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Michael Fischer on Jörg Haider, xenotransplantation and the Yanamamo, p. 3

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Frontpage illustration: An 'Amazon face', picture
by Valdir Cruz. Cruz is a Brazilian photographer
who worked with Patrick Tierny on the peoples
living in the Amazon rain forests.

EASST Review Volume 20 (2001) Number 1

Deep Play and Social Responsibility in Vienna

by Michael M.J. Fischer
Massachusetts Institute of Technology

Plenary Opening Panel: 4S & EASST Meetings, 2000, Vienna

I was going to start, and I will, by saying
"l'shannah tova!" ("happy new year!"). We meet
on the eve of the first new year (*rosh ha-shannah*)
of a new century by the Common Era count, the
21st century, (the year 5761 by the Jewish count).
What happens in a few days according to Jewish
liturgy is a very old ritual of social responsibility.
We ask forgiveness from those we have wronged.
For wrongs we have done to others, God cannot
forgive us; only those we have wronged can do
so. We perform this act of sociality, of mutual
recognition, before the book is closed inscribing
who shall live and who shall die.

L'shannah tova! May all of you and your loved
ones be inscribed in the book of life.

Now I was telling a member of the Jewish
community of Vienna that in addition to the
politics of coming to this conference in Vienna
after the inclusion of the right-wing FPÖe
(Freiheit's Partei Oesterreich, the Freedom Party of
Austria) in the government, coming in order to
express solidarity with the University of Vienna
(which has issued fine statements on tolerance and
minority rights, and on freedom of research and
expression), with the many demonstrators against
the FPÖe (who have continued their
demonstrations every Thursday evening now for
eight months), and with the many Austrian
intellectuals who have spoken and written against
the FPÖe; that in addition to that politics, I also
wanted, underscoring the *Rosh ha-Shannah*
scheduling of a conference whose theme is social
responsibility and whose venue, of all places, is
Vienna, to take my grandfather's seat in the
synagogue in which my parents were married, the
only synagogue the Nazis did not destroy. He
laughed and said that the scheduling of
conferences on the high holidays has become not
so unusual, the last was the dentists, that it is like
a business: the Jewish community gets to sell a

few tickets. A reminder perhaps that even
memories, not to mention sentimentalities, can be
commodified; and that life goes on and did not
stop in 1939 even for the Jewish community in
Vienna. But history is important, and experiences
do affect subsequent choices.

I understand the rationale and goal of this
plenary to be to take note of our venue, of where
and when we are meeting, and to underscore the
themes of the conference: the role of
technosciences in transnational social change,
issues of equity and distribution regarding the
knowledge and power that science and technology
provide, the building of new social institutions for
the more complex civil society of the twenty-first
century, the ethics and politics of research, and
who are the audiences for our research?

I savor the opportunity, and I thank Sheila
Jasanoff and the other organizers, to speak in
these halls [of the University of Vienna] where
my father listened to Max Weber when he visited
here for a term, where my mother studied with
Moritz Schlick and Hans Hahn and others of the
Vienna Circle, where an important foundation of
socially-committed ethnography began with the
Marienthal study [by Paul Lazarsfeld, Marie
Jahoda, and Ernst Zeisel]. All of these remain
touchstones in my own intellectual formation.

In my few remaining minutes I want to evoke
three sites of "deep play" or what I have also
come to call "ethical plateaux". "Deep play", of
course, is a nod to the essay by Clifford Geertz
and to Jeremy Bentham; ethical plateaux is what
I've come to call the terrain in which multiple
technologies interact creating a complex topology
for perception and decision-making. The three
"deep plays" are first that of the politics of the
FPÖe in Austria and more broadly in Europe
which was the original reason for this panel, and
that poses questions of the building of
transnational institutions for civil society, a first
experimental effort for a Europe-wide
construction consensus on rights for minorities,

refugees and immigrants. The second deep play is that of the biosciences that so many of the papers at this conference are about, and that directly pose questions of who shall live and who shall die; that implicate both of the other two deep plays; and that exert pressure towards new institutions of reflexive modernization or deliberative democracy in some of the most difficult areas of human experimental trials, informed consent, privacy and surveillance, patents and ownership of biological information, and the power of huge amounts of investments of not just money and power but also ideology and fantasy. The third deep play is a very brief acknowledgement or alert -- acknowledgement for many of you who have been part of its dissemination across the Internet, and alert for others -- about the furor over new allegations about the studies of the Yanamamo by the American geneticist James Neel and the American anthropologist Napoleon Chagnon, a furor breaking over my own discipline of anthropology, but that will include other fields, that threatens to reopen the science wars and the sociobiology debates, but that potentially also may affect the oversight demanded by IRBs and other oversight bodies on the research that we all do.

"Deep play" refers to cultural sites where multiple levels of structure, explanation, or meaning intersect and condense, including the cultural phantasmorgia that ground and structure the terrain on which reason, will, and language operate but which they cannot contain.

First then, regarding the Austrian deep play, I want mainly to reaffirm our purpose in this panel, still now, even in the aftermath of the Report of the "three Wise Men" (led by the former president of Finland, Marti Antisaari; with Jochen Fowein and Marcelina Oreja) which ended the mild sanctions on Austria of the member states of the European Union. I wish that I had thought enough ahead to be able to show slides of the wicked cartoons of the Austrian artist Manfred Deix, which are still on display at the Wiener Kunst Haus, on Oberer Weisgerberstrasse, across the street from my grandfather's house. In several of the cartoons, he takes on election slogans of the FPÖe such as "Überfremdung" (overrun by foreigners) and exaggerates the anxieties. In one cartoon, he depicts an American Indian in warpaint, an African, and a Chinese person in Lederhosen. In another he draws a Turk in red fez and harem pants skiing down the Alps, running a skiing school while unemployed Austrians hold

up signs asking for jobs. The best perhaps is a cartoon of a "Right Wing Extremist Opinion Poll" which has a series of questions and boxes to check asking about one's attitudes towards Jews, the Kriegesgeneration (the generation of World War II, "ordinary folks who did nothing wrong"), immigrants, and patriotism. The cartoons are an effective format for getting at displacements, denials, and the behind the scenes anxieties, complex psychological and ethical plateaux. I want here to pay tribute to the many Austrian analysts who have done superb dissections of the rhetoric and tactics of the FPÖe and of Jörg Haider: the linguist Ruth Wodak and her colleagues, the political scientist Johnny Bunzl, the anthropologist Andre Gingrich, the political theorist Hakkan Gurses, the social psychologist Klaus Ottomeyer, and many others. The tactics of the FPÖe, even after the dropping of the sanctions, remain a serious issue, and even more a fascinating cultural site of deep play not only for Austria but for Europe and the global stage.

The report of the "three wise ones" [the ironic New Testament resonance unfortunately in English is gendered, while the pluralized German avoids this] says that the Austrian government has lived up to its legal commitments to protect the rights of minorities, refugees and immigrants. Indeed, as it acknowledges, Austria has accepted more immigrants than most European countries. But the report also takes as its mandate to evaluate the political evolution of the FPÖe, and here it says that while the FPÖe may yet evolve into a responsible democratic party, to date it remains in the words of the report "a right wing populist party with radical elements" that requires monitoring. It cites the language of Haider calling extermination camps *Straflager*, punishment camps, as if those condemned were being punished for things they had done; and his tactics such as using libel actions to silence opponents including the case of Prof. Anton Pelinka, about which the protest letter to the President of Austria, being passed around to members of this meeting for signatures, appeals.1 (The E.U. office for monitoring the rights of immigrants, refugees, and minorities is in fact located in Vienna.)

It is a "deep play" because it is at the same time a psychodrama, a politics, and also it is about the neo-liberal or neo-conservative restructuring of the economy that is happening not only in Austria, but Europe-wide, and also globally, that involves real dislocations. Indeed upon hearing of

the Report of the Three Wise Ones and the dropping of sanctions, members of the FPÖe renewed their call for the launching of a Europe-wide Freedom Party. The Hungarian philosopher G.M. Tamas has described the FPÖe as part of a much wider movement of post-fascism, a series of policies, practices, and ideologies that have little to do, except in Central Europe, with the legacies of Nazism. In Central Europe, he says, familiar phrases have different echoes, and vigilance is needed, "since, historically speaking, innocence cannot be presumed."

The Report of the Three Wise Ones, and the long series of treaties and legal conventions and commitments cited in it to which Austria continues to adhere, are part of an effort to build transnational codes, and institutions. And in this case, at least for now, it is working.

The second deep play, regarding biotechnologies, has to do with fantasies of abolishing disease and immortalizing life, sometimes at the expense of human rights, informed consent, equity and access. The American physicists went ahead with the hydrogen bomb, as Oppenheimer memorably put it, because it was "technically sweet." So too today physicians and patients often go ahead with heroic experimental trials because they are caught up in what Prof. Mary-Jo Good calls the biotechnical embrace, doing what technically can be done under the Hippocratic formulation of preserving and extending life, because it can be done, sometimes at the expense of the good death. Again Manfred Deix captures some of the fantasies, as in his cartoon of a genetically engineered pig, altered to be already a huge sausage, or his cartoons of various monsters -- think post-Chernobyl fantasies of mutants -- but monsters who have voting rights.

Xenotransplantation is one site among the new biotechnologies, where because the science is so hard, there is some time to experiment with some creative thinking towards new institutions and new ways of bringing into being an informed citizenry on a global scale that can provide civil society oversight, accountability, and decision-making. I've been watching in particular the efforts of Dr. Fritz Bach, the Lewis Thomas Professor of Medicine at Harvard, who incidentally is also Viennese born -- his grandfather and mine, both well known Viennese rabbis, I'm sure knew each other -- and who has directed genetics and immunology research labs in Wisconsin, Minnesota, and Boston, but also for

five years here in Vienna, and who has called for a moratorium on clinical trials in xenotransplantation. Xenotransplantation, like toxics, is a transnational issue. Old institutions of medical ethics are insufficient. The threat of xenosis that could unleash a pandemic like HIV-AIDS, however small the risk, is not something that can be dealt with in medical ethics models of doctor-patient relations, or hospital ethics committees, or even national level regulatory institutions. Older methods of self-regulation by scientists in the Asilomar style of dealing with the fears about recombinant DNA in the 1970s seem no longer possible or adequate, and the recent experience of Monsanto with the Terminator Seed in the controversies over genetically engineered crops show that the refusal to engage in public consultation can lead at minimum to a public relations fiasco. Dr. Bach has been experimenting not only with education modules at the high school, church and grassroots level; and with national committee structures at the political level in several countries both first and third world; but also with new modes of global web-based public consultation seeded with a network of opinion leaders in various countries. It will be interesting to watch this and other experiments in new institution and public critical knowledge building.

And finally a very brief word about the Yanamamo, and the forthcoming publication of *Darkness in El Dorado* by the investigative journalist Patrick Tierney. We have known for a long time that Napoleon Chagnon's accounts of warfare and its sociobiological basis in the linkage of male aggression to reproductive success was contested by many other ethnographers of the Yanamamo. As to how much ethnographic films should be just film verite documentary and how much setting up and editing for didactic purposes, this was a debate of the 1970s in which Tim Asch was a central figure: Tierney makes a little too much of Asch and Chagnon staging films; but Chagnon's defenders go way overboard in asserting that there is nothing at all of film-making tactics in, or of finding venues for, Asch's important films. And we have known for a long time that James Neel's work with the Yanamamo was funded by the American Atomic Energy Commission, as was much biological research after the War. It does not seem far fetched that populations in South America could have been control groups for work investigating the effect of radiation after Hiroshima and Nagasaki, in relation to studies on low level

radiation accumulation in human populations in the Marshall and Aleutian islands, the radiation experimental releases over Midwestern populations, and other radiation experiments. The Yanamamo in any case provided a well known and much contested model for population genetics and sociobiology. The new allegations are first that the Yanamamo may have been used as a natural experimental population in ways reminiscent of the Tuskegee syphilis experiment, that it might have been ill considered to have used live attenuated Edmonton B measles vaccine with a population that had no previous exposure to measles. A further attenuated vaccine (the Schwartz vaccine) was being phased in the U.S. and Venezuela. Neel got his Edmonton B vaccine donated by two pharmaceutical companies -- an issue still very much alive today of pharmaceutical companies taking philanthropic tax benefits for donations of medicines being phased out or near expiry to third world populations, in this case said by many at the time to be dangerous and counter-indicated for previously unexposed populations -- and that whether or not the inoculations unintentionally helped trigger a measles outbreak into the 1968 epidemic, the medical care he and his team provided may have been too little and even perhaps was interested not only to observe the natural course of an epidemic among a previously unexposed population but also to test hypotheses about the immunological superiority of headmen over others in small populations again leading to their reproductive success. Secondly, in more sustained fashion, the allegations are that Chagnon's intervention into the local political dynamics with trade goods, and with bringing together feuding groups for purposes of filming rituals, lead to incidents of the violence that he portrayed as natural or primordial, and which had unintended but further political fall-out including helping mining interests and the military interests in Brazil resist giving to the Yanamamo constitutionally promised land rights and territorial demarcation.

It is too early to make any judgments on these allegations, but in the end they may not only in the end turn on intent -- charges that Neel's crew caused or exacerbated the 1968 measles epidemic seem overdrawn and they are not the center of Tierney's book -- but on the interactive effects of what one might call the hidden machineries of technologies of large scale multi-disciplinary research projects with cargo planes bringing

crates of medical, trade and film equipment, and descending upon small populations, recruiting large numbers of them as porters and stage crews, as well as medical subjects, usually without concern for the the pathogens that the outsiders might be carrying with their bodies. This should give us pause and cause for reflection upon not only how we deploy research projects but also how we represent them, that is, the relation between research results and how we collect information, and the conventions of erasing the apparatus of the scientific collection process in order to present descriptions of societies and data sets as primordial or natural. Tierney's book, even if flawed, is a fascinating account of such a large scale research project combining genetics, filming and ethnography, using many personnel, both outsiders and natives. Tierney's book is also an advocacy effort to intervene in a media war on behalf of Yanamamo beleaguered by miners, disease, and unfulfilled land rights commitments and social benefits. It has been at least one of the fastest ever disseminations of a call for reflection upon science and ethics across the Internet, and one that many of you have already participated in. The passion, and name calling, that the American and international press has delighted in fanning, signals that like the Austrian deep play, and those surrounding new biomedical technologies and agrobiotechnologies there is deep play here: psychodrama of antagonisms among scientists, deep passion, fantasy, status, and monetary investments beyond merely rational arguments and differences of perspective.

I want to end with a reflexive thought. I have tried to suggest "deep play" as an analytic device to explore charged sites of multiple levels of causation, explanation, and meaning; and "ethical plateaux" as sites where multiple technologies interact to create a complex terrain or topology of perception and decision making. I have also tried, albeit not enough and perhaps not successfully enough, to invoke humor via cartoons, paradoxes, ironies, ambivalences, and what the literary critic Homi Bhabha has called affiliative anecdotes as tools towards creating and sustaining a self-critical community. Bhabha comments on the rhetoric of these forms, saying "The uncertainty that the joke and affiliative anecdote casts on the production of knowledge goes beyond mimetic or epistemological paradoxes. It attaches to the very mode of address of modern thought in which the first person witness or teller feels uncertainty in judgment

[that's my position here], and the third person hearer has the freedom to speculate with what is only partial, piecemeal, and fragmented" [that is, the ethical moment]. This is he suggests an effort to renarrate the normative stories of modernity "from a position in which the very discourse of modernity is eviscerated and needs to be rewritten from a place other than its enlightened or civilizational origins."

What better place than Vienna to initiate such a practice?

Note

1. See *EASST Review* 19 (2000), nr. 4, 23-24.

References

- Ahtisaari, Martti, Jochen Fowein, Marcelino Oreja. 2000, Sept. 8. *Report to the President of the European Court of Human Rights and the Council of the European Union*. Paris. 39pp.
- Bach, Fritz, et al. 1998. "Uncertainty and Xenotransplantation: Individual Benefit versus Collective Risk." *Nature Medicine*, 4(2):141-44.
- Bhabha, Homi K. 1998. "Joking Aside: The Idea of a Self Critical Community." in Bryan Cheyette and Laura Marcus, ed. *Modernity, Culture, and 'the Jew'*. Stanford, California: Stanford University Press.
- Bunzl, John. 1997. *Between Vienna and Jerusalem: Reflections and Polemics on Austria, Israel, and Palestine*. Frankfurt am Main: Peter Lang.
- Bunzl, John. 2000. "Who the Hell is Joerg Haidar?" ms.
- Deix, Manfred. 2000. *Deix: Good Vibrations, Eine Retrospective*. Kunst Haus Wien. Wien: Museums Betriebsgesellschaft.
- Geertz, Clifford. 1973. "Deep Play." in *The Interpretation of Culture*. New York: Basic Books.
- Geertz, Clifford. 2001, Feb. 8. "Life Among the Anthros." *New York Review of Books*, pp 18-22.
- Gingrich, Andre. 2000. "A Man for All Seasons: An Anthropological Perspective on the Austrian Freedom Party's Cultural Politics." ms.
- Good, Mary-Jo DeIVecchio. 1996. "L'Abbraccio biotecnico: Un invito al trattamento sperimentale" in Pino Donghi, ed. *Il sapere della quarigole*. Spoleto: Laterza.

Guerses, Hakan. 2000. "Oesterreich, einmal anders: Ein Versuch, gemass Kanzler Schuessels Vorschlag in abgeruesteter Sprache die 'Strasse' zu verteidigen." ms.

Jahoda, Marie, Paul Lazarsfeld, and Hans Zeisel. 1933 *Die Arbeitslosen von Marienthal*. Leipzig: S. Hirzel. (English translation: 1971 *Marienthal: the Sociography of an Unemployed Community*. Chicago: Aldine, Atherton).

Mann, Charles. 2001, Jan 19. "Anthropological Warfare." *Science*. Vol. 291: 416-21.

Ottomeyer, Klaus. 2000. *Die Haider Show: Zur Psychopolitik der FPÖ*. Klagenfurt: Drava Verlag.

Tamas, G.M. 2000, Summer. "On Post Fascism: How Citizenship is Becoming an Exclusive Privilege." *Boston Review*, pp. 42-45.

Tierney, Patrick. 2000. *Darkness in El Dorado: How Scientists and Journalists Devastated the Amazon*. New York: Norton.

Wodak, Ruth et al. 1990. *"Wir sind alle unschuldige Taeter!": diskurshistorische Studien zum Nachkriegsantisemitismus*. Frankfurt-am-Main: Surkamp.

Wodak, Ruth and Richard Mitten. 1993. On the Discourse of Prejudice and Racism: Two Examples from Austria. Center for Austrian Studies Working Paper 93-4. University of Vienna. April.

Wodak, Ruth and Rudolf de Cillia, hsg. 1995. *Sprachenpolitik in Mittel- und Osteuropa*. Wien: Passagen Verlag.

Dissertation Abstract

Tiago Tavares Santos Pereira, *Changing places? The extension of research groups through European research collaborations*, D.Phil Thesis, 2000, University of Sussex.

This thesis analyses the importance of international research collaborations in the development of scientific capabilities at the research group level. Underlying this central topic are three main aspects. European research collaborations are at the centre of the European Union's research policies, to which European research institutions cannot be indifferent. Beyond such policy initiatives, research collaborations more generally are an increasingly common mode of scientific research. Finally, international research collaborations are particularly important for peripheral countries, like Portugal, providing important opportunities to develop links with researchers from the scientific centre.

At the intersection of studies in the sociology of science/economics of science/research policy, this study proposes an approach to research collaboration as practice and culture. It investigates collaborative projects between Portuguese scientists and collaborators in Germany, Spain, and the UK. The analysis of the processes, both at the macro and the micro-level, through which researchers construct, and maintain, wider networks sheds light on the motives leading researchers to collaborate. It shows that these factors are broadly shaped by the search for diversity among the collaborating research systems. It also highlights how the differences in culture are articulated within the collaborations, identifying three different types of collaborations, based on complementary skills, similar skills or learning collaborations. Finally, this approach also highlights the indirect benefits of international research collaborations for the research groups.

A model of research collaboration as extension is proposed. This suggests that through collaboration the research groups, rather than acquiring radically new capabilities, extend and reconfigure the culture of the laboratory through its interaction with diverse elements. In this sense, the research groups find the international research collaborations a resource for achieving increased

flexibility, in the uncertain world of scientific research. The analysis of formal and informal collaborations has further implications for European research policies aimed at promoting research collaboration.

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Governance & Science Group (GSG)

1. Our aims

We are a working group of critical intellectuals focusing on governance & science, particularly the recent efforts at opening up technological innovation and its regulation to wider constituencies. We are starting with a base in the UK but will expand as circumstances permit – initially to Europe and then further afield.

We intend to act as a catalyst for discussion among the various groups involved – NGOs, government, industry and research institutes. We will analyse the various strategies – actual or possible – which could be called 'governance and science'. That is, we will analyse interactions among multiple actors beyond the formal authority of government, as these relate to the legitimacy of decisions involving science or technology.

We will bring insights about the challenges, tensions and constraints which affect the prospects for new institutional arrangements. By raising critical questions, we will bring to bear traditions of dissent, both from within science and outside.

Our work will be partly internal for the development of our own analysis, and partly external. We will arrange our own seminars, as well as events in collaboration with other organisations

2. Context

Conventionally called 'Science & Governance', these issues have become central to European policy debate. They are responding to a legitimacy crisis – over prescriptive uses of science, monolithic notions of rationality and deterministic ideas about progress.

Technoscientific R&D is driven by pressures to commoditize resources. Government policy is driven by the dual aims of 'wealth creation' and 'the quality of life' – as if these were readily compatible. New technologies are promoted as safe solutions to society's problems, yet many people would define these problems differently.

Technology and its regulation have been framed by explicit and implicit commitments to particular

models of society, thereby excluding diverse public values. Official experts have incorporated ethical and cultural assumptions into their policy advice, yet government represents this as 'science', thus discrediting science as well as their own policy decisions. As universities and public-sector institutes become more dependent upon private finance, their staff become less credible providers of independent expertise for policy decisions.

Moreover, public controversy is characterized by open disagreements among various experts, as well as different approaches by national governments. Critics have found greater opportunities to challenge scientific evidence, while a single European approach has been difficult to formulate. Consequently, government claims for 'science-based' policy increasingly lack public credibility and trust.

As a remedy, government has devised several ways to pursue a more authoritative and legitimate science-based policy. They have sought to incorporate broader participation by diverse social actors, so that 'governance' procedures can extend beyond official government structures. They have acknowledged scientific uncertainty as grounds for delaying approval of contentious products, while extending precautionary measures.

Remedies should be informed by realistic diagnoses of the legitimacy crisis which faces all the major governmental institutions. This is why we call ourselves the "Governance & Science Group". We will pose critical questions about the main concepts and models in the current debate.

3. Concepts and models

Democratizing technology

Often technological developments are criticized as 'out of control' and therefore warranting 'societal control'. How are existing technologies designed to control resources and human behaviour in particular ways? How could they be designed differently, to solve different problems? What would count as democratic accountability of technology? Can there be a value-free science and technology?

Participation

Government has sought to involve 'stakeholder' groups in various ways – official advisory bodies, consultation, Technology Assessment exercises, etc. At the same time, official distinctions are drawn between 'scientific and other concerns'.

What role do stakeholder groups play? Are they relegated to 'non-scientific concerns'? Or will they evaluate the framing assumptions embedded in the science? How do official problem-definitions open or limit the terms for such involvement? The greater the 'participation', the greater the potential for government (or industry) to share responsibility with other constituencies – but on what terms? What are the prospects, limits and political dilemmas of shared responsibility? What provision should be made for communicating pluralistic viewpoints and dissenting voices to the wider public?

Expertise

For some expert advisory bodies, members are now being chosen to avoid association with material interests, thus restoring claims for 'independent' scientific advice. How are such interests defined? How does one find independent experts? Regardless of material independence, how does expert advice nevertheless remain dependent upon policy assumptions? What are the strategies for incorporating or marginalizing scientific dissent? How should dissent contribute to policy decisions? Can public funds be allocated for various constituencies to contract out research to address their own distinct agendas?

Uncertainty/risk

For risk-assessment purposes, regulatory agencies often downplay or deny predictive uncertainty. Why? When they acknowledge uncertainty, how is this understood – e.g., as merely technical imprecisions, as implicitly value-laden cause-effect models of risk, or as normative issues? What are the limits of risk assessment? How best to address deeper issues of ignorance and indeterminacy?

Precautionary science

A greater policy role is being played by ecologically-trained scientists, ecological models and new ecological research. Which versions of ecology are being favoured and which marginalized? What are their socio-political assumptions? How is science being redirected to

anticipate hazards? How does this priority complement or conflict with investment in innovation? How can precautionary science contribute to appraising several policy options for a given problem?

Accountability

Given the vested interests of international agencies and transnational corporations, how should they be held accountable for their investment decisions? How do their interests limit or influence the forms of governance & science? How do the recent initiatives in governance & science complement or conflict with the research sector?

As NGOs have more successfully influenced government or industry decisions, questions have been raised about whom they represent. What accountability should apply to the activity of NGOs or groups of selected citizens?

Trust

What are the reasons for public distrust in policy-related science and official science advisors? Is the fundamental problem really public distrust – or institutions which depend upon trust? What would count as a rational, informed basis for trust? What is the role of procedures, problem-framings and interests?

4. European Union initiatives

European Research Area

The European Commission seeks 'to establish a common system of science and technology reference to support the policy-making process'. While valuing European cultural diversity as a resource, this initiative seeks a common dynamic as a basis for answering policy questions. Perhaps implicitly, one motive is to devise a coherent scientific basis and defence of European regulatory measures vis à vis US challenges. In these efforts, how are European differences understood? e.g. as cultural differences which could be transcended through technical standards? as cultural values intrinsic to technical criteria? Exactly what criteria should (or should not) be harmonized?

Precaution

In its February 2000 communication, the European Commission set guidelines for the precautionary principle as a policy tool. Throughout Europe, how is the precautionary

principle being interpreted and used in practice? e.g. to re-legitimize specialist expertise for truth-claims? to highlight uncertainties and unknowns which were previously downplayed? to make policy dependent upon more complex ecological research? to broaden the basis for the social appraisal of technological and policy options? Also, what is special about precautionary research and the uncertainties it investigates?

Risk assessment/management

The European Commission has restructured its advisory bodies in order to separate risk assessment from risk management, and thus to protect scientific advice from political interference – or from the appearance thereof. However, are risk assessment and risk management really separable? What are the value-laden criteria for scientific evidence? How does scientific advice depend on policy judgements? How should it do so?

Text finalized in November 2000

GSG Members include the following:

(Institutions are listed for identification only)
Prof. Jacqui Burgess (University College London)
Glynn Ford, MEP
Les Levidow (Open University)
Sue Mayer (GeneWatch)
Erik Millstone (Univ. of Sussex)
Stuart Parkinson (Scientists for Global Responsibility)
Doug Parr (Greenpeace)
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The International Science Shop Network

A report by Loet Leydesdorff

An EU-sponsored workshop on "Living Knowledge: The International Science Shop Network" was held on the basis of a working document entitled "Science, society and the citizen of Europe". The document calls for involvement of patient associations, transport user groups and consumer organisations in defining and monitoring research activities and programmes that bring research and society together and helps to ensure that results match needs. More than 120 "science shoppers" and scholars from community-based research groups met in Leuven (Belgium) for a three-day meeting to discuss the creation of an international and a European network in tandem. See the nice portal at <<http://www.bio.uu.nl/living-knowledge/>>. Participants came mainly from the northern part of the EU, Canada and the USA, and from South Africa where this same concept is also used, with a few individuals from other countries (e.g., Japan, Israel). European science shops are very

much alive in The Netherlands, Germany, Austria, Denmark, and the UK.

Part of the immediate value of the meeting was the cross-connection with other, but similar activities in the USA and Canada. The latter are better known under the title community-based research centers. Of course, Dick Sclove has been a champion in communicating about these developments and the LOKA institute <http://www.loka.org/> therefore has been part of the consortium from the beginning (as have been the South-African, Rumanian, and Israeli initiatives).

The participants to the meeting agreed on a working definition of the common denominator which was formulated as follows: "A science shop provides independent, participatory research support in response to concerns experienced by civil society." Among other things, the LOKA institute is extending its database so that it can serve the European science shops as well, and in collaboration with them. The Science Shop in Bonn has taken the initiative of launching an

international journal entitled "Living Knowledge". A test issue was available at the conference.

Noteworthy is the Canadian program Community-University Research Alliances (CURA) of the Social Science and Humanities Research Council if only because of its size of Can.M\$ 24. The officer of this program, Peter Levesque, chaired part of the meeting informing us, among other things, that this money had already leveraged Can. M\$ 32 from other sources, and the Can. Institute of Health Research has put in another Can. M\$ 36, which may have an even larger leverage. Large-scale operations were also reported from the US-side. For example, Philip Nyden reported about the Center for Urban Research and Learning at the Loyola University of Chicago.

The present confluence of momenta seems to set a window for organizing not-commercially interested R&D with an academic orientation and with the wish to use academic freedom for serving the larger community. The representative of the science shop in Tilburg (The Netherlands) reported that this university has used the science shop questions for many years as a window for university research policies. These have entailed the funding of PhD places in case departments, clients, and the shop could agree on a mutually relevant research project. He reported, for example, on a project about water-management in rural areas that was taken up as a PhD project in the department of economics.

Let me also mention in this context our colleague Nicole Farkas of Rensselaer Polytechnic Institute in Troy (NY) who devotes her PhD project with support of the NSF and the EU to writing the history of this development. But it seems to me that we owe particular gratitude to the science shoppers and volunteers at the various universities who have kept the idea alive in a period when commercialization and fund-raising have often so dominated academic agendas. The change of the agenda at the European level was manifest by the presence of Rainer Gerold, the new Director of Science and Society in the Research Directorate-General in Brussels. The vitality of this conference technically organized mainly by Utrecht (and Groningen in collaboration) will show off. The spirit is highly academic and research-oriented. On the agenda are issues like "quality control," "impact on higher-education and research," "internationalization," etc.

A next conference will be hosted by the science shop of the two Northern-Ireland universities in January 2003. We hope to be able to meet also colleagues from Latin America and other parts of the world. Oh: let me mention Rumania: a science shop in collaboration with Groningen made possible with the help of funding of the Dutch ministry of foreign affairs. But this has to be an email. Look at the website (<http://www.bio.uu.nl/living-knowledge/>) if you wish to see more details. The email-list is accessible at <http://listserv.surfnet.nl/archives/livingknowledge.html> (without the hyphen!). One can access and unsubscribe or browse through the archive.

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From the President's Desk

At a recent EASST Council meeting in York, England, the EASST Presidency was transferred from Rob Hagendijk to me. I would like to offer, on behalf of all EASST members, heartfelt thanks to Rob for all of his hard work for EASST over many years. He has been President for the past four years and was Treasurer for four years before that. His energy, commitment and diplomatic skills will be sorely missed.

I would also like to thank the members of Council who recently stepped down, Günther Küppers and Maria Eduarda Gonçalves, and, of course to welcome our newly elected members, Geoff Cooper (University of Surrey, UK), Nadezhda Gaponenko (Russian Academy of Science), Joao Arriscado Nunes (University of Coimbra, Portugal) and Arie Rip (University of Twente, Netherlands).

After many years of service, Courtney Lake, who was our administrative and membership secretary, has also stepped down in order to concentrate on her own academic work. We are all very grateful for her efforts on our collective behalf. She has been replaced by Vanessa Dirksen who is working on her PhD at the University of Amsterdam.

The reason we met in York was so that we could have a look at the facilities for our next conference, to be held at the University of York in the summer of 2002 (July 31- August 4). York is a very pretty campus university, on the edge of the city. Even though it takes only ten minutes by bus or bike to reach the town centre, the facilities offered by a campus university will provide us all with additional possibilities for social and intellectual interaction during our next conference. The call for papers will be circulated early in the autumn.

Readers of the EASST Review are, by definition, EASST members. Nonetheless, I would like to remind you of the benefits:

- biannual conferences, which remain open to the wide variety of empirical objects, theoretical approaches and policy questions which occupy the community.
- workshops, in the non-conference years, on more focused topics. One was held in Lisbon in February about genetic modification and food policy. If you would like to know how EASST

can support any plans you have, please contact me.

- travel stipends for young researchers from eastern European and developing countries.
- the EASST Review. This is not a journal for research results but rather a forum for the discussion of important policy and teaching developments.

Remind your doctoral students to send summaries of recently completed dissertations for inclusion. If you would like to include any promotional material for publications, we can do so for a modest fee (approx. 160 euros). This will reach a very targeted audience.

The number of members is surprisingly low, especially when one considers how successful the conferences are. It is important that we increase membership in order to maintain and expand our activities. If you will be attending a conference, please contact Vanessa ([easst@pscw.uva.nl](mailto: easst@pscw.uva.nl)) who will send you EASST leaflets and membership forms. If your institution might like to join, please get in touch with me and I'll explain the institutional benefits.

Despite our low membership, the field remains very vibrant. Perhaps for the wrong reasons, such as the foot and mouth outbreak in Britain, the crisis on British railways, the collapse of a bridge in Portugal and the 'loss' of tens of thousands of human genes, politicians and the media are beginning to take more seriously the ways in which science and technology are embedded in our social and political lives. EASST needs the continued support of its members in order to provide a focus for continued research and teaching in STS.

In some ways, STS has fragmented in recent years, nonetheless EASST remains committed to its original broad approach and to promoting communication and co-operation between humanistic and policy-oriented studies of science and technology.

Together with Council, I hope that we can continue to engage in constructive debate on these issues over the coming years, both within and outside the community of STS scholars.

Sally Wyatt

Conferences and Calls for Papers

The Institute for Technology Assessment and Systems Analysis (ITAS), Germany and the VDI/VDE Information Technologies GmbH, Germany, are organizing an international congress entitled "*Innovations for an e-Society: Challenges for Technology Assessment*." This congress is supported by the German Federal Ministry of Education and Research and will take place from 17 to 20 October, 2001 in **Berlin**. Issues to be discussed will concern e-commerce, new media and culture, e-health services, electronic governance, e-work, security of the e-society, as well as new approaches and methods of technology assessment and innovation analysis. Further information on topics, dates and the call for papers can be downloaded at <http://www.itas.fzk.de/e-society/> or contact banse@itas.fzk.de.

Beginning this year the **University of Vienna** and the **Institute Vienna Circle** will hold an annual two-week summer program dedicated to major current issues in the natural and the social sciences, their history and philosophy. The title of the program reflects the heritage of the Vienna Circle which promoted interdisciplinary and philosophical investigations based on solid disciplinary knowledge. This year's program, held 16-28 July 2001, is entitled *Unity and Plurality in Science*. A unified scientific understanding of nature was once a widely-accepted aim of science and remains so in more than a few areas of contemporary science. In recent years, however, both the possibility and the advisability of unification have been questioned, with some arguing that pluralism should be prized in the sciences, perhaps for political as well as philosophical reasons. This course will consider questions about unity and plurality in science from a variety of philosophical, historical, and institutional perspectives. Specific topics to be covered include: 1. Theoretical unification in physical science. 2. Vitalism, materialism, and reductionism in biology. 3. Relativity, complementarity, and underdetermination: Metaphors of multiplicity in twentieth-century science and philosophy. 4. The Unity of Science movement and the Vienna Circle. 5. The

organization of scientific research. 6. Realism, reduction, simplicity, and explanation: Methodological perspectives on unification. Consult the IVC's Web page: <http://ivc.philo.at/visu/>

Organised by the Centre for Technology, Innovation and Culture (T.I.K.), **University of Oslo**, and held in Oslo on 20-21 May 2001, 21st century policies for sustainable technological innovation: The role of STS higher education will be the fourth and final international conference organised as part of the European POSTI project: "*Policies for Sustainable Technological Innovation in the 21st Century*". By sustainable innovation, POSTI refers to two different concepts: 1. sustainability-related objectives and measures incorporated in innovation processes or outputs; 2. innovation processes or outputs which aim directly at improving the present or future quality of the environment, in a broad sense. While POSTI encompasses ideas related to "clean technology" and "green innovation", it also incorporates aspects of sustainability in the interactions between social, political, economic and ecological spheres. Further information is available at <http://www.esst.uio.no/posti/cfp.html>

The aim of the *Theoretical Physics and Mathematics in Twentieth-Century Political Contexts workshop*, to be held in **Milan** on 25-26 May 2001, is to gather together scholars concerned with the history of theoretical physics and mathematics. It is expected that the presentations of their works invite the participants to reflect and discuss about various questions related to the relationship between theoretical scientists and politics in the twentieth century. Whilst there is an extensive literature on the relationship between experimental physics and politics in the twentieth-century, the interaction between theoretical physics and mathematics with power during the same period still deserves study and discussion. This is true both for the American context where the focus has been on the military-industrial-university complex and for the non-American context, although the latter has received

far less attention in historiography. Some of the broad questions the workshop should try to tackle are the following: How did the political environment in different national and international contexts affect the research and pedagogical practices? How did the political situation in Europe affect the migration patterns of European scientists to other countries besides the United States? What was the role ascribed to theoretical physicists and mathematicians in the ideology of national security and/or development? What role did they actually play? How did they negotiate their own status in view of the growing interests of the state in science and technology? To attend, please write to any of the following addresses: Alexis De Greiff, Istituto di Fisica Generale Applicata, Sezione Storia della Fisica, 20121 Milano, Via Brera, 28, Fax: ++39 02- 7200 1600, Tel: ++39 02-8057 309, Email: a.degreiff@ic.ac.uk; aleste69@hotmail.com; pasquale.tucci@unimi.

The next *NECSTS workshop* on Technological Practices and Innovation in Services will take place at **Roskilde University**, Roskilde Denmark on 3-5 May 2001. The purpose of this cross-disciplinary course for PhD students is to discuss recent research on the implications of new technology in services in relation to innovation. The course will take account of different ways to understand and conceptualise services, including economics and sociological perspectives. We are interested in all kinds of services, but will pay special attention to three areas: manual services (e.g. cleaning, repairing, catering etc.), social services, and knowledge intensive services. The course will, among other things, emphasise different attempts to understand the roles that employees can undertake in services in the context of technological changes. First and foremost we want participants to focus on the concept of strategy as a starting point for understanding how actors cope with technological change. We think strategy-making and "strategic reflexivity" can be central categories in understanding how new roles and identities are shaped in services. One assumption behind the course will be that services have become more complex in the sense that they are more differentiated and tied into multiple networks of mutual obligations. The new interdependencies, including intersectorial interdependencies, are to some extent enabled by the new technologies,

particularly information and communication technologies (ICT). By using such new technologies and through other initiatives as well, services become closely attached to other complementary services. In many situations, it becomes difficult, at least for the customer or client, to distinguish one service from another. Rather, what matters is the overall service process and the co-ordination among services. One example is the mutual co-ordination of social services within districts. This implies, on the other hand, that service activities have to be better "programmed" in relation to each other. Various kinds of strategic programming becomes more important for the service organisation, where the organisation seeks to ensure a role for itself by attempting to define and redefine the "scene" of services as well as the overall service flow. Given these changes Intellectual Property Right is still one, but not the only solution to the appropriability problems of the firm. In addition, firms create new roles, for example management roles and system-builders, in order to deal with these matters. The course will particularly focus on the application of ICT in services and innovation. Questions such as the following will be examined: What environment does ICT provide for service development? How is ICT used to introduce new forms of communication and new "common languages" in services? How does the single service organisation master this situation? Broader issues will also be addressed such as the applicability of "services" approaches to all sectors (since all have service elements) and how services contribute to other sectors. The course will be divided into four themes. In each theme there will be lectures followed by discussions in which the theme of the lecture will be related to the PhD students' projects. Further, the PhD students' projects will be thoroughly discussed in separate sessions by the teachers and fellow students. The PhD students must deliver a paper which describes a central issue from their PhD thesis. The course will take place in a hotel in Zealand (the island where Copenhagen is situated). The exact place will be communicated 1 April. The course is open to all PhD students within social sciences (including business administration) from Denmark and other countries. Participation is free. The course is based on active involvement of the PhD students' projects and active participation. The PhD student must deliver a paper of 15-20 pages from their project before 15 April. It may be a description of

the project or an article/a chapter. The papers will be commented by the teachers. The PhD students will also be asked to be opponent on two other papers. The participants will receive a compendium with articles and the PhD papers about 15 April. The course is part of the activities within the European NECSTS network (Net of European Centres in Science and Technology Studies), but all PhD students are invited. Application including name, affiliation, address, e-mail address and tentative title of the paper must be sent before 1 April to one of the two members of the Organization Committee, by post, e-mail or fax. They are Prof Jon Sundbo, fax 45 46743081, email sundbo@ruc.dk, and Assoc Prof Lars Fuglsang, same fax, email fuglsang@ruc.dk. The program will be updated at <http://www.ssc.ruc.dk/undervisning/phdseminarer.html>

Fashioning the Future: Science, Technology and Visions of Progress is the title of the Annual Meeting of the Society for *Social Studies of Science (4S)*, to be held on 31 October to 4 November 2001 at the Royal Sonesta Hotel, **Cambridge, Massachusetts, USA**. The deadline for the call for papers has been extended to 31 March 2001. Scientists and engineers have played a central role in refashioning the material and social worlds of modernity. They have provided key resources with which human beings and institutions imagine, and in part realize, particular visions of progress. These resources can also destabilize identities, threaten security and arouse resistance. For example, in biomedicine, genetic breakthroughs may allow us to remake the human body, profile individuals and populations, and commodify nature in unprecedented ways; in the information sciences new technologies promise to provide ready access to vast realms of information, facilitate new forms of human interaction and consumption, and enable new forms of state and corporate surveillance; in the military sphere, smart technologies may offer unprecedented accuracy and striking power to the armed forces of post-industrial states. These new knowledges and technological forms are materializing at the same time that processes of globalization are mobilizing novel flows of capital, commodities, ideas, technologies and human migration across borders - and so giving rise to new types of social and technoscientific experimentation. The risks, possibilities and

intellectual puzzles of such a moment invite conversation across scholarly and practical boundaries. Science and technology studies has been an interdisciplinary field since its inception a quarter century ago. In this anniversary year, we welcome contributions from scholars across the humanities and social sciences, as well as from scientists, engineers, policy-makers, industry officials and those active in non-governmental organizations. While panels showcasing particular issues or perspectives are always welcome, we also encourage panels that cross conventional boundaries, whether by combining perspectives from different disciplines, by juxtaposing scholars of different national or institutional backgrounds, or by staging dialogues between practitioners and social analysts of science. We invite proposals for entire panels and for individual papers. Abstracts should be submitted electronically in text format to: epd@enr.arizona.edu A completed copy of the 4S Abstract Cover Sheet/Pre-Registration Form below and a \$25.00 deposit (Visa, Mastercard, American Express, check or purchase order) must be faxed to 520-621-1443 or mailed to Engineering Professional Development, The University of Arizona, 1224 N. Vine Avenue, Tucson, Arizona 85719-4552. (Checks should be made payable to: The University of Arizona Foundation.) For more detailed information, contact the Program Chair: Hugh Gusterson (Program Chair) Guster@mit.edu. Hotel reservations (\$189.00 for singles or doubles) may be had by telephoning 1-617-806-4255 or faxing 1-617-806-4232.

The fourth international conference of the *Commission on the History of Modern Chemistry (CHMC)* of the International Union of History and Philosophy of Science will take place 3-5 October 2002. The Chemical Heritage Foundation in **Philadelphia (USA)** will host this meeting, entitled *Industrial-Academic Relationships in the Chemical and Molecular Sciences*. The general theme of the conference is the interactions between the chemical and molecular sciences, technologies, and related industries since 1900. Traditionally, studies in this area have employed a linear approach to the science-technology relationship. However, it is well established that such transfers are rarely uni-directional. We hope to encourage further a shift in emphasis toward multi-directional transfers. Knowledge, practices, transfer successes and failures, technology,

materials, organizational networks, management of R&D, and labor are all potential objects of study within these exchanges. Related themes include interactions with other research centers beyond the academy-e.g. national laboratories, military centers, experimental stations, NGOs, and colonial institutions. Papers are invited on and around this theme. Comparative and international perspectives are strongly encouraged. For more information, please contact: Leo B. Slater, Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106-2702, Phone 1 215 873 8224, Fax 1 215 925 1954, E-mail: lslater@chemheritage.org.

The *Postgraduate Forum on Genetics and Society (PFGS)* will convene for its fifth colloquium on 21-22 June 2001 at the Genetics and Society Unit, **University of Nottingham**. The colloquium offers the unique opportunity for post-graduate researchers across Europe in the fields of science studies, sociology, philosophy, history, law, cultural studies, anthropology and genetics to meet in an informal and friendly environment to present and discuss their research on aspects of the new genetics. If you would like to register for the colloquium or are interested in presenting a paper, please contact the colloquium organiser Filippa Corneliussen at lqxfc@gwmail.nottingham.ac.uk, Genetics and Society Unit, School of Sociology and Social Policy, University of Nottingham, Nottingham NG7 2RD, UK. The closing date for registration is 1 June 2001. See also: www.nottingham.ac.uk/~lqzweb/genetics/pfgs.

The *Joint Atlantic Seminar in the History of the Physical Sciences (JASHOPS)* will take place on September 28-30, 2001 at the Chemical Heritage Foundation in **Philadelphia**. The conference, entitled "Historical Interactions Between the Physical Sciences, Business, and Technology," will focus on the historical interactions between the physical sciences, business, and technology. The physical sciences, technologies, and industries have profoundly shaped the history of the world since the late nineteenth century. New scientific disciplines and global industries have been established, e.g., petrochemicals, polymers, solid-state electronics, materials science, pharmaceuticals, and biotechnology. Moreover, the physical sciences, technologies, and industries

developed early and had far-reaching connections with public sector-institutions, spanning the range from public health and environmental protection to national defense. These fields and industries have had dramatic effects on standards of living, global economic patterns and developments, as well as on worldviews. Submitted papers should be concrete historical investigations on any topic in the history of physics, chemistry, astronomy, biophysics, or the geosciences. Participants will be expected to integrate into their analyses broader issues relating to business history and the history of technology. Examples include the history of science-based industry, technological innovation in the public and private sectors, knowledge production and practice, regulation and risk, and the military-industrial-academic complex. Papers that address historiographical issues are especially welcome. All scholars are invited to submit proposals, although preference will be given to students and recent Ph.D.'s. Abstracts of 500-1000 words are due by May 11, 2001. If accepted for the program, completed papers will be due by August 10, 2001 to ensure availability for distribution prior to the conference. Abstracts and papers should be submitted to the following address: Thomas C. Lassman, Joint Atlantic Seminar in the History of the Physical Sciences, Chemical Heritage Foundation, 315 Chestnut Street, Philadelphia, PA 19106, USA. Electronic submissions should be sent to toml@chemheritage.org.

Agent XX: Women and Everyday Uses of the Internet Edited by Mia Consalvo & Susanna Paasonen. Proposal Deadline: April 30, 2001. Since the mid-1990s, cyberfeminist research has looked at women hacking the Net, using the medium for activism, as an artistic medium, and as a tool for networking and collaboration. Different renegotiations and redefinitions of sexuality, identity and agency have been under scrutiny, particularly in the context of virtual communities. This edited volume seeks to broaden this scope of investigation to the more mainstream, everyday practices of Internet use: to look at portals and other sites designed for women; homepage building; chats; email; dating services and online romance; ways of popularizing the World Wide Web. This is especially relevant as the Internet and especially the WWW become more ubiquitous and (for good and/or ill) more commercialized. We are

interested in investigating through different case studies how gender matters, and is made to matter, in online services and communications of various kinds. Doing this, we also want to lay emphasis on the continuities and connections between cyberfeminist investigations and the tradition of feminist media studies, in which both the gendering of users and the address of women as consumers have been central topics of research. This approach looks at agency not only as that of "content producers", artists and other professionals, but also that of consumers who use media for different means, derive different kinds of pleasures from it, and are addressed in specific ways. As the Internet, and its "shop window", the WWW, are becoming increasingly wide-spread and used media for communication, consumption, and other leisurely uses alike, it is important to analyze critically the ways in which these practices have been gendered, how they are entwined into the structures of everyday life, and how women make use of them. Agent XX is to be an interdisciplinary and international publication, bringing together writers with different theoretical, conceptual and methodological frameworks to discuss women as target audiences, different kinds of users and content producers. Authors interested in having their manuscripts considered for publication in this volume should send three copies of their manuscript by April 30, 2001 to either: Mia Consalvo, 127 Johnston Hall, Dept. of Journalism and Mass Communication University of Wisconsin-Milwaukee, Milwaukee, WI 53211, USA, consalvo@uwm.edu or Susanna Paasonen, Dept. of Media studies, FIN-20014 University of Turku, Finland, suspaa@utu.fi.

The research network, Sociology of Science and Technology (SSTNET), invites you to attend the session on the *Commodification of Knowledge* at the Conference of the European Sociological Association (ESA) in **Helsinki**, Finland from August 28th to September 1st 2001. You will find information on the SSTNET website at <http://www.mpi-fg-koeln.mpg.de/sstnet/news.html>. Modern complex societies are characterized as knowledge societies. Professional expertise and knowledge-based technology are needed to further develop these societies. Knowledge is also a central productive force in the "new economy." New modes of knowledge production have evolved and the

products are different from traditional scientific knowledge. Academic knowledge producers have an increasing interest in the commercial viability of knowledge and in the development of strategies that include among others setting up knowledge transfer agencies. For this purpose knowledge must assume the properties of a private commodity. Commodification may require a transformation from tacit into explicit, unstandardized into standardized, uncoded into codified knowledge and an emphasis on its exchange value rather than on its utility value. Changes in knowledge production and the incentives (or the pressure) to commercialize knowledge correspond with significant changes in the ethical presumptions of science and the normative orientations of researchers. As knowledge can be easily distributed via global communication networks, it can become an important source of revenue. At the same time knowledge needs special protection such as patents and other intellectual property rights to prevent unauthorized use. Access to knowledge is unequally distributed in society. With the commodification of knowledge, access problems are likely to become relevant. This tends to undermine the basis of the knowledge society. As a consequence, political measures are taken to improve access to information (e.g. information infrastructure initiatives). There are also movements that argue for the development of knowledge as a public good.

IT in Health Care: Sociotechnical Approaches, the International Conference, to be held in **Rotterdam** on September 6-7, 2001 by the Department of Health Policy and Management, Erasmus University, has issued a Call for Papers. In recent years, the importance of the 'social' has become thoroughly accepted within health care informatics. Whether labeled as 'social aspects', the 'organizational context' or 'human factors', it has become clear that a thorough understanding of these issues is crucial to information systems development. Within the field of health care informatics, scholars have started to develop and draw upon what we will call here 'sociotechnical' approaches: approaches that consider 'social' and 'technical' aspects as inextricably intertwined, and as equally important in information systems design, implementation and evaluation. These approaches sometimes borrow from developments in science and technology studies, where the

importance of studying the interrelation of 'social' and 'technical' elements has been a core tenet for quite some time. For these investigators, health care informatics is a fascinating field to explore because of the coming together of issues of professional work, patients' experiences and embodiment, and the development and employment of formal technologies. The conference is aimed to be modest in size, to allow in-depth discussions and continuity between sessions. Papers may deal with design practices, or with implementation or evaluation issues; they may consist of descriptive analyses of IT developments in health care, discuss the implications for practice in the field, or outline new ways of developing information systems. Both empirical and more theoretical discussions are welcome (the ideal paper should contain both). At this moment, confirmed plenary speakers are: Claudio Ciborra (London School of Economics), Ole Hanseth (University of Oslo), Eric Monteiro (Norwegian University of Science and Technology), Rob Proctor (University of Edinburgh), Joan Ash (Oregon Health Sciences University) and Marc Berg (Erasmus University). If you want to contribute to this conference, you should submit a title for your contribution and a one-page abstract BEFORE April 20th. The conference fee is 215 Euro. For PhD students, we have a reduced rate of 110 Euro. These rates include lunch and drinks but do not include lodging. Since the week of 6-7 September is a popular one in Rotterdam (it is the week of the World Harbour Days, to mention one event), hotels do fill up quickly, so book a room as soon as possible! See the conference web site <http://www.bmg.eur.nl/smw/ithc> for a list of hotels. You can register by sending us an e-mail with your name, affiliation and address; registration is definite upon reception of the conference fee. Please send all queries, applications and submissions ELECTRONICALLY to: ithc@bmg.eur.nl. Conference web-site: <http://www.bmg.eur.nl/smw/ithc/>

The Eindhoven Center for Innovation Studies (ECIS) at **Eindhoven University of Technology** will organize a conference on *The Future of Innovation Studies* on 20-23 September 2001. The conference will host a number of plenary sessions featuring some of the key contributors to the field of innovation studies. Speakers invited in

the plenary session include (stars indicate confirmed speakers): Koenraad DeBackere (Leuven), Giovanni Dosi* (St'Anna School, Pisa), Kathleen Eisenhardt (Stanford), Jan Fagerberg* (TIK, University of Oslo), Ikujiro Fujimoto, Ranjay Gulati (Northwestern), Bengt-Åke Lundvall* (Aalborg), Franco Malerba* (Bocconi), Kevin Morgan* (Cardiff), Richard Nelson (Columbia), Keith Smith* (UNU/Intech, Maastricht), Michael Song* (ECIS), Nick Von Tunzelmann* (SPRU, Sussex). In addition, a number of parallel sessions will be scheduled. A call for papers for these parallel sessions is now open. Topics of the conference include all areas of the social sciences perspective on the innovation process. Special emphasis will be placed on contributions in the area of the economics of technological change, innovation management, and sociology of innovation processes. Specific topics of interest to the conference include, but are not limited to the following: measurement and analysis of technology and innovation; the relation between innovation and performance; the contribution of intuition and creativity to the innovation process; habits and perceptions of customers related to newly developed products; innovating teams; the management of innovation; innovations strategies; technology policy and regulation; innovation in clusters and networks; intellectual property rights; (evolutionary) models of technological change; the history of technology; sectoral studies of technology dynamics; the link between institutions and innovation. Proposals for papers to be presented in the parallel sessions are invited in the form of an abstract of 250-500 words. Abstracts must be received before 15 May 2001. Authors will be informed about the decision of the review process before 1 June 2001. Accepted papers will be made available for conference participants, and are expected to arrive in Eindhoven a month before the conference. Presenters of papers in parallel sessions are expected to cover their own expenses, although a conference dinner and documentation will be offered. Assistance in reserving hotel accommodation (at various prices) will also be offered. The conference is also open for participants not presenting a paper. Proposals for papers can be faxed, emailed or snailmailed at the following addresses: ECIS Conference Committee, attn. Bart Verspagen, DG 1.21, Eindhoven University of Technology, PO Box 513, 5600 MB Eindhoven, Netherlands, fax +31 40 2474646, email b.verspagen@tm.tue.nl, tel. +31 (0)40

2472828, fax. +31 (0)40 2472607

Knowledge & Discourse 2, the **Hong Kong** event, is announcing a Call for Papers. We are now delighted to be able to announce that we are organising a follow-up conference to our 1st gathering back in June 1996: "Knowledge and Discourse: Speculating on disciplinary futures". The title is intended to be provocative and somewhat tongue-in-cheek - Hong Kong having a certain reputation! All discussions will be designed to address key questions or issues nominated by the speakers and coordinators. We will also have pre-conference workshops and conversations featuring plenary speakers, a debate between Steve Fuller and Bruno Latour, and a retrospective of the films of Trinh-Minh-ha, the Vietnamese film-maker and feminist scholar. For more information, please check the attachment, or if that fails to download, visit the conference website directly at: <http://ec.hku.hk/kd2>

The British Society for the History of Science and Société Française d'Histoire des Sciences et des Techniques announce a Joint meeting on the history of science in museums on 30 June - 1 July 2001 at Musée des arts et métiers, Paris. In recent decades many innovations in museums of science have ignored history, to concentrate on an exclusively modernist perspective, even when viewing the past. This has been linked to a disappointingly narrow notion of what should constitute 'the public understanding of science'. There are now signs of dissatisfaction with this approach and evidence of aspirations towards a richer public culture of science, in which both history and art will make substantive contributions in their own right. The meeting will take place at one site for such aspirations and will comprise reports and discussion of recent work, and plans (as well as dreams) for the future. Registration will cover refreshments and admission to the Museum. Participants will book accommodation themselves, but will be sent information on hotels, some of which will give a discounted rate for registrants. Offers of papers or other presentations should be sent (by 1 May) to: Dr Jim Bennett, Museum of the History of Science, Broad Street, Oxford OX1 3AZ, United Kingdom, jim.bennett@mhs.ox.ac.uk. Contributions are welcome in either English or French. Registration details (name, address, and

payment) should be sent (before 8 June) to: BSHS Executive Secretary, 31 High Street, Stanford in the Vale, Faringdon, Oxon SN7 8LH, United Kingdom. Registration fee: BSHS full members: £20; BSHS members/student/retired/unemployed: £18; Non-members: £22

Net News

The "Science Wars and Peace" workshop hosted last Spring at the University of San Francisco was recently rebroadcasted on the Web at <http://www.kusf.org/listen/>. It features David Stump, Stephen Kellert and Bruno Latour. Now that many scholars are moving beyond the contentious debates between scientists and social constructivists that has been called Science Wars, it is time to reflect on this dispute and develop new ways of approaching public understanding of science. Science Wars and Peace is a one day workshop that addresses the role of the humanities and the social sciences in the public understanding of science. For more information, write to David Stump at stumpd@usfca.edu.

Traveling to Vienna? A recently published regional map of sites related to the history of philosophy of science may serve as a more specific city guide: <http://scistud.umkc.edu/hopos/nl/5-2.pdf>

For the European Commission's IST Programme's KA II Newsletter, see <http://www.cordis.lu/ist/ka2/newsletters.htm>.

Theory & Science is an interdisciplinary, peer-reviewed journal devoted to the discussion of theory, science, and social change. At <http://theoryandscience.icaap.org/> the full content is gratis.

A Sociological Theory of Communications: The Self-Organization of the Knowledge-Based Society by Loet Leydesdorff (University of Amsterdam) specifies the model of a Triple Helix of university-industry-government relations for the analysis of the dynamics of knowledge-based

developments. The book is available not only as a paperback but as an online publication at <http://www.upublish.com/books/leydesdorff.htm>

The new edition of the HOPOS Newsletter is online. This edition features an article on history and philosophy resources in Brazil, and reviews of the following books: Boolos, Logic, Logic, and Logic; Huggett, Space from Zeno to Einstein; Golinski, Making Natural Knowledge. Please visit the webpage of HOPOS, the History of Philosophy of Science Working Group, at <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 most recent academic meeting took place at the University of Vienna in July, 2000; the next meeting will take place in Montréal, Canada in 2002. The HOPOS Newsletter is published electronically two to three times a year and features reviews of books on topics related to the history of the philosophy of science.

An international team of over 200 contributors looks at the literature of the history of science in some 500 entries on individuals (Einstein), institutions and disciplines (Mathematics), general themes (Romantic Science) and central concepts (Paradigm and Fact). The field has been construed broadly to include the history of medicine and technology and other related disciplines. For more information on the Reader's Guide to the History of Science edited by Arne Hessenbruch, see <http://www.fitzroydearborn.com/readgths.htm>.

There is a new electronic book, City Sites, multimedia essays on New York and Chicago, 1870-1939 at <http://www.citysites.org.uk>. City Sites is an open access electronic book published by the University of Birmingham Press, supported by the Arts and Humanities Research Board, and the Universities of Birmingham and Nottingham, UK. City Sites is the result of collaborative research by scholars from Europe and the USA and presents a pioneering approach to American urbanism utilising new multimedia technologies. The book consists of ten essays by leading scholars presenting multi-disciplinary study of the iconography, spatial forms and visual and literary

cultures of New York and Chicago from 1870-1939. If you would like further information on City Sites or the 3 Cities project contact Dr Maria Balshaw, Department of American and Canadian Studies, University of Birmingham, UK at M.J.Balshaw@bham.ac.uk

The American Institute of Physics has posted a listing of History of Physics syllabi at <http://www.aip.org/history/syllabi/>.

Cyberscience, a collection of over 300 links, is at <http://www.oeaw.ac.at/ita/cyberlinks.htm>.

"TA on the WWW", the comprehensive and interactive link collection on technology assessment, is at <http://www.oeaw.ac.at/ita/www.htm>.

NiBBS - News in Brain and Behavioural Sciences - was launched in February, 2001. At <http://human-nature.com/nibbs/>. The brain and behavioural sciences incorporate the most complex and rapidly developing fields of the twenty-first century. Each week scientists, scholars, journalists and the public hear of new ideas, findings, and controversies, but are often left without the contextual information, access to intellectual resources, and informed commentary that allow a meaningful and timely evaluation of the scientific and socio-political importance of any new development. The topics covered by NiBBS so far this month include the Human Genome Project, sex addiction, consciousness studies, pathological gambling, The Bell Curve, sex differences in the expression of emotion, maternal care and neuronal development, the efficacy of psychotherapy, pheromones, fathers and puberty, evolutionary psychology, suicide and income, the pill and partner choice, Darkness in El Dorado, theory of mind in chimpanzees and humans, the causes of schizophrenia, and much more.

'The Index Society' is at <http://web.inter.nl.net/users/FrankvanderMost/Ind exSociety/Index.htm>

Opportunities Available

The **Netherlands Institute of Scientific Information Services** (NIWI) invites applications to fill two senior positions in our research group. NIWI, an institute of the Royal Netherlands Academy of Arts and Sciences, aims at providing scientific information in the fields of biomedicine, the social sciences, history and Dutch language and literature. In addition, NIWI provides information on research and researchers throughout the Netherlands. NIWI's main office is situated in Amsterdam. Recently, NIWI has formed a new research department to respond to the transformation of scientific publishing, communication and information. The successful applicants will be part of a team that will ultimately consist of ten people. NIWI's research goals are laid down in our research programme (<http://www.niwi.knaw.nl/us/research/research.htm>). Our hypothesis is that the sciences, social sciences and humanities are in the midst of an informational turn. This has important, yet largely uncharted implications for the researcher. Studying these implications is the main objective of our research programme. For this reason, we wish to characterise the informational turn, study its properties, in particular its implications for the use and creation of scientific information by the individual research group and scholar. Although this means that many aspects of the development and of the social impact of information and communication technologies will be involved in our research, our programme differs from existing research efforts, in that it puts the researcher in central place. Many research projects in information and library science are related to the development of specific technologies or information sources. There has been far less research on how the development of ICT affects the conduct of scientific research. Yet, it is the combination of technological and social developments at research group or individual scholar level, which is largely responsible for shaping the future of scientific information and communication patterns and needs. We are also developing applied research. This is aimed at providing solutions to problems emerging from the practice of library and information services. Applicants should hold a PhD and be available to start work in the short term. They should moreover have acquired research experience in a

relevant field. They will be working towards answering one of the following questions: 1. How can we understand the differences between academic disciplines and research domains with respect to the use of ICT in information and communication? 2. What influence are the new virtual research institutes and networks of research institutes - which rely heavily on communication through the Internet - having on the production of knowledge? The research associates will be responsible for their own research project (one of the two mentioned above). They will be responsible for the acquisition of funding for additional research projects and submit grant applications. In collaboration with university researchers, some supervision of PhD students may be required. Location: Amsterdam, the Netherlands Salary: Remuneration will be based on a full-time gross salary of 7924 Dutch guilders per month in accordance with salary scale 11 in the academic sector Starting date: With immediate effect. For further information please contact: Dr. Paul Wouters, e-mail: paul.wouters@niwi.knaw.nl, or Drs. Repke de Vries, e-mail: repke.de.vries@niwi.knaw.nl. Please send applications accompanied by a C.V. and marked with vacancy number to: NIWI, Personnel Department, PO Box 951101090 HC Amsterdam, Netherlands, email: henry.duindam@niwi.knaw.nl.

The Faculty of Arts and Science invites applications for one limited-term appointment in the History and Philosophy of Science. The successful candidate will teach in several of the Faculty's academic units, likely including the Department of History, the Department of Philosophy, Science College and the Liberal Arts College's multi-disciplinary Great Books core curriculum. Applicants must hold a PhD in the area, some publications and concentration on the modern period. Applicants must have appropriate scientific formation and a willingness to participate in general education initiatives emanating from Faculty priorities. The above position is a full-time, limited-term appointment, beginning August 15, 2001 and ending May 31, 2002. Hiring is subject to budgetary approval.

This position is normally at the rank of Assistant Professor or Lecturer. Candidates will be expected to teach three courses per semester. Applications should consist of a letter of intent, a curriculum vitae, a list of publications, a statement of teaching and research interests and three letters of reference. Please forward all applications to the contact listed below. Review of applications will begin on March 15, 2001 and continue until the position is filled. Dr. Martin Singer, Dean, Faculty of Arts and Science **Concordia University**, 1455 de Maisonneuve Blvd. W., Montreal, Qc. H3G 1M8 CANADA, Telephone: (514) 848-2081, e-mail: msinger@vax2.concordia.ca, <http://artsandscience.concordia.ca>. In accordance with immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Concordia University is committed to employment equity and encourages applications from women, aboriginal peoples, visible minorities and disabled persons. Please direct all general inquiries about the Faculty to Dr. Martin Singer, Dean of the Faculty of Arts and Science. Telephone: (514) 848-2081, e-mail: msinger@vax2.concordia.ca Concordia University, 1455 de Maisonneuve Blvd. W., Montreal, Qc. H3G 1M8 Internet: artsandscience.concordia.ca

There are Post-doctoral Fellowships available at **Harvard University**. The Science Technology and Innovation (STI) Program - <http://www.cid.harvard.edu/cidtech/index.html> - offers post-doctoral fellowships in Science, Technology and Development under the auspices of the Biotechnology and Globalization project supported by the Rockefeller Foundation. The aim of the project is to provide research-based information to policy-makers and the general public on the role of biotechnology in the global economy with emphasis on its implications for developing countries. The project covers issues such as evolution of the biotechnology industry; biotechnology in international trade; intellectual property rights in biotechnology; biotechnology and international relations; bioprospecting; biotechnology in developing countries; environmental aspects of biotechnology; biotechnology and human health; and ethics, social values and biotechnology. The STI Program offers 10-month stipends of \$31,000, for the period of September 2001 through May 2002. Deadline is mid-March.

The **University of Manchester's** Centre for the History of Science, Technology and Medicine and Wellcome Unit for the History of Medicine is inviting applications for a Research Associate to join an ESRC funded project for three years to work with Prof John Pickstone on the recent history of a medical technology. Informal enquiries can be made to John Pickstone by e-mail at pickstone@fs4.ma.man.ac.uk. Application forms and further particulars are available at <http://www.man.ac.uk/news/vacancies> or from the Personnel Office, The University of Manchester, Oxford Road, Manchester, M13 9PL. Tel: 0161 275 2028; fax: 0161 275 2471; minicom (for the hearing impaired) 0161 275 7889; e-mail: personnel@man.ac.uk Please quote reference no. 127/01. Closing date for applications: 19 March 2001; we expect to hold interviews in Manchester on 29 March 2001.

The **Darwin Trust** invites applications for a postgraduate research studentship tenable at any UK university from graduates of any nationality, who wish to study for a PhD in the history or philosophy of science & technology. The scholarship will provide a maintenance grant of 7450 UK pounds (equivalent to Medical Research Council's scholarships), a travel grant where appropriate, and the necessary university fees. Candidates should hold, or be expected to obtain, academic qualifications equivalent to a First Class Honours degree from a British University and must have an application confirmed or pending for a postgraduate position within an appropriate university department. Preference will be given to candidate who propose moving on to another University or department. Applications should be lodged by 30 April 2001 with Professor K Murray, Institute of Cell and Molecular biology, University of Edinburgh, Darwin Building, Mayfield Road, Edinburgh, EH9 3JR, Scotland, UK, from whom application forms may be obtained. Tel ++ 44 (0) 131 650 5382, Fax ++ 44 (0) 131 668 3870

The Society for the History of Technology is offering the 2001 *Melvin Kranzberg Fellowship*, for doctoral students engaged in the preparation of a dissertation on any topic in the history of technology, broadly defined. The deadline is April 1. For details, see