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research and teaching interest to the requirements of the position; b) a curriculum vitae; c) a sample of written work; and d) sample course syllabi. Candidates should arrange to have three letters of recommendation sent directly to the Committee chair. Application materials should be submitted to: Professor Peter Dear, Chair, Search Committee, Department of Science & Technology Studies, 632 Clark Hall, Cornell University, Ithaca, NY 14853, U.S.A. Telephone: (607) 255-6234; Fax: (607) 255-6044; e-mail: jly5@cornell.edu. Application deadline: January 1, 2003. Cornell University is an affirmative action/equal opportunity employer. <http://www.sts.cornell.edu/>

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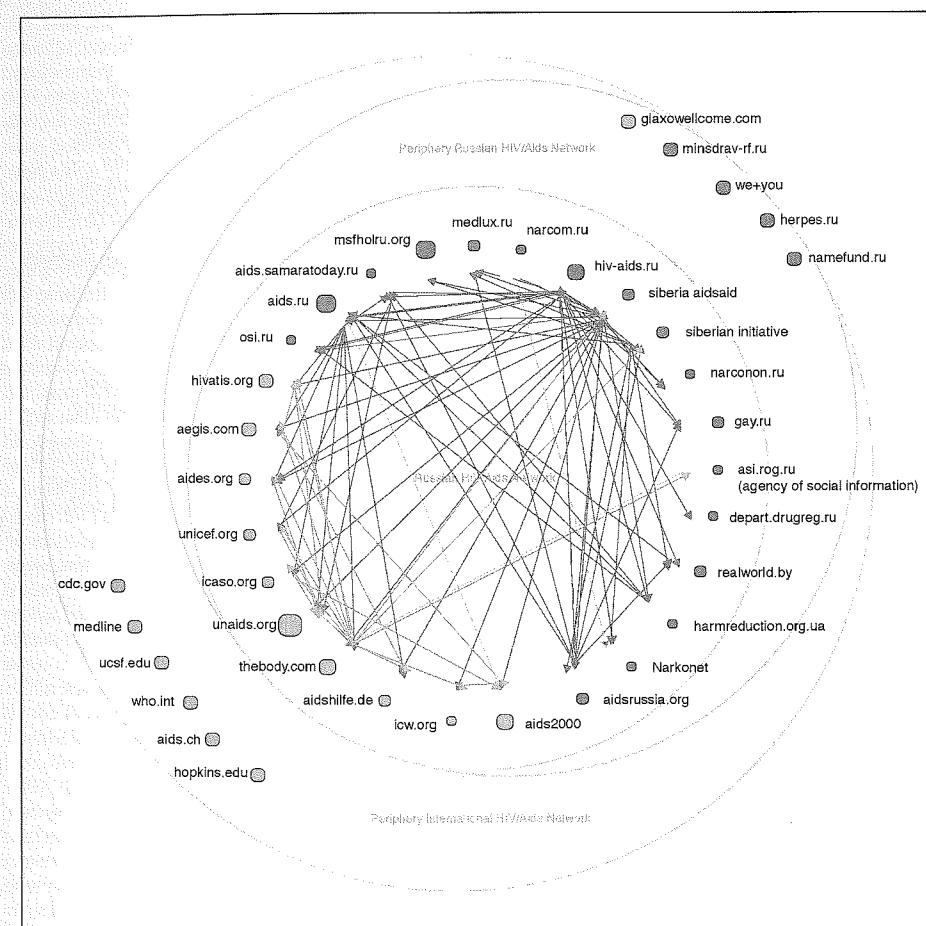
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see the article by Richard Rogers in this issue.

Contentious Science - discussing the politics of science

by Paul Wouters, Aant Elzinga and Annemiek Nelis

Royal Netherlands Academy of Sciences, University of Göteborg, University of Amsterdam

Since the constructivist turn in the sociology of scientific knowledge, it is no longer possible to speak about the relationship between science and politics. Whereas in the older tradition of the sociology of science, one could metaphorise the political dimension of research and the political role of scientists as an interface between two different social institutions - each with their specific norms, processes and procedures, this is hardly tenable from a perspective which stresses the constructedness of knowledge. There are several reasons for this. Political considerations have been shown to play a formative role in the production of scientific knowledge which has resulted in the notion that scientific knowledge is always political through and through. The same constructivist turn has not only recreated science as a political phenomenon, but has also redefined the political itself. Both science and politics seem to have been reconstructed as networks of power with humans and artefacts as the nodes and symbolic and material translation processes as the links between the nodes.

This does create a problem, though. It becomes necessary to analyze the co-production of science and social order(s). If everything plays around in a seamless web, how can we sensibly speak about the politics of science except in the thick description of case studies? Or does it not make sense anymore to try to make generalised statements about the politics of science? This would be rather ironic since scientific research seems to have become more controversial than ever.

This was the theme of two workshops organised by the Dutch graduate school Science, Technology and Modern Culture WTMC. The first, the Summer School, was held in September 2001, the other in May this year. We wished to discuss with the PhD students how one could analyse the political roles played out by scientific experts and indeed by research itself and also how one could systematically study the influence of political processes in knowledge creation. This is the more pertinent since PhD students are increasingly confronted with situations in which they are asked to advise the public in controversies relating to new technologies and

state of the art research. At least this is our experience in the Netherlands: the media and public institutes in general are quite interested in students of science, including PhD students, doing case studies on, for example, new reproductive technologies, the use of scientific expertise in parliamentary debates about drug policies, or the future of cloning humans and their tissues.

The central question around which the Summer School turned out to revolve is one of language: how can one in present-day "social studies of science speak" conceptualize the political without falling back to positions that are either implicitly or explicitly based on models of the political or of science that we have been deconstructing? We do not think that we found a solution, although several candidates did turn up. The extent of the problem was clearly demonstrated in a role playing exercise the PhD students did for a whole day. The challenge was to play out a scientific hearing to inform a jury that had to judge the credibility of the science used to back up statements about global warming put forward on the tables of political decision-makers. The jury consisted of experts from different fields. They had to write a report to their government clarifying whether a phenomenon like global warming actually exists and what course of action the government should take in the light of these conclusions. In the course of the hearing, the dispute about whether or not global warming exists, and if so what causes it, raged between the experts from the relevant scientific fields, social movements and interested parties. The PhD students had read the documents from the (Intergovernmental Panel on Climate Change) IPCC climate conference and the statements by the different parties before the exercise. Hence, they were thoroughly familiar with the line of reasoning of the actors they had to play out. Therefore it was no big surprise that the PhD students did their job very well. It was striking, we think, how all cliché-models of the political dimensions of scientific research dominated the discourse. The rationalist model in which "good science" should underpin and determine the political course of action; the

cynical model in which every political movement or economic actor can tailor the science to their needs and find the appropriate scientific spokes person; and the legal model in which scientific arguments are one of the many different arguments that should be weighed against other considerations.

The hearing itself can be seen as an exemplar of the latter. Given the fact that the majority of the PhD students were Dutch, it may come as no big surprise that seeking consensus was the main motive that drove the actions of the jury and the different parties alike. More surprising was that it proved very difficult for the participants to actually mobilize the insights generated by the last decades of science studies in this dispute. The approach that comes closest seems to be the co-production of knowledge model (Callon, 1999), which enables one to seamlessly include actors other than researchers and to equalize influences no matter what their motive. One pays a price for this, though: the actor-network theoretical perspective effectively represents all movements in one dimension. Therefore it makes by definition invisible analytical distinctions between different types of institutions or social domains. This is the same problem brought up by early critics of Latour that ANT effectively represents all scientists as political actors and science as politics.

The take we had on the problem in the Summerschool was that of the thought figure. We proposed to see the different models and mid-level theories about recent developments in the scientific system (mode II (Gibbons et al., 1994; Nowotny, Scott, & Gibbons, 2001); triple helix (Leydesdorff & Etzkowitz, 1998; Etzkowitz & Leydesdorff, 2000); postnormal science (Funtowicz & Ravetz, 1993; Funtowicz & Ravetz, 1999; Ravetz, 1999); strategic science (Cozzens, Healy, Rip, & Ziman, 1990; Rip, 2002); coproduced science (Callon, 1999) as thought figures of politics of science. This means that images of the interplay of science and politics were understood in two-tier fashion, as at one and the same time involving epistemic claims about natural and social realities, and as cultural goods through which institutional and actor-group identities are actively shaped in tandem with reconfigurations of institutions, networks and agency.

Earlier policy models, like the so-called linear model of innovation, Don K. Price's "truth speaks to power", or Robert Merton's CUDOS norms-model all had clear boundaries between science and society and were predicated on powerful metaphors that assumed clearcut boundaries between science and society. They can be seen as

the product of a post-World War II social epistemology, and once commonly accepted came to function as social facts despite an anemic picture of the states of affairs they were supposed to portray. In present-day discussions regarding the "new production of knowledge" or a new "social contract for science" the earlier images and metaphors are being replaced by new ones, this time predicated on a social epistemology informed by globalisation and fusion of different stakeholder interests. The new models and metaphors are no less anemic than their predecessors, but given the new context they serve to reinforce and legitimate new institutional arrangements where the accent is on hybridity and porosity.

The models and metaphors are nevertheless part and parcel of new forms of boundary work, this time in a co-production of "metascience", social organisation and economics of research in society at various levels (micro/meso/macro) that ought to be the units of analysis for a more reflexive mode of "new science policy studies" (SPS). Since the learning lies in reflection-in-action it is not unusual to find some of the scholars in this field playing a double role, for example as participant observers and experts in research foresight, social constructive technology assessment, consensus conferences around new technologies (e.g. nanotechnology), and ethical, legal and social aspects of science (ELSA) pertaining to opportunities and threats in for example biotechnology (cloning, GMO-foods). In such processes STS-scholars may have an important role to play, generating critical science policy knowledge in the very process of advising decision-makers. Therewith we come a full circle, as we are confronted with the same types of problems faced by our colleagues in the natural and social sciences that interact with politicians in the domain of global change where climate is both research and politics.

Of course, this creates a tensions between the participant/advisory role and the reflexive/analyst role, as the role play in our Summer School demonstrated. How do actors including scholars in our field themselves solve these tensions? This is apparently a question quite relevant to understanding the politics of knowledge making, yet one that cannot be answered by the usually rather abstract studies of mode II or triple helix interactions at the systemic level. It asks for case studies, either focused on the actors involved or on the communication between the actors.

This was the theme of the second workshop on the politics of science (Workshop Heterogenous Knowledge Practices) which we organised May this year. The question we put central in the

discussions with the PhD students was if a methodological focus on knowledge practices could generate new questions about the politics of knowledge that remain invisible in the studies mentioned above. Steve Epstein's study of the invasion of lay experts in the making of knowledge about Aids was one - among others - of the inspiring cases (Epstein, 1996). Epstein convincingly shows that science studies tend to "follow the actors" in a very narrow way, thereby in fact reifying the boundary around science that science studies are supposed to challenge. His narrative history is a successful attempt to lay bare the politics of knowledge by following a broader category of relevant actors. Epstein is not the first to do this (see e.g. the work of Stuart Blume (Blume, 1974; Blume & Catshoek, 2001)) but his study does represent one of the new approaches to be explicit again about the political dimension of science studies without falling back into (implicit) functionalist models.

The limitation of Epstein's work is that it focuses on the influence of lay experts in so far as they have organised themselves as social movements. Although this itself is still a topic that needs further exploration and more (comparative) case studies, there are many instances in which politics and policy do matter without a relevant social movement that can carry the invasion of the scientific by the lay experts. For example, the shaping of much of the genomics research agenda and the funding of nanotechnology research agenda's seems to take place without much social movement influence. It might be an interesting challenge for science and technology studies to study the politics of this type of hybrid agenda building and thereby maybe re-politicise the cultural study of knowledge practices.

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How Not to Think About Biotechnology

by Andrew Jamison

A review of *Our Posthuman Future*, by Francis Fukuyama (Farrar, Straus and Giroux, 2002)

Americans, it is sometimes said, have had a love-affair with science and technology for well over 200 years. Already back in the revolutionary period, the American national identity came to be associated with technical progress: Benjamin Franklin discovered electricity and was an enterprising craftsman as well as a "founding father", and Thomas Jefferson was an architect and scientist, as well as the author of the Declaration of Independence.

Later on, as the natives were defeated and the vast open plains were cultivated, it was machinery that paved the way: the mass-produced guns used by the cavalry in the Indian wars, the railroads that made it possible to move the population across the frontier, and then, in the 20th century, it was the automobile, electrification and the computer industry that, more than anything else, have come to define Americanism. In the United States, human development came to be seen in technological terms, and, as Ronald Reagan used to say back in the 1950s when he was a television salesman for the General Electric company, "progress is our most important product."

But then, of course the sixties happened, and for a brief moment the love-affair with technology turned sour. It became socially acceptable to criticize technology, and, as in Sweden, nuclear power plants and a few other symbols of progress were challenged by the emerging environmental movement, and, in some cases, technological development was actually curtailed. A group of activists even buried a car on the first Earth Day in 1970.

But the technology lovers quickly bounced back, with new toys and new products that they could manufacture and sell. And as in earlier periods of technological development - what economic historians call "long waves" - the radical innovations of the 1970s, in particular, the personal computer and genetic engineering, have simultaneously given rise to huge industries and to enormous amounts of hype. Information technology and biotechnology are seen by many pundits as the driving forces in a new era of

economic expansion, and, as in the past, the new technology is glorified throughout the American society, and, for that matter, the increasingly Americanized rest of the world.

The problem, however, is that many people, in the United States and elsewhere, simply don't like genetic engineering, or see any particular reason for its development other than corporate greed and commercial hubris. At least computers can be fun; you can play games on them. But genetic engineering isn't necessarily fun. It is more a matter of solutions looking for problems to solve. Ever since that day in 1972, when scientists managed to transfer some genetic material from one organism to another in a laboratory in California, the genetic manipulators have been looking for ways to make money out of their newly discovered techniques. And almost everywhere they have looked they have run up against opposition - from environmentalists, small farmers, the religious minded, and all those people who would simply not like to have to decide whether or not to check out the genes of their forthcoming babies. Genetic engineering has raised economic problems, environmental problems, and, of course, a range of ethical and moral problems that primarily have to do with power relations, and, more specifically, with who is to have power and control over processes of life.

Now Francis Fukuyama comes along and tells us that the real problem with genetic technology has to do with political philosophy. Like the good established American academic that he is, Fukuyama loves not only technology but he also loves the American constitution - that highly flawed document, which contains a lot of talk about human rights and human nature, but not a word about slavery. What bothers Fukuyama about genetic engineering is that all that "rights" talk simple becomes irrelevant and meaningless now that the genetic manipulators are able to change the meaning of being human. All of the other economic and environmental issues pale by comparison to this fundamental issue of "posthumanity".

Fukuyama has made a name for himself by having big thoughts, and this time, as in his earlier books, he is both inspiring and silly in just

about equal doses. The inspiring part is that he provides an interesting and well-written overview of the whole debate about the genetic determinism of human behavior, which has been raging for quite awhile. There is a basic disagreement among scientists about what role the so-called genetic code actually plays in human behavior, and Fukuyama presents the debate in a readable, if overly opinionated manner (he's on the side of the genetic determinists). He also has some thoughtful things to say about the new sorts of personality-affecting drugs - Prozac and Ritalin, in particular - and again covers a wide range of literature about their costs and benefits. Perhaps most inspiring of all is the openmindedness he shows about how to deal with the challenges of biotechnology. He rightly criticizes the fact that in the United States, as opposed to Europe, there are no proper regulatory institutions in place - neither laws, government agencies, technology assessment boards (that was closed down in 1995), ethical commissions, or even ethical rules for companies - all of which exist, in one way or another, in many, but certainly not all European countries. He also challenges what might be called the conventional wisdom in the United States, namely that policy making is best left to the private marketplace, and that consumers are the ultimate decision-makers.

But the words of inspiration tend to get cancelled out by the silliness, and, in particular, the strange idea of a universal human nature that Fukuyama would have us believe hasn't changed in any fundamental way since the time of Aristotle, the guru of all Western political philosophers. The problem with that, of course, is that Aristotle, and Thomas Jefferson, as well, for that matter - another Fukuyama hero - lived in slave societies, and their idea of human nature, among other things, didn't involve working for a living. Slaves by definition were not humans, and, with such a point of departure, their political ideas strike me as somewhat inappropriate for dealing with genetic engineering. Indeed, it seems to me that we need to think about the political aspects of biotechnology in a very different manner than Fukuyama.

The real challenge of genetic engineering is that powerful techniques for manipulating elements of living organisms are almost entirely out of public control and access. In keeping with the dominant neo-liberal belief system of our time, our politicians have given private commercial companies the right to experiment with these powerful techniques without much in the way of public oversight. Making

biotechnology and the biotechnology firms publicly accountable is the task at hand, not defending some old-fashioned notion of human nature that was never particularly convincing in the first place.

The Issue Crawler: the Makings of Live Social Science on the Web

by Richard Rogers

The Issue Crawler project at <http://govcom.org.oneworld.net> is really three in one - a software, visualisation project and 'live' social science project. Where the first, the software project, is concerned, we have built the Issue Crawler - a remote, server-side machine, operated through a desktop browser, that crawls a set of specified sites, brings back the sites' outgoing links, looks for common outgoing links (the co-links) in up to three iterations, and delivers the co-links by domain name (e.g., greenpeace.org) and by top- and second-level domain suffix (.gov, .com, .org, .edu, and their country-specific, subdomain equivalents) to an XML file. The Issue Crawler output, the XML file, is rendered into maps, dubbed 'issue network' maps; they make up an issue network atlas in an archive. These maps capture the state of a network of heterogeneous actors, configuring around an issue. Finally, we are able automatically schedule regular queries on the issue networks to watch them evolve over time.

I first hired two designers, graduates of the Design Academy in Eindhoven, to do not only the look, feel and object design of the piece of software as well as the entire site, but to deal with the myriad problems of navigation and use sense. I also secured 'proper users' at this early stage, former students of mine from the University of Vienna, who'd already suffered through 3 of my classes and who understand the theory and method of network location and issue mapping. These folks would be the co-cartographers and the user-testers, and attend a series of four mapping workshops on the 'Social Life of Issues', where we would push the theory and standardise the practice. (See <http://www.govcom.org/workshops.html>)

The Narrative Specification defined a 'narrative algorithm' which crawls sites, and returns co-links. It was specified to bring back not co-sites, but co-pages. This was the first conundrum. If you generate a map of relevant pages related to an issue, and more than one of those pages come from a single organisational site, the map may look strange. What's Greenpeace doing on the map three times? On the other hand, we are

looking for the most relevant material on the web per issue. If geocities or oneworld is hosting a set of distinct sites, then we don't want the crawler to bring back 3 geocities sites, and 4 oneworld sites, if geocities and oneworld are only hosting others - organizations divided from a mother host by a mere slash. Then you'd have quite the inaccurate picture. So the solution is two-fold. We build a 'switch' that allows the cartographer to 'match pages' or 'match sites', and once the network is returned to you, you may 'edit' it. If you've matched pages, you select the page of a site that appears most frequently, so there's only one site per map, but with the most relevant page. If you match sites, you delete the double sites. For the geocities case cited above, you can check for a network in two ways (pages the first time, sites the second time, say), compare them, and be reasonably assured that eventually you have the right nodes for the map.

Building in switches - allowing one or another method to be employed by virtue of turning on and off particular settings - has been our solution to many of the other conundrums. For example, the Narrative Specification also called for the starting points to be privileged. Starting points are a set of URLs one enters initially into the software, to be crawled to bring back a network of interlinked sites. Starting points are privileged in that you find their external links, and then you crawl the starting points and the external links together to find external links anew (which results in a set of actors, the 'pool' or 'population'). The next iteration of the co-link analysis returns your sample, in which you seek a 'network'. This 'biasing' of starting points is one 'trick' to the algorithm, for it ensures that the network you capture has a semblance of the starting points you entered. It meets some expectations of the issue network seeker, whilst also producing a few new unexpected actors in the outcome. (It also assumes some sophistication in choosing the initial starting points.) The Amsterdam theorist was against this, for she believes in 'brutal co-link' and hard network location analysis (my phrases), while the project scientist (yours truly) believes that

without privileged starting points you will get 'issue drift'. Global civil society, we both agree, is not really made up of single-issue actors (as old social movement theory has it), but rather of a more free-floating protest network potential (to paraphrase Heidegger) that moves from issue to issue. If you do brutal co-link analysis, and only match sites, you run the risk of having the same network for every issue. In the event, we've built in a switch to allow both methods. Privileging starting points also allows you to find a classic social network around your starting points, i.e., the starting points plus those actors that have (linking) affiliations with at least two of the starting points.

Another example of the switch solution is the number of iterations one requires in order to find a network. By iterations, I mean the number of times a set of sites are crawled and common external links returned. It's the network location heuristic. The minimum requirement is 2 iterations (with or without starting points privileged), so we have made this the default setting. Also the depth of the crawls of the sites was an issue solved by a setting. So on the crawler interface, there is a number of settings (privilege starting points [default=off], sampling iterations [default=2], crawl depth [default=2]). There's also a setting called 'use stoplist', with the default on. This blacklist is a site/page exclusion list that excludes software download pages and the like. Some cartographers protested that you actually may wish to map this sort of 'issue', so we allow you to turn off the stop list. A debate continues currently on whether you should be able to view that list (yes), but also edit it and save it anew (probably not). There you get into another kind of privileges debate, i.e., whether any user or just the administrator or some kind of user in between can save a new blacklist, and then this blacklist becomes the default list, etc. The moment a specification is changed or added for political or other 'vibe' reasons, it reverberates across the many other pieces of the puzzle.

The original project name is Live Issue Atlas, funded by the Internet Program of the Soros Foundation, New York. In discussions between Jonathan Peizer (of Soros) and myself before the grant was allocated, we debated whether the project was primarily about making a piece of software or making an issue atlas. My response was that we would make the software and the atlas, but the 'live' part would have to wait another day. In my view, an atlas, or a set of maps, becomes 'live' when they know when to refresh themselves. They would know to refresh themselves, I believe, if the network they're based on is hot, i.e., is increasing the frequency

of its page modification behaviour, perhaps increasing the link density of its network. In order to have a network (and a map) learn about itself well enough to refresh itself, it needs to first schedule a series of refreshing crawls, and note the differences in heat over time. The hotter it is in comparison to a set of previous crawls, the more frequently it should refresh itself. If it learns, the atlas is not only live, but it's also webby and self-reliant. It's webby in the sense that it is responding to Web dynamics, and is responsive to web users, who would be sensing for any number of (online and offline media) reasons that an issue is heating up. If the live atlas meets that expectation for those web users, then it's timely. (Perhaps it could be said to be performing live social science, as the first workshop brief put it.) Also, it could alert folks to particular issues heating up. Finally and perhaps most importantly, it's self-reliant - in the sense that it maintains itself, sort of like artificial life.

Some issues emerge if you try to design this, one of the larger of which is the effects of dynamic html. My solution was to exclude those pages from the refresh analysis whose timestamp is about the same time as the crawl was performed. We shall try to make the maps learn in future (here the famous phrase of the 'second phase' comes to mind). For the time being we have built in a scheduler for regularly scheduled refreshes. For operators sensing a heated issue, that refresh schedule could be made shorter, what have you. Thus the atlas will not be 'live' in the sense above, but the sets of maps will still be able to show 'evolution' of an issue over time through the scheduler feature.

But refresh what? One could plug the starting points back in, and determine quite wholesale changes, potentially, or, as our solution has it, especially after a long discussion with the Oneworld programmers (Cambridge University math graduates - this came in handy), we can note the smaller changes in the network (who's now in, who's now out), by taking the inputs of the last iteration as the new starting points. So, we are refreshing the 'network' on its own terms. The starting points become a little less relevant, and thus partially address some cartographers' concerns of bias in starting point selection, i.e., whether the 'network' is ultimately more a product of the starting points than web issue network dynamics.

Above, I mentioned the default number of iterations as well as the default crawl level. This brings me to the most frustrating aspect of the software, and that's the speed at which it returns a query (and the planning, and administrator crawl

cancellation moments, that will have to go into making the atlas proper). I'll preface this by reiterating that we're not Google, and we're not operating a database farm. We're operating a lonely Oneworld server, with some distance from a backbone. The maximum number of starting points that can be crawled - or is 'spec'd to be crawled; it could be more - is 300. Say you start with 300 URLs, you set the crawler depth to 3, and iterations to 3, the crawler could be working perhaps for hours. This was first brought to my specific attention when we discussed 'email notification'. The cartographer is notified by email when the network location crawling and co-link analysis are completed. (The cartographer also may move to his/her member's page [renamed cartographer's page], and note a completed crawl.) Really the only way to speed up this process is to pull a SETI, and do some distributed server computing. We are now looking into devising a piece of downloadable software - like the SETI screensaver - that has a machine, once slumbering or perhaps not slumbering at all, contact the server-side software, telling it that more bandwidth and machine power are available for crawling operations, and thereby extending a helping hand for the cause. (Ultimately such a construction may encourage the emergence of a user community.)

Moving to the thought behind node classification as well as the first visualisation scheme, some time ago we mapped the Russian HIV-AIDS network on the Web. Up until that point most of the issue network mapping work had been done from a 'govcom.org' perspective. That is to say, we have been looking for the composition of issue networks (and the extent of the debate on issues within them) amongst three to four leading actor types per issue - governments, companies, ngo's and scientific institutes. Noting that an issue is occupied only by com's and org's indicates perhaps a budding debate, whilst one occupied by gov's and com's a more matured, regulatory regime, for example. Knowing its composition (who's who) and its composition type (e.g., what we call an 'unholy alliance' by .gov and .com, as above) was enough to build theory, talk practice, make claims. The colleague mapping HIV-AIDs in Russia (as well as Belarus and Ukraine), however, was interested in the interplay between national and international groups, and whether the nationals defined the problem (and their audiences) in one way, and the internationals in another. She also was looking for the best-positioned international actors in the Russian network. (It turns out to be the Dutch Doctors without Borders site in

Russian.) In fact, she had many new questions because she came to the problem with a new pre-classification of node types. The breakthrough came when we actually mapped the two groupings, in a two-node-type scheme. Before coming to the breakthrough, I should mention that the visualisation of the Russian HIV-AIDS map was inspired by the conversations with Oneworld programmers, and the idea that a network is refreshed by using the inputs of the last iteration as starting points. We can visualise not only the final network but also those parties included in the last iteration that did not make the final network. Thus we used a kind of Turkish eye visualisation, a circle within a circle with the bottoms of both circles meeting. This shows who's in, and who's just out - and perhaps obviously (only to the cartographers) - from whom those actors just outside the circle would have to receive a link in order to make it into the inner circle, and count as relevant in the issue network on the Web.

We were interested in a different node type naming convention (international and Russian), and thus only a two-colour as opposed to the 4/5 colour gov.com.org.edu.country scheme. Recall that once the crawler returns your network, you may edit your network. This page is called the 'network tuner', where upon tuning and saving, you render your network into an actual map. At the tuner, you may edit the URLs; you may also edit the node names. (You also can raise the authority of your network, asking for only those actors who have received 3, 4 or more inlinks from the network actors.) Now, at the network tuner, we decided that you may also edit your node types, as well as the node colours. In those fields, the gov.com.org.edu.country scheme will automatically appear as suggestions (or defaults), but you may edit them. Once edited, you save your network which could just as well be with your own node naming, node type naming, and node colouring assignments. Thus, we have a generic issue network mapping tool, with the gov.com.org.edu.country as suggested frame only.

There are more details, but allow me to conclude with map viewing. The maps arrive as SVG files, which requires an adobe plug-in, viewer 3.0. In you've kept the gov.com.org.edu.country scheme (because you've kept the defaults, saved and rendered that kind of network), you may turn links on and off, and node types and links on and off, from a straightforward gov, com, org, edu-type legend. (It wouldn't make sense to turn off only node types and be left with just links, unless you're an artist perhaps. Though we may wish to view

collective link shapes at some point.) Intriguingly, if you have tuned and saved your network with a non-gov.com.org.edu.country scheme, your map legend will be dynamically generated, so you can turn on and off mylinks, and mynode types and mylinks. (I gest with the MyNegroponte allusion.) Here we still have to sort out the colour paletting for new and different maps so that they do not correspond to the gov.com.org.edu.country colourisation. Nevertheless, there it is - a server-side generic network location and mapping tool, based on

Dear Members

As this was a conference year, we have had the opportunity to meet. Indeed, over 500 of us did so in York this summer. The conference was a huge success and again I would like to thank the Local Organising Committee from the Department of Sociology and the Science and Technology Studies Unit at the University of York for their hard work. I hope the hassle of your months and years of effort has now faded and you remember only the good times. Further reports about the conference can be found elsewhere in this issue of the Review and at the following url:

www2.york.ac.uk/org/satsu/easst2002/report.htm

For the first time, we made it pretty well compulsory for conference participants to become members of EASST. This had the utterly intended consequence of massively increasing our membership and our income. We have been struggling to keep the Review going the past couple of years (which is the main reason why we have had only three issues instead of four in 2001 and 2002). We hope we are now on a more even footing. Both the budget and our overall information strategy (the Review and the website primarily) are under review by the Council and I hope to have more news for you by the time of the next issue.

If you have not already received a ballot paper for the Council elections by the time you receive this, you should do so very soon afterward. I

basic scientometric analysis, with settings to convince at least a portion of the webometric community. (In the next installment, we will write of our new visualisation scheme, developed with Andrei Mogoutov of the Ecole des Mines.)

Note: The Issue Crawler software has a public archive, at <http://govcom.org.oneworld.net>. Operating the software requires user privileges. Please contact the author at rogers@hum.uva.nl.

thanked them during the conference dinner and again in the covering letter accompanying the ballot, but they cannot be thanked enough in my view. Yet again - thanks to Roland Bal, Ann Rudinow Saetnan, Jane Summerton, Andrew Webster and Steven Yearley - who have served a four year term on Council. Each of them has made a great contribution to the work of EASST over these past four years. They will be missed, but as you will see, there are more good people willing to fill their places. Please be sure to return the ballots to me by the end of the year.

Finally, some very sad news. On November 20, there was a fire at the University of Twente. Luckily, no one was hurt but our STS colleagues, and others at Twente, lost their offices and everything that was in them. Someone has been arrested on suspicion of arson. A few moments contemplating what your working life would be like if you suddenly lost all your books, notes, computer disks, etc. will give you some idea of how difficult things must be for our Twente colleagues. Please be patient if you were expecting anything from anyone there and consider donating copies of books or hard-to-obtain reports and other grey literature. Up-to-date information can be found on their website (<http://www.utwente.nl>).

best wishes

Sally Wyatt
EASST President

Conference Announcements and Calls for Papers

The *International Society for History, Philosophy, and Social Studies of Biology* has issued a call for papers and sessions for ISHPSSB 2003, to be held at the **University of Vienna**, Austria on July 16-20, 2003. See also <http://www.phil.vt.edu/ishpssb/submissions/program.html>. The deadline is February 1, 2003. While participants are strongly encouraged to submit proposals for Panels, Roundtables, Discussion Sessions, or innovative and experimental sessions, individual papers are welcome as well. All Proposals must include an organizer and his or her address, including an e-mail address. There will be some travel funds available to support graduate students presenting papers at the conference. For further information about available funding, please contact Keith Benson, ISHPSSB Treasurer, 13423 Burma Rd. SW, Vashon Island, WA 98070 USA; Phone: (206) 543-6358; email: krbenson@u.washington.edu. The International Society for History, Philosophy, and Social Studies of Biology (ISHPSSB) brings together scholars from diverse disciplines, including the life sciences as well as history, philosophy, and social studies of science. ISHPSSB summer meetings are known for innovative, transdisciplinary sessions, and for fostering informal, co-operative exchanges and on-going collaborations. For further information consult the ISHPSSB web pages at <http://www.phil.vt.edu/ishpssb/> and/or Rob Skipper, ISHPSSB Program Chair 2003, Department of Philosophy, University of Cincinnati, 206 McMicken Hall, Cincinnati, OH 45221-0374 USA; Phone: (513) 556-6340; Fax: (513) 556-2939; email: skipperra@email.uc.edu.

Academics, professionals and other interested parties are invited to submit chapter papers for a forthcoming book tentatively titled, *The Social Aspects of Space Projects*. This book will collate works from the social sciences devoted to critically exploring the myriad of social, political, cultural, philosophical, legal, ethical and environmental problems and solutions that arise within space projects of all types. Subjects which might be suitable include, but are not limited to, the following: the values and motivations behind space exploration; the impact of space development on non-developed nations; the cultural meaning of the Search for Extraterrestrial Intelligence; the political history

of the Space Race; nuclear proliferation in space; environmental damage caused by space projects; public understanding of space science; war in space; the social construction of space technology; the use and abuse of international space law; gender, race and ethnic issues associated with the space industry; and the impact of science fiction on space travel ideas. The editor will consider both unpublished and previously published papers subject to copyright clearance been shown. Deadline for first draft (in electronic form) is January 31st, 2003. Authors and potential authors can contact the editor to discuss topics/length etc by writing to: Dr. Alan Marshall, Department of Sociology, Nizhni Novgorod State University, Nizhni Novgorod, Russia, Dr AlanMarshall@yahoo.co.uk.

The *Fifth Annual St. Louis Philosophy of Social Science Roundtable* is to be held on March 21-23, 2003 at the **University of Missouri-St. Louis**. Organized by James Bohman (St. Louis University), Paul Roth (University of Missouri/St. Louis) and Alison Wylie (Washington University at St. Louis), the fifth in the series of annual working conferences on topics in philosophy of the social sciences continues a tradition of meetings that bring together a diverse group of philosophers and social scientists to discuss a wide range of philosophical issues raised in and by social research. Abstracts on any topic in philosophy of the social sciences are welcome. We plan to assemble a program of papers to be presented in workshop format so that intensive discussion can be the focus of the meeting. We choose papers with the aim of ensuring a broad mix of topics and of presenters from diverse disciplinary backgrounds. We particularly welcome contributions from junior colleagues and colleagues new to the area. In this spirit, we have established an alternate year policy for participants; in general, we will give preference to new contributors over those who presented papers at the previous year's Roundtable. Selected papers from the Roundtable will be published in an annual special issue of *Philosophy of the Social Sciences* (see any March issue of *Philosophy of the Social Sciences* from 2000 onward for papers from prior St. Louis Roundtables). Send a ONE-PAGE ABSTRACT to any one of the organizers by DECEMBER 14, 2002. If you

would like to be on an email distribution list for future mailings, send a note to this effect to Jim Bohman at the email address below. And be sure to check the Roundtable web site for news and updates: <http://www.umsl.edu/~philo/roundtable.htm>. James Bohman, bohmanjf@SLU.edu; Paul Roth, roth@umsl.edu, and Alison Wylie, awylie@artsci.wustl.edu.

Articles are invited for a theme issue of *Knowledge, Technology & Policy* on Terrorism and Technology Policy. The attacks of 11 September 01 may not have been unimaginable but were certainly unexpected and deeply shocking. The subsequent war on terrorism, lead by the U.S.A, is still unfolding. KT&P would like to explore the technology policy issues inherent in fighting terrorism. We encourage general articles on terrorism and technology, putting recent events in the context of terrorism throughout time (from early civilization to predicted future threats) and geography (terrorism around the world). Specifically we are looking for papers that describe how technology has influenced terrorism, how terrorism has changed through the ages, the evolutionary role of information technology in terrorism, how information technology can be used to fight terrorism, and analysis of different technology policies to fight terrorism. Out-of-the-box ideas are encouraged. *Knowledge, Technology & Policy* is a hard copy quarterly that maintains pages at www.moted.org/kt&p. The publication date is still open. Contact Editor David Clarke at dsc@moted.org.

Envisioning Scientific Citizenship: Science, Governance and Public Participation in Europe, organised by the Vienna Interdisciplinary Research Unit for the Study of Technoscience and Society (on behalf of the OPUS Network - Optimising Public Understanding of Science; EC Framework Programme), is to be held on November 28 - 30, 2002 in the Kleiner Festsaal, **University of Vienna**, Austria. Throughout Europe, heated debates are underway over new forms of public participation in issues linked to scientific and technological developments. Policy makers perceive that it is increasingly necessary not only to promote socially acceptable research and development, but to cultivate, simultaneously, "scientific citizenship". Introducing this notion would mean defining rights but also conferring obligations to create new forms of informed engagement. The

objective is to give voice not only to stakeholders but also to other members of society in shaping future relationships between science, technology and society. When highly contentious public issues arise, in what concrete ways can participation by different groups and individuals be assured - and legitimised? Where and how will issues concerning technoscientific change be debated and negotiated? At which point and how should potentially controversial innovations be brought to the public arena? What can different countries in Europe, learn from each other in handling these issues? And finally, what does this imply for a culturally diverse Europe in terms of appropriate structures and procedures? The conference will take place near the end of the three-year OPUS project in the EC 5th Framework Programme (Raising Public Awareness in Science and Technology in Europe). OPUS is focused on exchanging knowledge and conducting analytical inter-comparisons amongst the different "cultures" of science-society relations in six European countries. It aims at opening up debate and questioning future directions to take in this domain, at all levels of European governance. The conference will be organised around six themes: 1. The Politics of Public Understanding of Science (PUS) 2. Communicating Science: Spaces of Interaction with Science 3. Publics: Consumers or citizens? 4. Transferability of good practice? European models and local contexts 5. Rethinking models of PUS for a European Research Area 6. PUS, Civil Society and European Governance. The website is www.univie.ac.at/wissenschaftstheorie/opus. For details contact Ulrike FELT (ulrike.felt@univie.ac.at) or Regina Danek (regina.danek@univie.ac.at).

Innovation in Europe: Dynamics, Institutions and Values is the title of a conference at **Roskilde University**, Denmark, on 8th -9th May, 2003. A call for papers has been issued. With the ambition "to become the most competitive and dynamic knowledge-based economy in the world", the European Union has recently engaged in a series of policy initiatives towards fostering innovation and technological development. This is taking place at a time when some fundamental social dynamics related to the innovation process are in a process of rapid transformation, like for example, new regimes for knowledge production and appropriation, changing social values on science, the emerging information society, rapid development of private risk capital markets/industry. These parallel

transformations, of policy and of social dynamics, are having a direct impact on the contemporary patterns of European innovation. The driving idea of this conference is to analyse the dynamics, institutions, and values that characterize the innovation process and technological development in Europe, with special focus on the EU. The conference is particularly interested on papers that have a perspective on European/EU dynamics, multiple-country/comparative studies, or exceptionally national experiences that have a European relevance, in the following topics: 1. Systems of innovation, institutions and values in Europe; 2. Knowledge dynamics and co-operation; 3. Intellectual property rights; 4. Private financing and public-private partnership for innovation; 5. Risk society and the governance of science; 6. Innovation for competitiveness and cohesion; and 7. Information society. Extended abstracts of 1-2 pages should be submitted no later than December 1st, 2002 to Kenny Larsen at: kennyl@ruc.dk. Further information can be found at the conference website: <http://www.segera.ruc.dk/>. The abstracts will be selected on the basis of their scientific excellence and relevance for the Conference, by a panel of experts made of the SEGERA-project partners. The decision will be communicated in January 2003. Registration to the conference will start on January 15th, 2003. Final paper submission is March 1st, 2003. The conference has the possibility of providing financial support for travel and accommodation to a maximum of 5 researchers submitting a paper. Special account will be given to young researchers from the EU, and to Eastern European participants. Please, contact Kenny Larsen for further information about procedures.

The first Nordic post-graduate workshop in *History of Science and Technology* is to be held on May 1 to 4, 2003 in **Bjerringbro, Denmark**. In recent years, studies of the history of science and technology have been conducted in an increasing number of institutional settings and from a variety of different perspectives. In the Nordic countries, young historians of science and technology often find themselves in relative academic isolation - working on individual projects and located at decentralized academic milieus of limited size. To help extend the network and interchange recent ideas and results among Nordic post-graduates we are pleased to invite our young colleagues to participate in a Nordic post-graduate workshop in History of Science and Technology to be held in

Bjerringbro, Denmark May 1 to 4, 2003. The workshop is open to all post-graduate colleagues (doktorander og doktorand-studerende, ph.d.-studerende, assistant professors, and other non-permanently employed researchers) working within the field of history of science and technology. Financial support for accommodation and the academic/social programme has been secured from a number of generous sponsors. However, participants must pay their own travel expenses to and from Aarhus and a limited conference fee (DKK 300). The workshop takes the form of a residential workshop hosted at Noergaards Hoeskole in Bjerringbro, Jutland. The Hoeskole presents rich academic and recreational facilities hopefully helping to further the networking of participants. To promote interactions and networking between the participants, the workshop has largely been modelled over the annual postgrad workshops of the British Society for the History of Science (BSHS). The workshop includes two invited lectures (Graeme J. N. Gooday, University of Leeds and Hanna Östholm, Uppsala Universitet) providing a historiographical and a Nordic perspective for the discussions. Each participant should prepare brief presentations of their current research project. Participants can also contribute a poster - in addition to or instead of the oral presentation. Additionally, the workshop program contains excursions to the Steno Museum (The Danish Museum for the History of Science and Medicine,) in Aarhus and to the Danish Museum of Electricity near Bjerringbro. For further information see the workshop's website <http://www.ivh.au.dk/nordicworkshop>. Deadline of registration: February 3, 2003.

The *Cultural Politics of Human Experimentation* is a one-day Workshop at the Research Center for Advanced Science and Technology, The **University of Tokyo**, Japan, Building 13, Room 215. December 7, 2002, 9:45-17:30. See <http://www.rcast.u-tokyo.ac.jp/index.html>. The workshop aims to look precisely back on some historical living-body tests as something never separated from normal medical treatments, to analyze scientific, political and ethical aspects of the tests, and criticize the medical ethics often reduced to personal morality such as the doctor-patient relationship, and to try to find a way to control runaway medical technologies.

The *8th European Congress of Psychology* will hold its next meeting on 6. - 11. July 2003, **Vienna, Austria**. Organised by the Austrian

Professional Association of Psychologists (BÖP) under the auspices of the European Federation of Psychologists' Associations (EPPA), the congress has as its theme "Networking". The conference is designed to constitute an international review of how psychology acts in dialogue with related disciplines. The Congress will provide a unique opportunity to bring together experts in the field of psychology and related fields to exchange ideas, information and the latest research findings. Keynote speakers will introduce a selection of important topics followed by symposia, parallel sessions and posters. I also want to highlight the teaching seminars "Tools for Practitioners", which will offer an excellent opportunity to increase the level of familiarity with different areas of psychology. The Call for Papers posted in this list is to encourage submissions of abstracts especially to the topic Media/New Media. Other topics are Organisational Psychology, Disaster Psychology, Health Psychology/Wellness, Life Span, Clinical Psychology, Psychotherapy and Political Psychology. The official language of the Conference is English. Presentations in the German language are possible but should not exceed one third of the programme. There will be no simultaneous translations. For further information and submission details visit the congress website: www.psycongress.at or contact: info@psycongress.at.

Science, Its Advocates and Adversaries is the theme of the 17th Summer Conference of the Institute of Contemporary British History at the IHR, **University of London**, 7-9 July 2003. Changes in Science, Technology and Medicine have profoundly affected all aspects of British life over the past century, from the kitchen to the battlefield, at home, at work, at leisure, in town and country. The capacity to kill and the capacity to cure and to extend life have never grown faster. For much of the twentieth century these changes were generally greeted with enthusiasm and awe as unquestionable improvements and the experts responsible for them were held in respect, though there was always a strand of opposition, in particular to armaments. In the later twentieth century the previously dominant deference to scientific expertise was replaced by widespread scepticism of scientific and medical authority. The conference seeks to explore how this change came about within the wider context of discussing the production and application of scientific knowledge and its impact on British society. Topics to be considered might include:

Who are the scientists?; Specific innovations and their impacts e.g. penicillin, the pill, the motor-cycle, the washing machine, the mobile phone; Household technology and women's lives; Communications; Diseases and their eradication; The environment; Popular attitudes to science, scientists and scientific expertise; R & D and the fortunes of the British economy; and Cultural Representations of science, technology and medicine. It should be stressed that we shall only accept papers which present the findings of new research. The conference will include a mixture of plenary speakers, panels and parallel seminars. Young researchers and postgraduates are particularly encouraged to apply. The deadline is 31 December 2002. Please send short proposals (no more than 300 words) for individual papers or panels to Dr Harriet Jones, ICBH, Institute of Historical Research, Senate House, Malet Street, London WC1E 7HU. Email: hjones@icbh.ac.uk Electronic submission is preferred.

The Local and the Global: Contexts in Science and Technology, the Graduate Student Conference, is to be held in April 2003 at the American Association for the Advancement of Science Headquarters in **Washington, DC**. Abstracts are due by January 30, 2003. The conference is an opportunity for graduate students to present their research in areas concerning science, technology and globalization, particularly as they relate to the concerns raised in the post-9/11 world. It will take place in conjunction with a workshop on science and technology policy careers planned by the American Association for the Advancement of Science, and immediately follow their annual S&T colloquium. Abstracts (up to 250 words) for a 10-15 minute presentation should be submitted by January 30, 2003 to stglobal@vt.edu. Submitted abstracts will receive a response by March 1, 2003. Final papers will be included on the conference website. Travel funding may become available for a limited number of presenters. Students in need of travel funds should indicate so when submitting their abstract. There may be a small (\$25 or less) conference fee. The organizers welcome submissions from graduate students whose research focuses on challenges in the global science and technology arena. We are particularly interested in research that concerns science, technology and globalization in relation to (but not limited to): Science and Technology issues in the post-9/11 world; Technology transfer, international investment, and intellectual property rights; Terrorism, public safety, public health and

critical infrastructure; Challenges to institutions, civil liberties and civil rights; Science and technology in support of nation-building and development; Science and technology from non-Western perspectives; and Multinational corporations and international regulation. The conference is sponsored by George Mason University, School of Public Policy; George Washington University, The Center for International Science and Technology Policy; Virginia Tech, Science and Technology Studies Program. Further information on previous conferences, area lodging, schedule etc. is available on the conference website at <http://www.gwu.edu/cistp/stglobal.html>, and will be updated regularly. If you have any questions, please contact either of the following organizers: David Bruggeman, dbrugg@vt.edu, Christine Pommerening, cpommere@gmu.edu, Edith Webster, ewebster@gwu.edu or Meighan O'Reardon, oreardon@gwu.edu.

The International Conference on *Women scholars and institutions* will be held in **Prague**, June 8-11, 2003. It is organised by the Commission Women in Science of the International Union of History and Philosophy of Science/Division of History of Science (IUHPD/DHS) and the Research Centre for the History of Sciences and Humanities founded by the Czech Academy of Sciences and Charles University, Prague.

The conference will focus mainly on historical themes, however, gender and sociological topics will be included, as well. By women scholars we mean researchers involved not only in sciences, medicine, technology, but also humanities. The term "institution" is understood in a broad context. It includes: universities, scientific, technical and learned societies and academies, research and educational institutions and organisations, scientific communities and scientific schools, means of communication (e.g. journals, scientific meetings), prize committees, boards of funds, formal and informal networks and associations (supportive networks, communication networks). Analytical and comparative approach (local, regional, international and multicultural) will be preferred to pure biographies. Topics focusing on cultural diversity or multicultural perspectives will be encouraged. All historical periods will be included, however, papers drawing on 19th and 20th centuries would be welcome.

If you wish to attend the conference, please send a short note with your name, postal and e-mail address and feel free to forward this

announcement to anybody who might like to participate. Persons who will express their interest in participation before October 1, will receive the First Circular after October 15. Organizing Committee: Ida Stamhuis, President of the Commission and Head of the Programme Committee, Vrije University, Amsterdam; Soňa Štrbáňová, Ph.D., Head of the Organizing Committee, Research Centre of History of Science and Humanities, Prague; Antonín Kostlán, Ph.D., Head of the Research Centre of History of Science and Humanities, Prague.

Contact Person: Mgr. Kateřina Mojsějová, Research Center for History of Sciences and Humanities, Legerova 61, 120 00 Praha 2, Czech Republic. Phone: (+420) 22199-0617; fax: (+420) 22494-3057; e-mail: mojsějov@vcdv.cas.cz or katerinam@email.cz

The Department of Science & Technology Studies, **Cornell University**, is hosting a conference, *Connecting S&TS: The Academy, the Polity and the World*, to be held September 26-28, 2003. This meeting will be the first of a triennial Cardiff, Cornell, and Harvard conference series superceding the old Bath quinquennial series.

In the past decade and a half, S&TS has evolved intellectually. It has built institutional strength, and forged links with other disciplines. New communities, and policy relevant areas have come within its purview. S&TS has begun to make its mark in economic theory, anthropology, music, environmental governance, legal discourse, science education, and science policy.

A broad range of public institutions—from funding agencies to science museums to transnational NGOs—are beginning to incorporate S&TS insights into their thinking. This international conference will take stock of the widening relevance of S&TS, reflecting on the novel problems and opportunities. There are thus two topics, the new links and the very process of creating, sustaining, and cutting links.

The conference organizing committee invites submission of one-page abstracts on topics related to these themes by January 15, 2003. Some funding may be available to help support travel expenses for participants.

Organizing Committee, Connecting S&TS Conference, Department of Science & Technology Studies, Cornell University, 632 Clark Hall, Ithaca, NY 14853, USA. Abstracts can be e-mailed to: STSCConnections@cornell.edu.

Net News

The 9th issue of the on-line journal FQS is now available at <http://www.qualitative-research.net/fqs/fqs-eng.htm>. As mentioned in the Editorial, we are pleased to announce that we had an overwhelming amount of contributions and we have decided to manage this situation by devoting two issues to the topic of subjectivity and reflexivity (Part II will appear in May 2003). In the current issue, in addition to articles, linked directly to the topic, you will also find selected single contributions and review essays and notes. Furthermore, we started in FQS 3(3) a new debate on "Doing Successful Research in the Social Sciences--Ethnography of the Career Politics of an Occupational Group."

NETFUTURE: Technology and Human Responsibility, the web journal has published its recent issue with a piece by Langdon Winner on "Complexity, Trust and Terror". See Issue #137 at <http://www.netfuture.org/>.

'Psychology Constructs the Female' by Naomi Weisstein has been published at <http://www.cwluherstory.com/CWLUMemoir/psych.html>. Written in 1968, this is one of the founding documents of feminist psychology. One of its strengths is that it addresses both the ideological aspect of psychological theory and the deep sexism of the social relations of the profession. Its author was subsequently struck down by chronic fatigue syndrome, and her husband, the distinguished radical historian Jesse Lemisch, provides further context for her and her work in Lemisch, Jesse and Weisstein, Naomi (1997) 'Remarks on Naomi Weisstein' <http://www.cwluherstory.com/CWLUMemoir/weisstein.html>. See also: 'Feminist Psychology, Psychology of Women & Gender' (2001) <http://www.utexas.edu/depts/wstudies/publications/wslst/psych.html>.

The new edition of the HOPOS Newsletter is now online. This edition features an article on history and philosophy resources in Québec, and reviews of the following books: Boi (ed.), *Science et Philosophie de la Nature: un Nouveau Dialogue* (2000); Hacohen, Karl Popper, The

Formative Years, 1902-1945: Politics and Philosophy in Interwar Vienna (2000); Hacking, *The Social Construction of What?* (1999); Jackson (trans.), Baron d'Holbach, *The System of Nature*, vol I (1999); Wilson, *The Logic and Methodology of Science in Early Modern Thought: Seven Studies* (1999). Please visit the webpage of HOPOS, the History of Philosophy of Science Working Group, at: <http://scistud.umkc.edu/hopos>

On the Newsletter page, you will find the current edition (Volume VII, Number 1) on the right-hand side. You will need Adobe Reader to read and print the Newsletter. 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 scholarly meeting took place in Montréal, Canada in June, 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. For further information, contact the editor, Saul Fisher, sf@mellon.org.

The Human Nature Review, <http://www.human-nature.com>, is a comprehensive and up-to-date web site for information, coverage of the literature, guides and links to forums, e-groups and other resources concerned with the understanding of human nature. It hosts *News the Brain and Behavioural Sciences*, a daily update of research in the human sciences, broadly conceived, reviews of recent books, e-groups on *Psychiatry-Research*, *Evolutionary-Psychology*, and *Human-Nature-Information*, an ongoing archive of links to matters of interest mental health workers, as well as large archives of papers and entire books in these and related areas.

A new website has been launched which provides most of the writings of Charles Darwin in cite-able form. Most are also fully illustrated with hundreds of images never before offered on the internet. Despite an impressive proliferation of Darwin texts on the internet- almost all exclude essential bibliographical information such as edition, publisher, place of publication, etc. Page numbers are nowhere to be seen. These factors vastly reduce the usefulness of these texts as they cannot be easily cited. It is impossible to know if one is reading a first or sixth edition. An example are the many online 'first editions' of Darwin's *Origin of Species*. Often these cannot

be correct as the text of the book contains the phrase 'survival of the fittest'- famously coined by Herbert Spencer and first included in the 5th edition of 1869. Many other online copies of the Origin purport to be the first edition yet contain the Historical Sketch, first found in English in the 3rd edition of 1861. Other historical texts on the internet contain many silent additions or omissions- footnotes are changed to endnotes or formatting altered without informing readers where this has been

Opportunities Available

Museum practitioners and scholars are invited to submit proposals to the 11th annual **Smithsonian Fellowships** in Museum Practice awards competition for grants to research and write about museological topics. Program guidelines and application information are available on web site <http://museumstudies.si.edu/fmp.htm>
Deadline: February 17, 2003 for fellowships beginning after October 15, 2003.

The Department of Telecommunications at **Indiana University**, Bloomington seeks three tenure track faculty. Candidates will hold the Ph.D., M.F.A. or other appropriate terminal degree, and present a promising program of (1) scholarly research using social scientific, legal, or historical methods related to electronic media/communications, or (2) creative activity in interactive new media. They also must be able to teach effectively in one or more of the department's undergraduate or graduate areas of concentration. On the undergraduate level, these are Media and Society, Design and Production, and Industry and Management. On the graduate level, these are Processes and Effects, Law and Policy, Management, and Interactive New Media Design. The department's overriding objective is to attract the best applicants in the field. We encourage qualified applicants whose research, creative activities, or teaching is in any of the graduate or undergraduate areas of concentration indicated above. In light of our current needs, however, we especially seek individuals, with teaching and research or creative interests in the following areas: management of media enterprises, with background in management, organizational communication, economics or any

done. If scholars are to find digital texts more useful, it must be perfectly clear which historical text is represented and they must be citable in conventional ways. The texts provided at this site are an attempt to do so for the writings of Darwin. The site also contains several texts digitized for the first time. This site will be a treasure to Darwin scholars, scientists, and historians around the world.
<http://pages.britishlibrary.net/charles.darwin/>

other appropriate discipline; the ideal candidate would strengthen our media management curriculum, especially at the master's level, and intellectually complement our technology, economics, and policy faculty; interactive entertainment design, with demonstrated competence in non-linear script-writing for interactive storytelling and game design; interactive sound and music; 3D modeling for character animation; or networked game programming; programming and content strategies; advertising in and promotion and marketing of new electronic media and technologies; and/or public communication campaigns, especially those focusing on health or political messages. The department offers a B.A. in Telecommunications as well as M.A., M.S. and Ph.D. degrees. It features a special program on the graduate level in new media (MIME) and features a joint M.S./J.D. degree with the IU School of Law. It also offers an undergraduate Certificate in New Media and Interactive Storytelling. Applicants should submit 1) a cover letter summarizing their qualifications for the position, 2) a current vita, 3) selected publications or a portfolio documenting recent creative work, including recent student work if applicable and 4) evidence of effective teaching. Three letters of recommendation should be submitted directly by recommenders. Direct questions and application materials to Professor Walter Gantz, Chair, Department of Telecommunications, Radio-TV Center, 1229 East Seventh Street, Bloomington, Indiana 47405-5501. Professor Gantz can be reached by phone at (812) 855-1621, fax at (812) 855-7955, or via e-mail at gantz@indiana.edu. Those interested in the position and invited to learn

more about our faculty and programs by visiting the department's Web site at <http://www.indiana.edu/~telecom/>. Openings begin August 15, 2003. Review of applications will begin November 11, 2002 and will continue until the positions are filled.

The Science, Medicine, and Technology in Culture initiative (SMTC) at **Penn State University** is offering six fellowships for graduate study fall of 2003. Students will receive tuition plus approximately \$14,000 per year (plus health insurance). Multi-year packages are available on a competitive basis. The SMTC initiative is co-directed by Londa Schiebinger, Edwin E. Sparks Professor of the History of Science, and Robert N. Proctor, Feree Professor of the History of Science. SMTC spans the departments of History, English, Philosophy, Anthropology, Women's Studies and several of PSU's leading departments of life, social, and physical sciences. Core faculty include: Londa Schiebinger (colonial science, gender and science, voyages of discovery, race and natural history), Robert N. Proctor (human origins, Darwin, agates, health history, Nazis, the social construction of ignorance), Richard Doyle (rhetoric, virtuality, extraterrestrials, cryonics, sci-fi), Guido Ruggiero (Renaissance science, sex and gender, Italy), Susan M. Squier (literature, reproductive technology, aging, science fiction), and Nancy Tuana (feminist philosophy, sexuality, science ethics). Associated faculty include: Gary S. Cross (technology, toys, junk food), Alan Derickson (U.S. public health), Greg Eghigian (medicine and psychiatry, modern Germany), David McBride (health and medicine of African-American and non-Western populations), Adam Rome (U.S. environmental history), Jack Selzer (rhetoric of science and technology), Judi Wakhungu (women in science, global energy policy), and Kenneth M. Weiss (biological anthropology, bioethics, genetics). Please visit our SMTC web site for more information: <http://faculty.la.psu.edu/ssps/smtc.html>. Interested students should apply directly to a department for admission. For the Department of History, please contact Prof. Carol Reardon (car9@psu.edu). For the Department of English, please contact Jeffrey Nealon (jxn8@psu.edu). Application can also be made to Philosophy and Anthropology. Applications are due January 15, 2003.

The Department of Communication at the **University of Illinois** at Chicago invites applications for Assistant Professor of Communication. The successful candidate will have an earned doctorate in Communication or a related field, strong promise of scholarly accomplishments and teaching success (at the undergraduate and graduate level) appropriate for appointment as Assistant Professor, promise of external research funding, and demonstrated commitment to multidisciplinary scholarship. A candidate must also have some combination of interests in the study of health communication, intercultural communication, and new media, the Internet, and/or communication technology. Located in the heart of Chicago, UIC is a Research I University with 16,000 undergraduates, 6,500 graduate and 3,000 professional students. The Department of Communication has 10 full-time faculty, approximately 200 undergraduate majors, and 20 M.A. students. The Department is developing a doctoral program focused on the relationship between technology, intercultural communication, and media studies. The desired appointment date for the position is August 21, 2003. Interested parties should send a full curriculum vitae, samples of relevant scholarly publications, evidence of teaching effectiveness, and four letters of reference to Professor James J. Sosnoski, Chair, Communication Search Committee, Department of Communication (MC-132), The University of Illinois at Chicago, 1007 West Harrison Street, Chicago, IL 60607-7137, USA. Applications should be received by December 15, 2002, to receive full consideration, although the search will proceed until the position is filled. Applications from women and minorities are particularly encouraged. The University of Illinois is an Affirmative Action, Equal Opportunity Employer.

The Institute for Science & Technology Studies (IWT) at **Bielefeld University** announces within its graduate program one post- and several doctoral fellowships. Further information at: <http://www.uni-bielefeld.de/iwt/gk/WS02-03/Ausschreibung.htm>.

The Department of Interdisciplinary Studies at the **University of South Florida** invites applications for a tenure-earning Assistant Professor position. Applicants must have a demonstrated commitment to innovative, interdisciplinary scholarship and teaching that crosses the border between the natural sciences