof. T. Roska, istas2000@aei.it. The extended abstract should be attached to a message containing title, name and author(s) affiliation and full mailing address, 100-word abstract, session topic (see above list). The format for the extended abstract should be plain text or, if it is necessary to include formulas, images, etc. PostScript file. Further information: Prof. Valerio Cirnagalli, Dept. Electronic Engineering, University La Sapienza Roma Via Eudossiana 18, 00184 Roma, Italy. Tel: 39-064-4585864 Fax:39-064-745105; E-mail: istas2000@tce.ing.uniroma1.it; Go to <http://tce.ing.uniroma1.it/istas/istas/html>.

CAP 2000: Computing, Philosophy, and World Cultures, co-sponsored by the American Philosophical Association Committee on Philosophy and Computers, and the Department of Philosophy at Carnegie Mellon, will be held on 10-12 August 2000 at Carnegie Mellon University, Pittsburgh, Pennsylvania, USA. See <http://www.lcl.cmu.edu/CAAE/CAP/CAPpage.html>.

To celebrate the launching of its new journal, *Enterprise & Society: The International Journal of Business History*, the Business History Conference will organize its next meeting around the theme *Enterprise in Society*. This conference will meet from March 10 to 12, 2000, in Palo Alto, California. Contact Roger Horowitz, Secretary-Treasurer. Business History Conference, PO Box 3630, Wilmington DE 19807, USA, fax: 302-655-3188; email: rh@udel.edu.

The International Joseph A. Schumpeter Society announces its eighth conference to be held in

Manchester, England on June 28-July 1, 2000, and issues a call for papers for the theme of *Change, Development and Transformation: Transdisciplinary Perspectives on the Innovation Process*. The broad theme of this conference is the exploration of economic and social dynamics in relation to processes of innovation. This theme is very firmly located in the Schumpeterian tradition in which an economic perspective is grounded in a wider awareness of the contributing roles of other disciplines. Since Schumpeter wrote his path-breaking Theory of Economic Development, the degree of specialization in the social sciences has increased many-fold, new disciplines have emerged for the study of management and business, while, at the same time, the connecting links between these different disciplinary perspectives grow increasingly fewer. Certainly these trends do not facilitate the study of innovation nor do they help us provide wider conceptual understandings of an essential feature of capitalism; namely, its propensity to change, develop and transform itself from within. The conference programme will include contributions from scholars in a range of disciplines including economics, sociology, geography, economic and social history, history of science and technology, management and business studies, and others as appropriate. It will also encourage contributions that cover the Conference themes from the point of view of developing economies as well as advanced economies. Finally, it will include contributions that cover the science technology and innovation policy aspects of the Conference themes. The scientific committee of the congress would like to encourage you to submit papers devoted to theoretical, empirical and historical aspects as well as policy analysis. Abstracts of at least half a page and max. two pages should be submitted before January 31, 2000 to either address: Prof. J. S. Metcalfe, The University of Manchester, ESRC Centre for Research on Innovation and Competition, Tom Lupton Suite, Oxford Road, Manchester M13 9QH, UK, Tel: +44 161 275-7365/8, Fax: - 275-7361, e-mail: stan.metcalfe@man.ac.uk or sharon.hammond@man.ac.uk; or to Prof. Horst Hanusch, University of Augsburg, Dept. of Economics, Universitaetsstr. 16, D-86135 Augsburg, Germany, Tel: +49 821 598-4179, Fax: - 598-4229, e-mail: horst.hanusch@wiso.uni-augsburg.de Selection of papers will be based on abstracts. Decisions

will be made on a rolling basis with all persons notified by the end of February. All acceptances will be contingent on the participant's completing conference and hotel registration by April 1, 2000. (Please include fax and e-mail addresses with abstracts.) Papers that are accepted will be made available on the Conference websites, for the International Schumpeter Society and the ESRC Centre for Research on Innovation and Competition (CRIC). Registration information is available <http://nt2.ec.man.ac.uk/cric/schumpeter>. Application forms can also be obtained directly from Sharon Hammond, CRIC University of Manchester, Tom Lupton Suite, Manchester M13 9QH, UK.

The fifth conference on *Current Research Information Systems* (in Europe), CRIS 2000, will take place in Helsinki (Finland) on 25-27 May 2000. The conference is being organised by the European Commission, within the framework of the Commission's INNOVATION/SMEs Programme, and hosted by the Finnish Ministry of Education and TEKES, the Technology Development Centre in Finland. CRIS 2000 follows on from the European CRIS conferences held in Bergen (Norway) in 1991, in Amsterdam (The Netherlands) in 1993, in Milan (Italy) in 1995, and in Luxembourg (Luxembourg) in 1998. Internet technology and computer networks have evolved to the point that information providers and users are able to develop innovative approaches to the creation and dissemination of research information. The traditional CRIS was the research documentation unit at publicly funded universities, which produced research information in forms that were cumbersome and difficult to access. With the emergence of the Web, CRIS have evolved into dynamic, interactive information resources and important means for technology transfer, inter-institutional collaboration, and public access to research information. The CRIS 2000 Conference will address the challenge of using new technologies for Web, multimedia and database integration to make information on current research available for the benefit of all sectors of the society. The Conference will offer four different approaches for achieving these aims:

1. Papers in plenary sessions; 2. Cybercaf online demonstrations of leading-edge CRIS

applications; 3. Roundtable sessions of special interest groups; 4. Poster presentations of innovative CRIS methods, tools, and results. The Cybercaf of the previous CRIS-conference, CRIS'98, still can be found on: <http://www.cordis.lu/cris98>.

The American Political Science Association: *Science, Technology & Environmental Politics Section* has issued a call for papers for its 2000 Annual Meeting in **Washington, DC**, in Sept. 2000. For the theme of "Power, Choice, and the State", please see <http://www.apsanet.org>.

The Role and Activities of Scientific Societies in Promoting Research Integrity is the name of the conference hosted by the American Association for the Advancement of Science and the U.S. Office of Research Integrity. The Conference will take place in **Washington, DC** on April 10-11, 2000. The URL for the call for abstracts is www.aaas.org/spp/dspp/sfrl/projects/abstract.htm.

De-territorialized politics and Internet political communications is the title of the meeting being organised at **York University, Canada**. Internet political communications have emerged in a global context in which people's links to the land, a factor that long shaped political identity, are being eroded. Multiculturalism, pluralism, mass migration, globalized money markets, internationalized media and communications, and international "co-decision-making" and joint defence (NATO, WEU, UN and the EU system of pooled sovereignty) are altogether fostering new political hybrids and democratic deficits on a global scale. In these circumstances, a new wired political system is developing in which power and legitimacy have become tools for collections of widely scattered individuals motivated by common concerns and who can rapidly coalesce to articulate their views. Small groups as well as politicians and established political interests are now using new technologies in ways that deeply effect democratic ideals and representative institutions. Participants from a wide variety of perspectives are invited to reflect on the issues that arise through Internet political communications under the theme "De-territorialized politics and Internet

political communications". Three panels will explore the variety of ways in which Internet access, computer literacy, interactivity, synchronicity, location independence and "Netiquette displace spatial and "place-based" politics. These influences are broadly understood as de-territorialising insofar as political identities are being transformed into a "thing" that people carry with them rather than an attachment to a fixed birthplace. Questions about the neutral quality of language, images and representation as well as an acceleration of political time have now become factors in political interpretation. Panel participants are invited to explore and reflect on the impact of these processes from a variety of perspectives. Contributions are welcome from a range of quantitative, qualitative, critical, post-structural and post-modern perspectives. Send proposals to Dr. Michael Dartnell, <dartnell@yorku.ca>, Centre for International and Security Studies, York University, 359A York Lanes, Toronto, Ontario M3J 1P3 Canada. <http://www.yorku.ca/research/ionline/index.html>

Science in the nineteenth-century periodical, an interdisciplinary conference organised by the SciPer Project will be held at the **University of Leeds**, 10-12 April 2000. The collaborative project 'Science in the nineteenth-century periodical' (SciPer), recently launched at the Universities of Sheffield (Centre for Nineteenth-century Studies) and Leeds (Division of History and Philosophy of Science), is designed to identify and analyse representations of science, technology and medicine in the general periodical literature of nineteenth-century Britain. The specific objectives are to publish several volumes of analytical essays on the portrayal of science and scientists, and to publish a printed descriptive catalogue and searchable electronic index to the science content of selected periodicals. In addition, it is intended that the project should serve to draw together an interdisciplinary community of scholars with interests in this area, and to this end a series of international conferences is planned. The project's inaugural conference, to be held at Oxley Hall in the University of Leeds, will explore all aspects of the subject. For more information, contact Dr. J. R. Topham, School of Philosophy, University of Leeds, LS2 9JT, UK, email: j.r.topham@leeds.ac.uk, tel: 44-114-2228484; 44-113-2333280

Opportunities Available

The **University of York**, the Science and Technology Studies Unit (SATSU) and the Department of Sociology invite applications for a 3-year doctoral research studentship in the Sociology of Science, Technology and the Environment, to commence Oct 2000. Candidates should have a good first degree and/or Masters level qualification in a relevant discipline. The Department welcomes applications on a diverse range of empirical topics but which are methodologically focussed and relevant to current debates in STS. For further enquiries contact: Professor Andrew Webster Science and Technology Studies Unit (SATSU) Department of Sociology University of York York, YO10 5DD United Kingdom +44 (0) 1904 434740 +44 (0) 1904 433043 ajw25@york.ac.uk

The Institute for Science and Technology Studies (IWT) at **Bielefeld University**, Germany, offers 9 stipends in its *STS-Graduate School (Graduiertenkolleg)*. Details in German only via <http://www.uni-bielefeld.de/iwt/gk>.

There is an **Internet Research Opportunity** with Teleonomy Research and Lancaster University. Applications are invited for a full-time post, available immediately. The person appointed will help to develop, pilot, and implement a rolling programme of qualitative research projects exploring behaviour on web-sites, focussing initially on consumption behaviours. Applicants should preferably have a Ph.D. or equivalent social-science research experience in the area of Information and Communications Technologies or related domains. The post is part of the Web Research Alliance, a new initiative developed in partnership by two organisations - Teleonomy Research, a leading research consultancy in the private sector specialising in the area of customer relationship management and brand development, and the 5*-rated Centre for the Study of Environmental Change at Lancaster University. Funded by a number of significant private and public sector partners, the WRA is

establishing itself in the area of leading-edge research into the social and cultural dimensions of the new technologies. Starting salary: c. £20,000. Interested parties are encouraged to discuss the position informally with Dr Bronislaw Szerszynski, Centre for the Study of Environmental Change, Bowland Tower East, Lancaster University, Lancaster LA1 4YT, United Kingdom, Tel: +44 (0)1524 592659, Fax: +44 (0)1524 846339, E-mail: bron@lancaster.ac.uk, or with Michael Hulme, Teleonomy Research, The Mews, 62a Main Street, Kirkby Lonsdale, Cumbria LA6 2AJ, United Kingdom, Tel: +44 (0)15242 71866, Fax +44 (0)15242 72599, E-mail: michael-hulme@teleonomy.co.uk.

The Department of History at **Swarthmore College** seeks a Mellon Postdoctoral Fellow who specializes in the *History of Science, Technology, or Medicine*. The Fellow will teach five courses over the two year appointment and devote the remainder of the time to research. Geographic field is open, but focus on the nineteenth and twentieth centuries is preferred. Please send letter of application, CV, proposed courses, and letters of recommendation to Professor Robert Weinberg, Department of History, Swarthmore College, Swarthmore, PA 19081. EOE. Women and minorities are encouraged to apply. Application deadline is February 1, 2000.

The **Dibner Institute for the History of Science and Technology** invites applications to its two fellowship programs for 2000-2001; the Senior Fellows program and the Postdoctoral Fellows program. The Dibner Institute expects to have 20 Fellows each term. The Dibner Institute is an international center for advanced research in the history of science and technology, established in 1992. It draws on the resources of the Burndy Library, a major collection of both primary and secondary material in the history of science and technology, and enjoys the participation in its programs of faculty members and students from the universities that make up the Dibner

Institute's consortium: The Massachusetts Institute of Technology, the host institution; Boston University; Brandeis University; and Harvard University. The Institute's primary mission is to support advanced research in the history of science and technology, across a wide variety of areas and a broad spectrum of topics and methodologies. The Institute favors projects that address events dating back thirty years or more; and, while recognizing that overlap between the history of medicine and the history of biology makes strict distinctions impossible, the Institute generally does not support projects in the history of clinical medicine. The full call may be read at <http://www.usalert.com/htdoc/usoa/fnd/any/any/proc/any/dihs10139801a.htm>. The Deadline is 31 December 1999. The Dibner site is <http://dibinst.mit.edu>. The application form is at <http://dibinst.mit.edu/application/diappintro.htm>.

Newcastle University's Centre for Lifelong Learning seeks a Lecturer in Lifelong Learning: the Public Understanding of Science to work in this expanding Centre, your principal role will be to develop the Centre's provision in the public understanding of Science and its relation to Lifelong Learning. You will develop a research profile in this field and will be responsible for course programmes in the broad area of natural sciences for both personal and professional development. A background in the environmental sciences would prove advantageous. The appointment will be for three years in the first instance, and salary range is £17,238 - £30,065 p.a. For further information please telephone 0191 222 8834 (24 hour answerphone) fax. 0191 222 5694 quoting (ref.E055) or write to: Human Resources Section (Ref. E055), University of Newcastle, 1 Park Terrace, Newcastle upon Tyne, NE1 7RU, UK. Closing date: 20 December 1999.

The M.I.T. Department of Urban Studies and Planning intends to intensify its research and teaching in the field of Technology and the City by making several new faculty appointments. These appointments will be full-time, and will be at junior or senior levels commensurate with the candidate's qualifications. Candidates with exceptional qualifications will be considered for full professorship with tenure. We seek

candidates with experience in urban planning or design, knowledge of relevant areas of new technology, demonstrated potential for leadership in the field through publication or innovative practice, and the capacity and interest to make effective cross-disciplinary connections with M.I.T. laboratories and departments that focus on technology. A Ph.D. degree is preferred, but candidates with a terminal professional degree, or with equivalent experience, will also be considered. Our interests encompass, but are not limited to, the following: (1) Technology and City Development. We encourage applications from candidates with expertise in one or more of the following fields: information technology and its relationship to urban form and development; logistics; urban infrastructure; transportation technology; the planning, design, and implementation of large-scale development projects; and the impacts of technological change on locational and employment patterns of business and industry. The use of new technology in meeting the needs of low-income and minority populations is of special interest. (2) Technology and the Practice of Urban Planning and Design. We encourage applications from candidates with expertise in the use of advanced information technology to enhance the practice of urban planning and design. Areas of interest to us include urban simulation, visualization, GIS and innovative mapping techniques, remote collaboration, educational technology, and the representation and manipulation of information to facilitate dialogue, public participation, and access to design and planning efforts. (3) Information Technology and Organizational Behavior. We encourage applications from candidates with expertise in technological change within organizations involved in urban planning and design processes, and on the potential applications of advanced information and electronic commerce systems to promote urban development, facilitate citizen participation, and enhance the performance of planning, design, and economic development organizations. Interested candidates should send a curriculum vitae, a statement describing current research and teaching interests and future directions, and the names of three academic references to: Professor Bernard Frieden, c/o Ms. Laura Wilcox, Department of Urban Studies and Planning, MIT, Room 9-519, Cambridge, MA 02139. Direct any questions to Professor Frieden

(bfrieden@mit.edu) or to Dean William Mitchell (wjm@mit.edu). We shall begin scheduling interviews by February 1, 2000.

The University of Kentucky seeks an Assistant Professor, tenure-track, joint appointment in the Philosophy Department and the Honors Program, beginning August 15, 2000. Tenure will be in Philosophy. AOS: philosophy and history of science. The research focus will be on contemporary issues in the philosophy of science. Teaching responsibilities will include an undergraduate course "Philosophy and Classical Physics" - an historical introduction to the philosophical background of classical physics -- as well as upper division and graduate courses in the research specialty. Deadline for applications is December 3. Send complete dossier, including letter of intent, CV, at least 3 letters of recommendation, writing sample, evidence of teaching excellence, and sample syllabi to: Recruitment Committee, Department of Philosophy, University of Kentucky, Lexington, KY 40506. The University of Kentucky is an Equal Opportunity/Affirmative Action Employer. Applications from women and minorities are strongly encouraged.

Ecological Conversations: Gender, Science and the Sacred, a Rockefeller Foundation Humanities Fellowship Program at the Center for the Study of Women in Society, University of Oregon, invites scientists, scholars, theologians, writers, and grass-roots activists from different cultural and national contexts to share perspectives on the fundamental philosophical, evolutionary, political, and spiritual questions generated by the convergence of women's and environmental movements around the globe. First Year: Fellowships for the 1999-2000 academic year have been awarded to individuals from India, Israel, Zimbabwe, Canada and the United States. Detailed descriptions of the first-year fellows and their proposed research projects can be found on the program web site. Second Year: In 2000-2001, we welcome proposals addressing issues of scientific practice. Themes of particular interest are: the history and contemporary understanding of evolutionary theory and natural history; how scientific concepts and research are translated into public environmental discourse; eco-feminist visions of science and technology;

new approaches to issues of reproduction and population; the history and practice of indigenous sciences; and studies of new scientific paradigms. Third Year: During 2001-2002, the conversation will focus on questions situated at the intersection of the ecological and the sacred. We are interested in research or practice addressing the integration of scientific and sacred epistemologies in investigations of ecology, as well as alternative conceptions of relationships to place, land, and other living beings. Application deadlines: January 17, 2000 (2001) Contact: Lynne Fessenden Center for the Study of Women in Society 1201 University of Oregon Eugene, OR 97403-1201 Phone (541)346-5399 Fax (541)346-5096 E-mail: csws@oregon.uoregon.edu Web Site: <http://ecocon.uoregon.edu>.

News from the Profession

The European Guide to Science, Technology, and Innovation Studies provides an overview of European institutes of higher education and research in this interdisciplinary field of studies. The Guide (517 pages) presents approx. 100 academic centres and institutions where one can study the development of and the interactions between science, technology, and innovation. Many institutes also offer Master's degrees. In addition to the practical information (relevant websites; local facilities, cost, etc.), the Guide introduces this emerging field in terms of relevant topics and issues. This information is cross-linked to the institutional addresses. The Guide has been the result of a collaboration between DG XII and the Network of European Centers in Science and Technology Studies (NECSTS), European Studies in Science and Technology (ESST), the European Association for Political and Evolutionary Economy (EAPEE) and the European Association for the Study of Science and Technology (EASST). An electronic version of the Guide is available at <http://www.chem.uva.nl/sts/guide/>. To order the hard copy, send an email to Anne.DE-GREEF@DG12.cec.be.

Net News

Science Studies Methods Forum (SSMF), a listserv, provides a friendly venue for science studies graduate students and faculty to pose questions about research methods and discuss issues related to research practice. Postings to the listserv will address topics such as: Getting access to research sites; What literature is appropriate to a project; Discussion of software and technical tools; How to organize research materials; Challenges that arise during multi-sited research; Tips on "studying up". Leading members of the field will regularly be invited to engage in discussion about their research techniques and answer specific questions that arise on the listserv. The intention is to complement the STS listserv, which is principally devoted to theoretical discussion and requests for specific information about topics of study. The SSMF list will be moderated in order to reduce email accumulation, and the moderator will refer those who submit postings on topical or theoretical issues as well as material related to the credibility of the field at large to the STS listserv. The SSMF is hosted by UC Berkeley's PSSST (Project on the Social Studies of Science and Technology). PSSST is an interdepartmental coalition of students and faculty who are developing a campus science studies network, with support from a grant from the National Science Foundation. UC Berkeley graduates and faculty will form a core of membership on SSMF, but will not use the list for Berkeley campus communication. Our hope is to create an international bulletin board where science studies scholars can help one another with methodological issues that arise during their research, since this assistance is often hard to come by in their home departments. To subscribe, send a blank email to: ssmf-subscribe@igc.topica.com

Australia held its first Consensus Conference on the topic of Gene Technology in the Food Chain in March this year. Its official Web site is at <http://www.austmus.gov.au/consensus/index.htm>; there is also coverage on the public broadcaster's site at

<http://www.abc.net.au/science/slab/consconf>. There have also been consensus conferences on the topic in Norway (<http://www.etikkom.no/NENT/fast.htm#INTRDUCTION>), France, Canada (<http://www.acs.ucalgary.ca/~pubconf/index.html>) and Denmark (<http://www.ing.dk/tekraad/eng/publicat/genfoods.htm>).

Culture Machine is an international, inter-active, e-journal in cultural theory/cultural studies, accessed through the WWW and entirely free. The first issue, 'Taking Risks with the Future', includes contributions from Lawrence Grossberg, Sue Golding, Timothy Clark and Michael Naas. The second issue, 'The University' is due to be published in Feb. 2000, and will feature contributions from Jacques Derrida, Samuel Weber, Peggy Kamuf, Henry Giroux, Ted Striphas and Stevan Harnad. <http://culturemachine.tees.ac.uk>

The new edition of the HOPOS Newsletter is now online via <http://scistud.umkc.edu/hopos>. The History Of Philosophy Of Science (HOPOS) Working Group is dedicated to the study of historical topics in philosophy of science, from Aristotle to the very recent past. Our last academic meeting took place at the University of Notre Dame in March, 1998, and was sponsored by the UND Program in the History and Philosophy of Science. Our next academic meeting will take place at the University of Vienna in July, 2000, and will be sponsored by the Institut Wiener Kreis and the Zentrum fuer Internationale und Interdisziplinare Studien der Universitaet Wien (ZIIS). The HOPOS Newsletter is published electronically three times a year and features reviews of books on topics related to the history of the philosophy of science. You may direct electronic mail to the Editor, Dr. Saul Fisher, at: msf.sf@prodigy.net or sf@mellon.org. Surface mail to Dr. Fisher at: 3636 Fieldston Road, Bronx, NY 10463 USA.

The most recent issue of Sociological Research Online is available at <http://socresonline.org.uk/socresonline>. The new issue articles on the 'the Genetic Modification of Food'; a set of articles from the British Sociological Association's Annual Conference which address what it means to be 'For Sociology' at the end of the millenium; and others. Sociological Research Online publishes high quality sociology across the entire range of the discipline. Liz Stanley, the editor, is always pleased to receive articles and can say that these will be refereed and a decision made around six weeks after receipt. She may be reached at socres@soc.surrey.ac.uk

Cybersociology Magazine is at <http://www.cybersociology.com>.

The website for the study of new media, www.newmediastudies.com, has recent additions on researching media audiences via the web; the Internet and 'media effects'; and others.

Discourse, a peer-reviewed Anthropology Journal is looking for articles on linguistics, and may be found at <http://wings.buffalo.edu/anthropology/Discourse>

The Media and Cultural Studies Centre at the University of Queensland presents M/C - A Journal of Media and Culture at <http://www.uq.edu.au/mc>.

The Loka Institute, in Amherst, Mass., announces a new project on "Identifying Democratic Technologies." Further information at <http://www.Loka.org/idt/intro.htm>. To be added to the Loka Alert E-mail list, please send a message to Loka@Loka.org.

There is a growing movement at Berkeley opposed to "Techno-eugenics," i.e., human germ-line engineering with the intent of producing super-people. Information about TEEL, the Techno-Eugenics Email List, may be requested from Marcy Darnovsky at teel@adax.com.

Sexuality & Culture is a quarterly interdisciplinary journal published by Transaction Publishers at Rutgers University. See www.csulb.edu/~asc/journal.html.

The Journal of MUD Research has changed its name to The Journal of Virtual Environments at <http://journal.tinymush.org/~jomr/>

The Technoscience webpage is available at <http://www.cis.vt.edu/technoscience>. The winter 2000 issue of Technoscience will be up in late January, 2000. Please send your change of address notice to academic service at acadsvca@aol.com

Twenty nations all but bar the Internet from their borders for national security reasons, according to Reporters Sans Frontiers. The countries are Azerbaijan, Kazakhstan, Kirghizia, Tajikistan, Turkmenistan, Uzbekistan as well as Belarus, Burma, China, Cuba, Iran, Iraq, Libya, North Korea, Saudi Arabia, Sierra Leone, Sudan, Syria, Tunisia, and Vietnam. Read such items in the newsletter Bytes For All, <http://www.bytesforall.org>.

The History & Philosophy of Psychology Web Resources page has been revised. See <http://www.yorku.ca/dept/psych/orgs/resource.htm>.

New Media and Society, a new peer reviewed international journal published by Sage, interested in cultural, social, political aspects of new media, seeks book reviewers. Send an email to Caroline Bassett, Book Reviews Editor, New Media and Society, Room 242 Essex House, Sussex University, Falmer, Brighton BN1 9RQ, UK, c.bassett@sussex.ac.uk.