

WORLDS IN TRANSITION: Technoscience, Citizenship and Culture
in the 21st Century, 4S/EASST Conference September 27-30, 2000
University of Vienna

Vienna University was founded in 1365 by Duke Rudolf IV and is the oldest University in the German speaking country. Today, being Austria's largest University, it hosts eight faculties cover virtually all disciplines (Humanities, Social Sciences, Economic Sciences, Law, Natural Sciences, Medicine and theology) and 190 departments/units and has currently about 92,000 enrolled students from 128 countries. The University, which is a publicly maintained institution, has an impressive library, which is the largest in Austria.

The University's involvement in the field of science and technology studies started in the Eighties with the establishment of the Department for Philosophy of Science and Social Studies of Science. It is located in Vienna's 9th district at Sensengasse and offers teaching facilities for the whole university, profiting from the consequent interdisciplinary tension and dialogue.

The conference will take place in the old main University building at the Ringstrasse in the heart of town, with only walking distance to historical Vienna as well as a large number of cultural sites like museums and traditional coffee houses. We have also tried to choose hotels as close as possible to the Conference location, though there is a dense and well equipped public transport system in Vienna.

Special note from the local organizing committee concerning the political situation in Austria:

We fully understand that the gains by the extreme right-wing, so-called "Freedom Party" (FPO) under Joerg Haider in the Austrian parliamentary elections of October 1999, and the participation of this party in the Austrian government now, have raised concerns among a number of our friends and colleagues in the 4S/EASST community. More than two thirds of Austrian voters chose either the Social Democrats (who received the highest percentage of the vote), the conservative People's Party or the Greens, but the strong showing of the FPO has shocked us and many other observers deeply. Clearly, concern

about the conference venue is appropriate. Relocation might seem to be a solution for colleagues outside Austria, but for us, who are trying to resist Haider's rise, an active response from inside the country appears to be a far more appropriate way to confront the situation. We therefore suggest making the Vienna conference an opportunity to continue the ongoing discussion about the rise of right-wing populism in Austria.

We plan to do this by means of special panels on this and related topics, focusing on the ways in which social science has helped, or failed, to analyse and respond to such developments. In this context we also plan to discuss the ways in which Austrians have faced their past, or failed to do so, in the postwar era and especially since to Waldheim affair in 1986. Such discussions involving members of the 4S/EASST community and Austrian colleagues from other fields could make an important contribution to a more accurate and differentiated debate that might help to initiate change. We hope that the international 4S/EASST community will join us in our efforts to face these issues and contribute to international public discussion of this burning issue.

local arrangements

If you have any further question concerning the local organisation please do not hesitate to contact: Ulrike Felt or Judith Kröll or Tina Thiel. Via e-mail: 4SEASST@univie.ac.at Department of Philosophy of Science and Social Studies of Science University of Vienna, Sensengasse 8/10, A-1090 Vienna, Austria. Tel: +43(0)1 4277 47611 (Prof. Ulrike Felt) <http://www.univie.ac.at/Wissenschaftstheorie/conference2000/>

frontpage illustration: Ernst Mach (professor at the University of Vienna, 1895-1901), Selfportrait of the I, 1886.

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The Politics of Computer Profiling

by Greg Elmer

Department of Communication, University of Pittsburgh

A profile, as the name suggests, is a kind of prior ordering, in this case a model or figure that organizes multiple sources of information to scan for matching or exceptional cases. Resembling an informed form of stereotyping, profiling technology has become increasingly popular in targeting individuals for specialized messages, instructions, inspection, or treatment... Profiling, in turn, is only one of a host of increasingly available computer-assisted actuarial and diagnostic procedures that are being used, among other things, to identify individuals for various tasks and or entitlements, to define potential risks or hazards, and to forestall or enhance certain behaviors and traits. Unlike stereotypes, however, profiles are not merely "false images" that are used to justify differences in power. Diagnostic profiles exist rather at the intersection of actual and virtual worlds... (Bogard, 1996, p27)

While interest in all-things-profiled continues unabated in American culture - on the big screen, in books and on evening television news programming - the phenomenon itself remains quite surprisingly uninterrogated.¹ Yet, as profiling maintains a certain illusive and enigmatic quality, it is clearly not without its specific logic, applications and technologies. Although there are few sustained critiques of the technology and politics of profiling, I believe there to be a relatively simple logic behind the need to construct a picture out of the seemingly infinite qualities of everyday life.² To profile is to attempt to account for the unknown, the inability to adequately capture, contain or regulate, and govern behaviour, thought, language and action.

In a recent article I note the proliferation of 'profiling' television programmes - most prominently NBC's *Profiler* and Fox's *The X-Files* and *Millennium* - that focus on the very inability to capture the criminal, to know what's 'out there', or in fact know who is even human. To combat

this precarious state of affairs the protagonists in each one of these programmes, and many other more mainstream cop shows and feature films,³ look to match patterns of criminal (or alien!) behaviour to the *modus operandi* of known (meaning catalogued) criminals. How many times have we heard *The X-Files* lead characters and other agents/detectives list off the one-size-fits-all profile: male, in his late thirties, a loner, with above average intelligence? Without exception, such contemporary narratives, stories, plots and programming all play on the link between the need to profile - to come up with at least some picture of the transgressor - and the widespread fear of the unknown.

The historian and novelist, Caleb Carr, likewise, offers a compelling look at the earliest use of criminal profiling through a mix of narrative fiction and historical fact. Set in Manhattan at the turn of the twentieth century, Carr's *The Alienist* opens with a grotesque description of a series of unimaginably gruesome crimes. At first we are told that the authorities fail to recognize the relationship or pattern among a number of similar crimes perpetrated over two years. It is later revealed, however, that the police's disinterest was in no small part due to the nature of the victims, all child prostitutes. The crimes are subsequently invisible to the public eye. The book's chief protagonist, a newspaper writer, indeed bemuses the fact that such crimes are seen as unfit to print by his editors. Consequently, in addition to descriptions of the crimes and the moral standing of the victims, much of the book's first chapters begin to introduce the reader to the members of what will become the city's 'unofficial' investigations unit - the aforementioned journalist, two marginalised Jewish New York City police detectives and most importantly Dr. Kleizer, an enigmatic psychologist or, in the language of the day, *alienist*.⁴

What Carr sets out to accomplish in *The Alienist* is not only to provide a lavish description of the

moral landscape of Manhattan in the late 1800s, but more importantly to discuss the social implications of the convergence of mathematical statistics (specifically the establishment and significance of patterns) with behavioural psychology. Consequently, Caleb's main characters are largely developed through their relationship to the production and utility of simulated pictures of probable social, political and criminal transgressors. Thus, whereas authors such as Ian Hacking (1990) and Armand Mattelart (1996) offer compelling discussions of the relationship between statistics, measurements and the governance of the nation-state, Carr's piece of fiction sheds light upon the social and political dimensions of tracking, profiling and hence governing *individual* behaviour. For as Carr's most engaging character, Dr. Kleizer, notes:

We know nothing of the person we seek, and are unlikely ever to find witnesses who know more than we do. Circumstantial evidence will be sparse at best -- he has been at work for years, after all, and has had more than enough time to perfect his technique. What we must do -- the only thing that *can* be done -- is to paint an imaginary picture of the sort of person that *might* commit such acts. If we had such a picture, the significance of what little evidence we collected would be dramatically magnified. We might reduce the haystack in which our needle hides to something more like a -- a pile of straw, if you will. (p61)

One of the politically questionable results of this shift in tactics - from attempting to track the actions of individual criminals to researching the qualities of possible/probable transgressors through patterns of behaviour - is the production of very broadly defined 'deviant' social profiles (the aforementioned male, being the quintessential one-size-fits-all profile). As a consequence of deploying such broad and all-encompassing descriptions, profiling *virtually* (literally and figuratively speaking) 'guarantees' and 'serves up' a phalanx of typically marginalised individuals for surveillance. Given that such profiles are embedded with cultural and social values, alongside or in spite of the hard evidence or clues in any one case, potential discriminatory applications are all too apparent. A case in point: over the past couple of years there have been an increasing number of stories in the American press and on television, particularly in the state of New Jersey, that have recounted the practice of racial profiling on state highways by law

enforcement.⁵ In this excessively broad (indeed bio-political) definition of profiling, members of certain minorities, namely African-American and Latinos, are stopped and interrogated by authorities merely because of their race and ethnicity. To speak of racial profiling is to move beyond the individual acts of prejudice and racism by law enforcement officers to the larger bureaucratic and institutional realm (e.g., policy making, rules and regulations). The power of racial profiling therefore lies not so much in their 'representational' status, for example, as stereotypes, but rather as blueprints that actively serve to discriminate populations in search of possible transgressors. In other words, as consumers, citizens, fathers, mothers, African Americans, et cetera, we are not merely represented (or misrepresented) in/through texts, rather our actions, behaviours, opinions, likes, wants and desires are actively monitored, tracked and solicited.

Long before the medium became the message, Marshall McLuhan offered a compelling technological discussion of media feedback and profiling technologies. According to McLuhan the logic behind the so-called radio *audimeter* - a device that recorded the station choices of listeners - clearly resonated with "a good many other facts of our world. It is obviously the commercial counterpart of the secret microphone installed for political reasons. It is the mechanical sleuth which eventually pieces together the radio habits of a household into a singly chart-image." (McLuhan 1951, 49-50)

Published in 1951, this portion of McLuhan's *The Mechanical Bride* provides an early example of market research, indeed one with implications far beyond the switch, dial or television remote control for that matter. The audimeter clearly speaks to the process of sampling, the use of scientific methods to patrol, diagnose and survey particular markets, in this instance, radio listeners. It also reminds us that such techniques collect very personal information within a space widely respected as being 'private'. The audimeter is also a technology without an end; it continuously collects information round the clock. It tracks the routines and 'habits' of listeners. Later, McLuhan reminds us that the information collected by the audimeter is 'charted' or mapped, a somewhat prophetic choice of words given the contemporary spatialisation of profiling technologies in the 'real' and 'virtual' worlds.

Thus, as contemporary profiling technologies

continue to seep into the spaces of everyday litter - be it through point-of-sales/purchase technologies or at the click of a hypertextual link on the world wide web - they also becomes increasingly automated. In the example of Internet cookies (a program that facilitates the collection on information on web users), for instance, computer users receive (or download) their web browser applications (Netscape or MS Explorer) with their 'cookies' activated by default. Often only the most literate computer and Internet users find and change the default settings. The economy of personal information on the web is, in other words, governed by an implicitly affirmative technology that by default collects information and tracks the on-line behaviour of computer users. Many other computerized consumer exchanges also require individuals to give important demographic information (mainly zip codes or telephone numbers) to actually facilitate a purchase. Such exchanges, again, are built upon technological systems that *by default* require consumers to offer up personal information. In addition, mail order businesses - particularly those such as BMG music that offer free teasers (CDs and tapes in this case) in exchange for contractual obligations to purchase a number of goods at a relatively high cost - are also infamous for sending and billing for products that the consumer has not explicitly ordered. In this particular case, BMG's default setting (buy in absence of an explicit "no thank you") requires consumers to tell the business that it does *not* want a product.

Such default settings are common place in an information economy that needs to regulate and prioritize a seemingly infinite number of choices, products and services. Such computer settings are therefore not simple 'user-friendly' options meant to assist novice computer users; default settings obviously serve distinct interests. Computer software giants Microsoft, for example, have captured a sizable portion of the Internet browser market - hence providing *the* graphic representation of cyberspace - by merely setting their *Explorer* browser as the default Internet gateway in Windows and Apple's computer operating systems. In other words, Microsoft have used their PC operating system (Windows) monopoly to 'encode' their own browser as a default choice.

Facilitated by default settings, such 'genetic monopolies' and other automated 'choices' - particular those that integrate the collection of personal information - have not gone

unchallenged by their detractors. In the coming months and years the future applications of profiling and default technologies will have to respond to both legislative and technological opponents. Those interested in a democratic vision of the impending information society would be well served by participating in the recent anti-trust cases brought by the American government's Federal Trade Commission against both Microsoft and Intel. The conclusion of such legislative challenges will no doubt set the tone for other macro-political responses to a computer market that automates the collection of personal information.⁶ In addition to the broader challenges that need to be made against the computer, consumer, banking and retail industries, through government and the courts, the computing public also needs to actively promote and disseminate technological responses to computer profiling. By removing on-line persistent cookies, for instance, readily available programs such as *NS clean*, which obliterate cookies, thereby foiling any attempts to track computer uses,⁷ also provides a much needed technological response to the computer and information industries attempt to *give us what they know we want*.

Notes

1. Former FBI profiler John E. Douglas has become the profiling expert and star of 24 hour television channels such as Fox News and CNN. Douglas, whose own book titles proclaim his 'legendary' status, has forged a media career out of his ability to profile criminal minds and behaviours. Douglas, J.E. and M. Olshaker, *Obsession: The FBI's Legendary Profiler Probes the Psyches of Killers, Rapists, and Stalkers and Their Victims and Tells How to Fight Back*, Scribner, 1998; and Douglas, J.E. and M. Olshaker *The Anatomy of Motive: The FBI's Legendary Mindhunter Explores the Key to Understanding and Catching Violent Criminals*, Scribner, 1999.

2. William Bogard, *The Simulation of Surveillance: Hypercontrol in Telematic Societies*, Cambridge University Press, 1996.

3. Criminal drama programming on television, *Law and Order* or the British mini-series *Cracker*, for example, routinely discuss criminal MOs (or modus operandi) to correlate criminal traits to similar patterns of known offenders. Both programs, particularly the latter, also rely upon psychological profiling to "get into the mind" of transgressors. Such

programming, of course, takes its lead from feature films such as *Silence of the Lambs*, a gruesome crime drama that arguably started the contemporary fascination with the FBI and its criminal behavioral (profiling) unit.

4. Carr includes the forward note that "Prior to the twentieth century, persons suffering from mental illness were thought to be "alienated", not only from the rest of society but from their true natures. Those experts were therefore known as alienists."

5. The American Civil Liberties Union have been at the forefront of the argument against the use of racial profiles in the United States. In a recent report entitled *Driving While Black: Racial Profiling On Our Nation's Highways* (American Civil Liberties Union, 1999) the ACLU recount the first use of racial profiles by law enforcement agencies in the United States.

6. The Department of Justice has since reached an out of court agreement with Intel. Microsoft continues to fight the government in the courts. The Associated Press has written a helpful article on the government's allegations of anti-trust against Microsoft. cf. http://dailynews.yahoo.com/headlines/ap/technology/story.html?s=v/ap/19990625/tc/microsoft_charges_2.html

7. <http://www.nsclean.com/what.html>

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A longer version of this piece is contained in *Preferred Placement - Knowledge Politics on the Web*, edited by Richard Rogers, Jan van Eyck Editions, Maastricht, 2000, available via

<http://www.janvaneyck.nl> or
<http://www.balie.nl>.

Pretensions and Politics

by Gerard de Vries

Department of Philosophy, University of Amsterdam

Review of Irving Velody and Robin Williams (eds.), *The Politics of Constructionism*, SAGE Publications, London, 1998, 241 pp.

CONSTRUCTIONISM, if you have not come across the term before, is a collection of academic work that shares some surface affinities, and likes to think of itself as having a great common past. Gergen, cited in the introduction to this volume, situates and defines it as follows:

Drawing importantly from emerging developments most prominently in the history of science, the sociology of knowledge, ethnomethodology, rhetorical studies of science, symbolic anthropology, feminist theory and post-structuralist literary theory, social constructionism is not so much a foundational theory of knowledge as an anti-foundational dialogue. Primary emphases of this dialogue are based on: the social discursive matrix from which knowledge claims emerge and from which their justification is derived; the values/ideology implicit within knowledge posits; the modes of informal and institutional life sustained and replenished by ontological and epistemological commitments; and the distribution of power and privilege favoured by disciplinary beliefs. Much attention is also given to the creation and transformation of cultural constructions; the adjustment of competing belief/value systems; and the generation of new modes of pedagogy, scholarly expression and disciplinary relations.

That is a full plate, a sort of academic smörgåsbrod that may keep the faculty of a mid-size university busy for a couple of years. The

question, of course, is: would we like to visit that university? Promising a broad ranging and critical overview of themes of social constructionism and its relevance to contemporary social and political issues, this anthology may help to answer that question.

The book consists of four parts: 'Formulating Constructionism', 'The Limits of Constructionism', 'Applying Constructionism' and 'The Politics of Constructionism'. In keeping with the thrust of many of its contributors, I should not bother the readers with dumb facts like this. Instead, the reviewer would like to point out that this volume is *constructed* in four parts, each including a number of papers (*texts, inscriptions*) while excluding others, i.e., silencing *voices*, which is generally considered a bad thing to do. To the unsophisticated eye the division may look like a quite natural one, but of course it isn't. Isn't there already politics in formulating constructionism? Can we seriously apply constructionism before the dialogue on its limits has come to an end? I'm glad you asked.

Work in constructionism often seems to be driven primarily by the Charlie Brown fear of not being smart enough and losing friends. To fight this fear, authors enter into battles with the spectres of old-fashioned philosophy and other forms of naive thinking. Most of the time, they think that showing the flag will be enough to take a stand and to deter the enemy. Take one example out of many. Tom Shakespeare is interested in a 'schematic analysis' of the rhetorical uses of social constructionism within social movement contexts. He reconstructs this problem in terms of a debate between essentialist and constructionist explanations of minority group experience. Reconstructed in this way, the problem circles around a supposed contrast between biological and social/cultural features. A true constructionist is of course sceptical about this dichotomy. Didn't Shakespeare know this? Of course he does, so he immediately warns us that he does "not wish to imply a correspondence

theory of truth, or a simplistic positivism" -- did anyone bring that up? -- and continues to state that "external reality and personal embodiment are clearly not accessible except via contingent language and concepts, and the crude dichotomy between society and biology which I rely on throughout this chapter should not be taken as a denial that the natural is already and always social." For an analysis - however schematic - of the debate, this is not relevant, but Shakespeare's friends will be glad he wrote that.

The first three sections of this collection go on and on with the game of name-dropping, pre-emptive strikes to silence criticism that has not been - and probably never will be - aired, and give-and-take-prose that results in positions that require more acrobatic skills to keep all balls in the air than most authors have acquired. Even some critics of constructionism in this volume seem to have been infected by the virus that causes tedious, boring, pompous writing. Now that social constructivism has turned into an academic industry, the days of sharp and clear and funny writing that marked the work of Collins, Latour, and Shapin seem to be over. There is little progress to report ('progress' being - of course - a concept that constructionists mistrust). The one exception here is Ian Hacking, who presents a crystal clear paper that dissects the metaphor of 'social constructivism' (a phrase that in the course of the book takes over from 'constructionism'). But that paper is no reason to buy or even borrow this book, since Hacking has expanded his argument in *The Social Construction of What?* (Harvard UP, 1999).

Section Four of the volume, however, is a different matter. No more recycling of worn-out ideas, no more unnecessary name-dropping, no historical introductions that try to position the author in a long list of fancy and famous thinkers. The papers in this section face a real problem: the relation of constructionism to politics and moral issues.

The problem is easy to formulate. As Hacking points out, there are roughly two bodies of constructivist work. The first one applies constructivist analysis primarily to ideas about people, knowledge of people, or practices that involve the interactions of people. This brand of constructivism has primarily socio-political aims. It shows that many forms of labelling and categorisation of practices that may look natural and necessary are 'in fact' constructed and

contingent. The second one applies constructivist analysis to knowledge of inanimate nature. This brand has metaphysical aims; it criticises realism as defended in mainstream philosophy of science and argues for relativism, i.e., metaphysical agnosticism.

In the political arena, these two forms of constructivism have reverse effects. Whereas the first brand shows that because of the contingent basis of existing ways of thinking and action, there is space for alternatives and political action. The second one results in political immobility. If we can deconstruct the strong realist claims that come with the natural sciences, it must be easy to deconstruct also the real pain of real people. So why bother? Being a 'left-wing relativist' is a contradiction in terms. A first prerequisite for changing the world is the recognition that there is a world out there that has to be changed. The result of mixing up these two brands of constructivism are balancing acts, of the type Donna Haraway (in a passage cited by Shakespeare just after the above criticised quotation) tries to perform: "how to have simultaneously an account of radical historical contingency for all knowledge claims and knowing subjects ... and a no-nonsense commitment to faithful accounts of a 'real world'."

Balancing acts may be amusing in the circus, in academia they are not. There are several possible ways to get away from this. The first one is to take the route of Bruno Latour's recent work, i.e., to try to construct a metaphysics that goes beyond the asymmetric relation between epistemology and ontology that is taken for granted in most of the Western tradition since Kant. Although many authors in this volume pay lip service to Latour, his recent work is not discussed in this volume.

A second way out is to relativise the importance of constructivism and to look for different sources for guidance and inspiration. Mitchell Dean's discussion of Foucault serves this purpose. Dean provides an exegesis of Foucault's paper 'Questions of Method' which discusses the background of *Discipline and Punish*. Foucault's relation to constructionism is complex, so much is clear. If we consider him to be a 'constructionist', then Kant and even Carnap also deserve this label. His archaeology is a historicized version of Kantian critique with genealogy adding lineages of heterogeneous events of the content released by archaeology.

But Foucault's theme is not 'the construction of reality', but *the effects in the real* to which discourses that set up (among others) true/false distinctions are linked. His work is not directed toward scholarly ends, but to a diagnostics of the present. Dean points out that for Foucault, there is no straight line between discourses and their effects. Effects cannot be read from the realm of truth. Discourses and the programmes of conduct that come with them promote forms of visibility and evaluation. They guide the way we understand ourselves, they make possible various forms of expertise and solidify into particular institutions, and they allow certain forms of persuasive argument, etc. To trace these effects and to open up discussions, one has to go beyond the social constructivist critique of epistemology. One has to set up a 'political ontology' that accounts for the effects of various epistemologies, i.e., that perceives knowledge-related practices as *explanandum*, rather than perceives in the constructivist's mode practices as an *explanans* for knowledge-claims.

Craig Mackenzie suggests another, and in many respects easier, alternative. Mackenzie points out that both Walzer and Rawls, key authors in the communitarian and libertarian tradition of political theory, argue that their theories are based on convictions and understandings that they claim we share. The empirical adequacy of

these claims, however, needs more serious scrutiny than both Walzer and Rawls provide.

This is a point where constructivist *techniques* may be quite helpful. Hacking's discussion of child abuse is exemplary for this approach. Other (non-constructivist) approaches may be added, e.g., the one of Boltanski and Thevenot (*De la Justification*, Gallimard, 1991). Of course, this is a less ambitious task than the grandiose programme constructionism suggests. But for those constructivists who shy away from the philosophical complexities of Foucault's and Latour's work, i.e., who want to keep their feet on solid British soil, it may be ambition enough - to paraphrase John Locke - "to be employed as an under-labourer in clearing the ground a little, and removing some of the rubbish that lies in the way of politics." That, however, requires also less pretentious prose than most authors in this collection of essays seem to be willing or able to write.

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News of the Association

2000 Graduate Summer School in STS, University of Twente, September 4 - 8, 2000.
Anchor teacher: Tom Gieryn (Indiana University).

The main theme of the Summer School will be credibility of science and technology in society, and is linked to Tom Gieryn's 1998 book *Cultural Boundaries of Science: Credibility on the Line*. The programme, with an indication of other speakers, will be available by the end of April. The language of the Summer School is English. The Summer School is part of the graduate training of the PhD students in the Dutch national Research School Science, Technology and Modern Culture (WTMC). A limited number of places are available for other (foreign) PhD students.

The fee is Dfl. 1400,-, the reduced rate for EASST members is Dfl. 1200,-. EASST has a tradition of making a few travel stipends available. Please inquire at the EASST secretariat. For all other information concerning the Summer School: Arie Rip, Director WTMC; University of Twente, POBox 217, 7500 AE Enschede, The Netherlands. T: + 31-53-489 3345; F: + 31-53-489 4775; e-mail: a.rip@wmm.utwente.nl

Posing With Pinguins on Mars' Front Lawn About Not Being Afraid of the Technological Sublime

by Gerald Wagner

Review of: Richard Rogers: Technological Landscapes, London 1999: RCA.

The Nations corraled at the 1998 World Exhibition in Lisbon got a little homework to do. Do some „show and tell“ around the theme „water“ that might teach us something about you and your folks. Water? Yes, just a pavillion about water. Why not, call all the designers in, engineers, artists, scientists ... we gonna teach them something about „water“. The Finns did pretty well though – although I wouldn't like to pay that electricity bill. There's was basically a huge walk-in-fridge. Inside they got a little frozen lake with an iceskater scratching her circles in splendid isolation. And, of course, lots of smaller fridges with lots of beer and wodka. It was cold, dark and quiet – the epitomy of a perfect Finnish party. *Kippis!* The French then. *La France* did it – well, grand, with style and *savoir vivre*. A deep blue hall of glorious mystery. And beautiful waitresses serving Perrier, champagne and oysters – *A votre santé!* From *La douce France* to The Netherlands. If any nation in this world knows something about how to tame water, how to canalize it, pump it up and down and dike it, it's the Dutch. They ought to, otherwise there wouldn't be much land to found a nation on and thus no invitation to the Expo. But the Dutch love to watch tamed water. That's why the extremely educational Dutch pavillion was one huge noisy machine park of pumps, pipes and dikes – the epitomy of a technological landscape. Oh, and the visitors got a sample of free cheese ...

Three landscapes – the landscape of the soul, the national landscape, and the technological landscape. It's the latter which this book is about. In 1909, the sociologist Georg Simmel published a short essay „Brücke und Tür“ – the bridge and the door. It was an early attempt of some anthropology of technology *avant la lettre*. The bridge is the symbol of the difference between the human and the animal. Only the former constructs bridges. By doing so „he transforms

the accidental nature into the purely artificial unity“ of a landscape. Consider, however, that a landscape is something we look at, it's out there, laid out in the sunshine or under a dramatic sky. In order to describe it, the spectator must be outside the landscape: „The new landscape, whether thought of in terms of manufactured nature or the technological landscape, connotes a sense of viewer appreciation. In a technological landscape, it is the organisation of the technology, that appeals; in the manufactured landscape it is the organisation of nature“ (p.11). Richard Rogers must have spent quite some time out there, strolling around the roads through an impressive variety of technological landscapes under as well as up there in the sky. His recently published collection of essays is an amusing search for „relevant past futures“ of „technological spaces couched in natural, or naturalesque terms.“ For the typical STS couch potato this book is a perfect tourguide around those bizarre sites as the American front lawn, the Bikini islands and the dry surface of the Red Planet. It also visits The Age of Speed, The Atomic Ages, The Garden and The Windmill, The Seventies and finally Outerspace. It consists of book reviews, lectures and other fieldnotes, which partly have already been published. So don't expect too much system behind it. But listen to the advice of an delighted reader, keep your eyes wide open, „take the blind tour“ (p. 99) – and just glide through.

It's a classical STS-opening, especially if you have some political science background – „to examine the forms of social organisation that the technologies bring with them and that we now experience as second nature“ (p. 10). Such a book indeed might „be read as a short history of technological culture from the railways to the Internet“ (p. 10). Great project, breathtaking. Can it be achieved on one hundred lavishly illustrated pages? Most probably not. At least not in a decent scholarly SHOT-way. In his (unfortunately not yet published) book on the history of the Channel

Tunnel Rogers has in extenso proven what kind of work such a purgatorial challenge takes. These essays now require a different way of reading. One has to wait for the easily overread details, single phrases, gloomy sketches like „posing with pinguins on Mars“ and laconic theory fragments. Just as Rogers himself mentions the „appreciation for the aesthetic of the technological landscape and ‚new nature‘ (as the manufactured nature aesthetic may be called)“ which permeates much of his book, the reader should appreciate that appreciation and recognize the theoretical booby traps in it. Since it's technology that most of STS is about - more accurate: technology described in texts which claim to be in full control of their subject - statements like the following about the technological sublime¹ must ring some alarm bells in the community: „The beautiful and the terrifying – that which we do not control.“ (p. 45) But what do we control? „We“ as students of science and technology and landscapes and relevant past futures? Certainly not the sublime. Are there any technological landscapes which are not sublime and thus beyond control and experience? Remember that the sublime is connected with intimidation and fear. Even moviegoers who remember the opening scene of David Lynch's *Blue Velvet* (the cut-off ear nesting underneath the front lawn's accurately trimmed carpet) won't consider the American front lawn terrifying. Neither are the notorious cases like Robert Moses' bridges intimidating.² But still they are „essentially inconcludeable narratives“ (Woolgar), which leaves them at least irritating, perhaps offensive but definitely annoying for those who could not agree with Rogers that „there are no definite histories, only those currently considered more plausible than others“ (p. 35). However, it occurs that simply distinguishing „more“ or „less plausible (hi)stories“ isn't really satisfying. The mysteries of the soft forces of textual plausibility might deserve deeper consideration. „Plausible“ could as well mean „ironically serener“, „semantically richer“ or even „warrantedly more entertaining“. Which raises the question if there's any other guarantee for plausibility than the author's talent as a gifted storyteller. But that's the road STS has taken anyway. The „envisioned user“ of this book - designed by Richard Rogers at the Royal College of Arts in London – is a reader who is challenged by and not afraid of that turn of STS

towards literary criticism which is also a loss of scientific control. That loss – and the apparent lack of compensation for it – might terrify some of us. Or at least irritate them and make them plea for more methodology or a new realistic turn. I doubt that mainstream STS has finally abandoned that fear. This book and it's author definitely have.

NOTES

1. See the locus classicus: Immanuel Kant, *Kritik der Urteilskraft*, Analytik des Erhabenen, § 23 and § 28.
2. For the latest round see Bernward Joerges, Steve Woolgar and Geoff Cooper in *Social Studies of Science* 29/3 (June 1999).

Dissertation abstract

Paul Wouters, *The Citation Culture*, Doctoral dissertation at the Department of Science Dynamics, University of Amsterdam, 1999.

The need for greater accountability of scientific researchers has created a number of new professions. The scientometrician is one of these experts. She measures science scientifically, often on behalf of science policy officials. The professional scientometricians emerged in the sixties. Their creation is intimately linked to the invention of the *Science Citation Index* (SCI) by Eugene Garfield and his collaborators in Philadelphia (USA).

The Citation Culture argues that the development of scientometrics can best be understood if we analyze this field as both indicator and embodiment of a recently emerged subculture in science: the citation culture. This subculture has unwittingly and subtly changed core concepts of modern science such as scientific quality and influence. Because of the citation culture, being cited has profoundly changed its meaning over the last two decades, with a number of consequences for scientists. It has moreover contributed to the transformation of the very essence of science policy, notwithstanding scientometrics's apparent lack of outstanding successes. This study attempts to explore the possible meaning of the citation culture for the systematic generation of knowledge.

Today, a scientific publication is easily recognized by its references to other scientific articles or books. Citing behavior seems to vary according to personal traits. Nevertheless, the overall citing properties of the publications within a certain field share the same characteristics. The sciences and humanities host many types of specialty-specific citing culture, each slightly different from the other. The historical development of scientific publishing since the nineteenth century has provided for a fairly stable ensemble of citing cultures in science.

The gradual development of regular citing behavior in scientific publishing created a new resource for research as well as policy: citation data. It did not take long before these data began to be used. With hindsight, it seems an almost inevitable outcome of some straightforward reasoning. If researchers cite the work they find

useful, often cited ("highly cited") work is apparently more useful to scientists than work which receives hardly any citations at all.

Hence, the number of times an article is cited seems to be an accurate measure of its impact, influence or quality. The same is true of the collected articles of one particular scientist, research group, journal or even institution. Sloppy work will not often be cited, except in heated controversies - or so the reasoning goes.

Whatever one's view on the import of being cited, citation frequency is generally supposed to measure something that already exists. This is based on an implicit realist perspective with respect to the process of scientific communication: the indicator is seen as a more or less direct upshot of scientists' activities. Therefore, citation analysis provides a window onto the communication processes between scientists.

This book questions these realist interpretations of measuring science by citations. The citation culture is not a simple aggregate or derivative of citing culture in science. The citation as used in scientometric analysis and science and technology indicators is not identical to the reference produced at the scientist's desk. In other words, the citation is the product of the citation indexer, not of the scientist. The *Science Citation Index* is moreover not merely a bibliographic instrument. It also creates a new picture of science via bibliographic references found in scientific literature. In this way, the SCI provides a fundamentally new representation of science. By focusing on the seemingly most insignificant entity in scientific communication, the inventors of the SCI have created a completely novel set of signs and of a new symbolic universe.

The Citation Culture therefore not only tells how the SCI was created, but also tries to explore its ramifications. It discusses the main properties of the new representation of science as well as its impact on science studies, science policy, and on science itself. The book discusses also the implications of this perspective for the theoretical foundations of scientometric analyses in general.

The Citation Culture is forthcoming at Stanford University Press.

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Conference Announcements and Calls for Papers

The *The Centenary of Genetics*, the IoB Bateson-Mendel Centenary Meeting, organised by the Institute of Biology History Network, will be held on 8 May 2000. Mendel's researches revealing the primary laws of genetics were first discussed in the U.K. in a lecture to the Royal Horticultural Society on 8 May 1900. The lecturer was William Bateson, then of St Johns College Cambridge. It is said that he read Mendel's paper on the train journey from Cambridge and revised his lecture accordingly. This half-day meeting at the Royal Horticultural Halls and Conference Centre in **Westminster, England**, will mark the centenary of this important event. Please contact: Committee chairman Brian J Ford, b.j.ford@open.ac.uk.

The *International Conference on cultural attitudes towards technology and communication* (CATaC'00), to be held on 12-15 July 2000 in **Perth, Australia**, has as its theme Cultural Collisions and Creative Interferences in the Global Village. See <http://www.it.murdoch.edu.au/~sudweeks/catac00/>. Computer-mediated communication networks, such as the Internet and the World Wide Web, promise to realise the utopian vision of an electronic global village. But efforts to diffuse CMC technologies globally, especially in Asia and among indigenous peoples in Africa, Australia and the United States, have demonstrated that CMC technologies are neither culturally neutral nor communicatively transparent. Rather, diverse cultural attitudes towards technology and communication - those embedded in current CMC technologies, and those shaping the beliefs and behaviours of potential users - often collide. The conference takes up topics as: Communicative attitudes and practices in diverse industrialised countries; Communicative attitudes and practices in industrialising countries and marginalised communities; Impact of new communication technologies on local and indigenous languages and cultures; Politics of the electronic global village in democratising or preserving hierarchy; East/West cultural attitudes and communicative practices; Role of gender in cultural expectations regarding appropriate communicative behaviours; Ethical issues related to new technologies, and their impact on culture and communication behaviours; and Legal implications of

communication and technology.

Theory, Culture & Society and the Network Institute for Global Democratization are holding a conference on Democratizing Global Economy and Culture, 2-3 June 2000 at the **University of Helsinki**, Finland. As we prepare to cross the millennium, the idea of cosmopolitanism is attracting increasing interest. For some the term holds out the prospect of global democratization. The hope that cosmopolitan groups will be in the forefront of establishing values, institutions and lifestyles which are less directly embedded within nation-state societies. For others the cosmopolitan is a figure to be reviled as it has become associated with 'the revolt of the elites,' the inability of upper and middle class groups to sustain a sense of responsibility towards the growing numbers of the excluded around the world. These mobile elites who enjoy the freedom of physical movement and communication, stand in stark contrast to those who are confined to place, whose fate is to remain located. Equally harsh in its judgement of cosmopolitanism is the perspective which presents the cosmopolitan as dabbling rootlessly in a variety of cultures. This view of the cosmopolitan as voyeur, parasite, or some sort of cultural tourist, again emphasizes this incapacity to form lasting attachments and commitments to place and others, the inability to participate in a community to which one feels obliged to make sacrifices. This restless pursuit of experience, aesthetic sensations and novelty over duties, obligations and social bonds, is allegedly something which best fits anglophone societies, such as the United States and Britain, in which the market values of the trader, who looks, deals and moves on, are often seen to be key formative features of the current world-view. This raises two related questions. Firstly, the extent to which cosmopolitan dispositions are closely associated with cities. Cities have long been the sites for markets and the mixing of people, commodities, ideas and cultures. They have been the homes of a wide range of intellectual and artistic, social and cultural movements and institutions. Secondly, if cosmopolitanism in the arts was associated with modernism in cities such as Paris, London and New York, which now become centres of cultural heritage tourism, how far do more recently

developed global cities such as Sao Paulo, Singapore and Bombay manifest similar processes of transnational cultural exchange and mixing? This points to a more fundamental question: while cosmopolitanism may well be a Western project and projection, how far have varieties of cosmopolitanism *avant la lettre*, been present outside the West? What equivalent forms of cosmopolitan experiences, practices, representations and carrier groups developed, for example, in China, Japan, India and the Islamic world? What were the characteristic forms of civility and civic virtues, urbanity and urbane conduct, and how were notions of travel, exploration and innovation valued? If we look at the origin of the term cosmopolis, it refers to the links between cosmos, the order of nature or the universe, and polis, the order of human society. While many cultures have assumed there is a direct link between the order of nature and the order of society, the dream of Western modernity was that science and technology would eventually discover and exploit the principle forms of order at work in both realms. Technology would implement these findings to tame and control both external nature, along with the inner nature and social life of human beings. Yet the tragic, or dark side of modernity emphasised the sacrifice of all previously existing forms of order through the pursuit of progress. At the end of the second millennium, we are only too well aware of the dangers and risks of this process, of the finitude of nature as a living space for human beings and other life forms, along with the infinitude of our potential to develop culture, to weave narratives around this process. The cosmopolitan was meant to be someone who in principle could know everything, who would learn how best to act from the accumulation of knowledge. Yet this technological potential for the archiving and databasing of cultures does not offer any easy recipes on how to make adequate practical judgements, especially when we globalise the scope of our actions beyond the site of our accustomed set of identifications. In terms of Western notions of practice, the cosmopolitan political ideal derives from the Kantian tradition and entails some notion of a polis extending around the globe. This implies some form of world-state, or federation of states, which would involve the development of cosmopolitan or supra-national law and forms of citizenship and governance. The compatibility of this vision with the continuing impact of global marketization, along with the de-globalizing reactions of identity politics and balkanization, and the persistence of civilizational and cultural

traditions, is an open question. At the very least, if global democratization is to move forward it can be argued that it must not merely be the project of a Western centre, but become gradually assembled from a range of cross cultural dialogues.

The first day will explore cosmopolitan spaces and representations from a largely theoretical perspective, whereas the second day will focus on more concrete, topical political issues under the rubric of democratic reforms of cosmopolis. Many of the perspectives of the second day have been directly stimulated by the Network Institute for Global Democratization, a Helsinki-based NGO working alongside the *Theory, Culture & Society* Virtual Institute for Global Culture. Both are experimental projects designed to explore the politics of global citizenship and the new information technologies and have aims which are as much practical-political as academic. The conference has both academic and ethico-political aims. With respect to the academic aim, we intend publishing a selection of conference papers in a special issue of the journal *Theory, Culture & Society*. We also intend launching a series of 'travelling seminars' in conjunction with the TCS Virtual Institute for Global Culture and the Network Institute for Global Democratization (NIGD) to further explore the practical implications of global democratization and public sphere activities. The main ethico-political aim, then, is to open up a public and multicultural discussion on the meanings of cosmopolitanism and their relation to global reform. The special issue of *Theory, Culture & Society* will be built around a selection of the conference papers, and will come out in the year 2001. The travelling seminar will be developed out of the work of the conference. The idea is simple: to organise working seminars on strictly delimited topics and with both an academic and a practical-political intent. Based also on the relations and arrangements of the NIGD and TCS Virtual Institute, the travelling seminar will function as a node in a network of academic and political activities, with the aim of not only helping to work towards the solution of practical issues, but also feeding new, theoretically informed ideas and interpretations into practices. The travelling seminar strives to empower cosmopolitan political actors, particularly those excluded or marginalized, as well as contributing to finding more adequate, democratic responses to the problems of the crisis-ridden global economy and culture. There is also a further and more abstract ethico-political aim to this conference as well. By

bringing together different voices on cosmopolitanism, the idea is to further a more wide-ranging and participatory discussion of the potential for democratizing global economy and culture. Hence, we would like to invite both sceptics and advocates from a range of different cultures to become involved in a dialogue on the philosophical and practical possibility of cosmopolitan global reforms. Email: cosmopolis@ntu.ac.uk. *Theory, Culture & Society* Centre, Faculty of Humanities, Nottingham Trent University, Clifton Lane, Nottingham NG11 8NS, United Kingdom, Tel: +44 (0)115 948 6330 / 6332, Fax: +44 (0)115 948 6331, E-mail: tcs@ntu.ac.uk, <http://tcs.ntu.ac.uk>

PDC 2000 - *the Participatory Design Conference*, entitled *Designing Digital Environments: Bringing in More Voices*, will be held on Nov. 28 - Dec. 1, 2000 at the City University of New York Conference Center, **New York City, USA**. The organisers have issued a call for participation. Participatory Design (PD) is a set of diverse ways of thinking, planning, and acting through which people make their work, technologies, and social institutions more responsive to human needs. The sixth Participatory Design Conference, PDC 2000, is a forum to explore theories, methods, and examples of design through participation that foster early intervention on the part of future users and active and democratic involvement of both current and future users. We encourage academics, practitioners, and users to document and demonstrate ways that multiple voices can be heard in technical design environments. In particular we are interested in research and experience about participation of active users in the following design environments: 1. Community-based systems; 2. Health care systems; 3. Governmental and GIS systems at local, regional and international levels; 4. Education, instructional technologies and learning communities across distance; 5. Media, broadcast and new media environments; 6. Virtual communities and interactive designs; 7. Union - management relations; 8. Curricula for participatory design. Submission requirements are available at <http://www.cpsr.org/conferences/pdc2000>.

Physical Interpretations of Relativity Theory (PIRT-VII) will be held on 15-18 September 2000 in the Civil Engineering Building at

Imperial College, London. The objective of the 7th Physical Interpretations of Relativity Theory (PIRT) conference is to examine physical theories, models, and interpretations of the relativistic formal structure. The meeting is intended for physicists, mathematicians, engineers, philosophers of science and historians of science. The conference will examine: Cosmology, Gravitation and space-time; Structure Time, Reference Frames and the Fundamentals of Relativity; Nature and Models of the Physical Vacuum; Formal Structures and Physical Interpretations of Relativity; Epistemology, Physical Measurement and the Interpretation of Formal Structures; Experimental Aspects of Relativity; The Poincaré-Lorentz and the Einstein-Minkowski Expositions of the Relativity Principle; Relativistic Ether Theory: Ether Geometrised, Dirac's Ether and Ether Models; The Vortex Sponge: Analogues of Chaos and Quantum Mechanical Phenomena. This list is not exclusive and papers dealing with other themes are sought. The meeting is sponsored by the British Society for Philosophy of Science, and the School of Computing, Engineering & Technology of the University of Sunderland. See http://www.seat.sunderland.ac.uk/CET_ENG/Brochure.htm. Contact M.C. Duffy, School of Computing, Engineering & Technology, University of Sunderland, Chester Road, SUNDERLAND, SR1 3SD, United Kingdom. Tel 44 191 515 2856, fax 44 191 515 2703, email michael.duffy@sunderland.ac.uk

Taking Nature Seriously: Citizens, Science, and Environment, a conference, will be held on February 25-27, 2001 at **University of Oregon**. This conference is designed to bring together scientists, community activists, and science studies scholars who are working on environmental issues in an effort to reveal and move beyond barriers that have inhibited interaction between scholars in the sciences, social sciences, and humanities, and between academics and activists. From the common ground of our concern for our global environment, we devote this conference to establishing a dialogue between the interdisciplinary fields of science studies (history, philosophy, sociology, literature, cultural studies) and environmental studies (biological and natural sciences, social sciences, humanities, management, policy, design, and law), as well as between academic research and public activism. The chief goals of the conference are to foster

dialogue that engages the practical and theoretical challenges of "taking nature seriously," that illuminates the value of interdisciplinary and inter-community collaboration, and that envisions new models of scholarship and policy that can move us beyond culturally constructed barriers. We will explore whether and how scholars studying scientific practices can contribute to more effective scientific research and policy formation, and we will investigate the ways practicing scientists and environmental activists can and do work together on pressing environmental issues. Such a dialogue promises to enable both a richer understanding of similarities and differences in our approaches to environmental problems and a realization of the common ground shared in our ultimate goals. Among the keynote speakers are Donna Haraway and Andrew Pickering. Suggested conference topics include: Empirical analyses of specific environmental issues and proposed/implemented actions (for example: salmon restoration, forest protection and management, toxic waste management, ozone depletion, genetically modified organisms); Questions of expertise, citizenship, and sustainability; Environmental justice: the relationship between protecting the environment and implementing equity among people; The roles of humanistic and scientific rhetoric in environmental arguments and activism, including how best to translate theories and research results into public environmental discourse; The nature and potential of Public-Interest Science (i.e. scientific research developed and conducted with the collaboration of an active, informed citizenry); The value of science studies for environmental studies and vice versa; Investigations of the current realism/social constructivism debates; The history and role of the idea of an independent reality, free of human interaction; Analyses of distinctions such as body/mind, nature/culture - whether and how they might be productively reconceived; Assessments of recent models and metaphors for framing the material and social aspects of nature, such as the cyborg, hybridity, actor network theory, the mangle of practice, and the transgenic organism, etc.; The contributions of feminist science studies and race theories to the bridging of science studies and environmental studies / scholarship and activism. Abstracts for proposed papers, research presentations, panels, and forums are encouraged. Please send three copies of a two-page abstract and one copy of an abbreviated curriculum vita for each participant. Prospective

presenters should keep in mind an interdisciplinary and inter-community audience rather than a specialist audience. Proposals are due no later than May 1st, 2000. Send proposals to: Taking Nature Seriously, Environmental Studies Program, 10 Pacific Hall, University of Oregon, Eugene, OR 97403-5223, USA, <http://darkwing.uoregon.edu/~tns>, Phone: 1 541 346-5399, Fax: 1 541 346-5096, E-mail: tns@darkwing.uoregon.edu.

Science Communication, Education and the History of Science, a conference at the Royal Society, 6 Carlton House Terrace, London W1, arranged by the British Society for the History of Science with support from the Royal Society, will take place on 12-13 July 2000. This meeting comes at a time of re-appraisal of the 'public understanding' of science, of renewed discussion about the form and purposes of science education in schools, and of increasing popular interest in history of science, catalysed by Dava Sobel's *Longitude*, Michael Frayn's *Copenhagen* and various other works. Since the way we represent its past plays a significant role in framing contemporary attitudes towards science, it is important to examine critically the role of history of science in these public contexts. This conference will bring together leading science communicators, educationists and historians of science for a critical examination of the ways in which history of science is used in popular writing, in the media, in museums and in schools. It will also ask whether public representations of the history of science adequately reflect current historical scholarship, and explore various initiatives worldwide which seek to promote improved communication of recent work in the history of science. Conference themes include: Science and its publics: an historical overview; History of science in popular science writing; Perspectives encountered in museums and science centres; Science, history of science and the media; Schoolbooks and syllabuses: recent developments and future plans; Using history to represent 'other voices' in communication about science. A session on history of science in literature and the arts will be held at the British Academy, when academics and authors will join a panel discussion of the current interest in this field. Participants are also invited to attend Prof. Roy Porter's Royal Society Wilkins Lecture on the evening of 11 July (title: 'Reflections on scientific and medical futurology since the time of John Wilkins'). Conference speakers include:

Dr. Jim Bennett (Director, Museum of History of Science, University of Oxford); Prof Geoffrey Cantor (University of Leeds) Prof. Rick Duschl (Science and Technology Education Unit, Kings College London) Prof. Kostas Gavroglu (University of Athens; co-ordinator of an EU project which has established a history of science syllabus in Greek high schools); Dr Paula Gould (Young Science Writer of the Year, 1997). Prof. Susan Greenfield (Director, Royal Institution); Martin Hollins (Qualifications and Curriculum Authority); Andrew Hunt (NEAB AS-level syllabus in Science for Public Understanding); Prof. Bruce Lewenstein (Cornell University; Editor of Public Understanding of Science); Christine McGourty (Science and Technology Correspondent, BBC News). Dr. Steve Miller (University College London; co-author of *Science in Public: Communication, Culture and Credibility* (1998)); Dr. Melanie Quin (Technique, Cardiff); Prof. Joan Solomon (Centre for Science Education, Open University); Dr. Jon Turney (University College, London); Dr. Andrew Warwick (Imperial College, London). Based on papers made available beforehand, sessions will consist mainly of discussion of issues arising from those papers, introduced by the contributors from the different fields. More details of the programme and associated papers will be made available on the BSHS web site: <http://www.bsbs.org.uk>. In addition to the contributions already arranged the organisers are inviting proposals for papers related to the themes listed. After review, those papers which are accepted will be made available in the a pre-conference web-based collection of papers. To propose such a paper, e-mail your abstract of not more than 300 words to Jeff Hughes <hughes@fs4.ma.man.ac.uk>, from whom further details are also available.

The *Society for the History of Technology* holds its next annual meeting in **Munich, Germany**, from August 17- 20, 2000. Contact Dr. Michael Allen, SHOT Program Chair, Zentralinstitut fuer Geschichte der Technik Deutsches Museum, Museuminsel 1, D-80306 Muenchen, Germany, Phone (49)(89) 2179 402, Fax (49)(89)2179 324, email: Mike.Allen@mzwgtg.mwn.de.

The *Third Berlin Internet Economics Workshop* will be held in **Germany's capital** on May 26 - 27, 2000. The Berlin Workshop on Internet Economics provides a forum for researchers and

practitioners who are interested in and working on economic aspects of the Internet. The first workshop took place in October 1997 with world-wide participation by people working on Internet-related topics in industry, universities and government institutions. A selection of workshop papers has been published in various volumes of *Netnomics*. For the third workshop we invite submissions of extended abstracts. In particular we encourage recently graduated students to contribute with a submission. Topics of interest for the workshop include but are not limited to: economics of the Internet infrastructure (e.g., pricing and capacity issues in packet-switched networks, congestion charges, Internet interconnection strategies), economic issues of content and service provision, economics and pricing of digital goods, regulation and taxation of the Internet and electronic commerce, economics of convergence between Internet and other media, business strategies for the Internet age, economic aspects of electronic payment systems, consequences of the Internet for the "real" economy, empirical analysis of new data sources (e.g., log files) microeconomic models for electronic markets (e.g., agents). Paper presentations are invited for this workshop. Please submit an extended abstract (4-6 pages) by email as plain text, PostScript or PDF only including a title, author(s) name(s) and address(es) until March 17, 2000 to the workshop organizer, Thorsten Wichmann (iew@berlecon.de).

The European Molecular Biology Laboratory, the European Molecular Biology Organization, and the European Commission are jointly sponsoring an *interdisciplinary conference on Science and Society* under the title: "Developing a New Dialogue". It will take place at the EMBL in **Heidelberg, Germany** 10-12 November this year. Its aim is to promote mutual interest and understanding between biologists and a variety of other professionals also dealing with biology and biomedicine. Thus, the conference will bring together biologists, geneticists, and biotechnologists with a range of other professionals engaged in communicating to the general public the importance for society of science and its multiple consequences. Individual presentations and panel discussions among experts from a variety of fields relating to these topics should bring forth different perspectives, understanding and interpretations. Such a dialogue across professional boundaries will aim

at a heightened mutual understanding of the meaning and application of scientific evidence in different contexts. Please consult <http://www.embl-heidelberg.de/Conferences/SciSoc00/index.html> or contact Halldor Stefansson, European Molecular Biology Laboratory, Meyerhofstrasse 1, 69117 Heidelberg, Germany, Tel.: 49-6221-387-493, Mob.: 49-171-471 44 56, Fax: 49-6221-387-525, e-mail: stefanss@embl-heidelberg.de

More than Skin Deep: Medical Imaging, Culture, and the Body, is the name of the Program arranged by the Division on Literature and Science, at the Modern Language Association, **Washington, DC**, December, 2000. The rhetoric, authority and metaphors of medical images in professional and popular uses: research, diagnosis, and treatment; films, ads, and TV; the politics of race, sex, and disability. For instance, clinical photographs of disease and deformity, X-Ray, CAT and MRI scans of the body's interior, sonograms of fetuses, PET scans of the brain for research, diagnostic, and forensic purposes (to determine or confirm brain damage and mental disease or deficiency; or to determine sites of brain activity in perception, speech, affect, and other topics of cognitive interest). Papers welcomed from scholars of literature, history, anthropology, visual arts and medias, medicine and medical technology, disability studies, and related disciplines. Two-page abstract by 15 March to Jim Swan, English Dept., 306 Clemens Hall, SUNY at Buffalo, Buffalo NY 14260 USA. Email: jswan@acsu.buffalo.edu (attachments accepted).

The *Museum Computer Network Conference* will take place on September 6-9, 2000 at the Four Seasons Hotel in **Las Vegas, Nevada, USA**. The staid and traditional "museum" is shedding its straight-jacket and morphing into an organization that reaches out to new audiences and communities using the latest tools. See <http://www.mcn.edu/mcn2k/index.htm>, or write to Susan Patterson, Program Chair, MCN2000 at spatter@slam.org.

Internet Research 1.0: The State of the Interdiscipline, the first conference of the Association of Internet Researchers, will be held at the **University of Kansas**, Lawrence, Kansas, USA, on 14-17 September 2000. See the

conference website at <http://www.cddc.vt.edu/aoir/>. The growth of the Internet is one of the greatest cultural phenomena of our time, impacting almost all areas of life. It is crucial to build knowledge about the Internet's socio-cultural dimensions. Despite great interest, knowledge-building in Internet research is hindered by a lack of international, centralized opportunities for scholars from different disciplines to interact. This international conference, the first meeting of the Association of Internet Researchers, will focus on the Internet as a distinct interdisciplinary field for research. It will bring together prominent scholars, researchers, and students from multiple disciplines for keynote addresses, paper presentations, formal and informal discussions. The Association of Internet Researchers (A.(o).I.R.) invites submissions of between 150 and 250 words on all topics that address any social, cultural, political, economic, or aesthetic aspects of the internet. We welcome submissions from any discipline and encourage international and interdisciplinary work as well as submissions from those producing new media or working in multimedia studies. The deadline for submissions of paper/session proposals is 15 MARCH, 2000. Keynotes by Manuel Castells and Barry Wellman, among others.

Cultural Diversity in/and Cyberspace, the conference co-sponsored by the Consortium on Race, Gender and Ethnicity and the Cyberculture Working Group, will be held on May 5, 2000 at the **University of Maryland**. As the Century turns, fundamental aspects of human experience including individual and community identity formation, the mind-body relationship, and the articulation and valuation of difference are becoming increasingly tied to our ideas of Cyberspace. Computer literacy, particularly in terms of the ability to access and use the Internet has become, on a global scale, another boundary separating the haves from the have-nots. And, while non-dominant groups have made some inroads onto the information superhighway, these boundaries typically mirror existing borders of difference. To understand the meaning of race, gender, and ethnicity in the 21st Century, the project of examining and understanding cyberculture must be undertaken. Proposals for panels and papers dealing with cultural diversity in/and Cyberspace are sought for this interdisciplinary conference. Suggested themes include the construction of race in Cyberspace;

barriers non-dominant groups face in obtaining internet access; the construction of gendered, sexed, and virtual bodies; teaching issues of diversity and/with Cyberspace in the classroom; American/English hegemony of cyberspace; the study of online communities, particularly communities formulated around the articulation of difference. Please submit one page proposals for papers (20 minutes in length) or a two page proposal for complete panels (2-3 speakers plus a moderator - 1 hour in length) along with a current cv for all presenters by March 1, 2000 to Cyberculture Working Group, c/o Ed Martini, Department of American Studies, University of Maryland, College Park, MD 20742, USA, tel 1 301 405-1354 or by e-mail at emartini@wam.umd.edu.

Promises and Limits of Reductionism in Biomedical Sciences, a conference, will be held on 22-24 May 2000 in **Paris, France**. The application closing date is April 24. Scientists and philosophers of science will discuss reductionism as a useful research methodology for describing and understanding complex biological systems in terms of their molecular component parts. However, a biological system is not merely the sum of its parts and its functioning is always context-dependent and explainable only in terms of evolution. The limits of reductive explanations in molecular biology, genetics, evolutionary biology, psychology and molecular medicine will be highlighted. Particular attention will be given to the social implications of the human genome project. An attempt will be made to establish if reductionism is compatible with future progress in human biology and medicine. The application form and program is at <http://www.inserm.fr/laudat> or contact Mr. Stephane Montserrat, Conferences Philippe Laudat / Inserm 101, rue de Tolbiac, 75654 Paris Cedex 13, France, tel. 33 1 44 23 60 89, Fax 33 1 44 23 60 69, Montserrat@tolbiac.inserm.fr.

ISTAS 2000: *University as a Bridge from Technology to Society*: International Symposium on Technology and Society, co-sponsored by the IEEE Society for Social Implications of Technology (SSIT) Department of Electronic Engineering, La Sapienza University of Rome and the Associazione Elettrotecnica ed Elettronica Italiana (AEI), will be held on

September 6-8, 2000 in **Rome, Italy**. Technology is expanding at an unprecedented rate and influence on society reaches every aspect of the life of individuals and groups. However, human needs do not influence the development of technology, as people working in frontier areas of technological research become even more specialized. Focussing their own interest on restricted technical areas, research people are led to lose a global view of the motivations and effects of their accomplishments. University, that by vocation is committed to look at human life and knowledge in a unified perspectives, can strongly contribute to fill the gap between technology and society. Contributions are encouraged for topics related to the general theme: How new technologies modify the production and transmission of knowledge; Social implications of technology and research managing; The teaching of social implications of technology: integrations with technical subject; Information technology as a service to community; How science and technology influence culture; Safety and health issues related to: safe energy production, reliability of computer controlled systems in sensitive environments (e.g. healthcare and military); computerised workplaces; electromagnetic; pollution, etc.; Legal and social issues related to: telework, circulation of individual information and the right to privacy, computer crimes and their prevention. Submission of extended abstracts of 1000 words by e-mail to the Program Committee Chairman Prof. T. Roska, istas2000@aei.it. Further information: Prof. Valerio Cirnagalli, Dept Electronic Engineering, University La Sapienza Roma Via Eudossiana 18, 00184 Roma, Italy, Tel: 39-64-4585864, Fax:39-64-745105, E-mail: istas2000@tce.ing.uniroma1.it, <http://tce.ing.uniroma1.it/istas/istas/html>.

The *Postgraduate Forum on Genetics and Society* (PFGS) will convene for its fourth colloquium on 26-27 June 2000 at the Sheffield Institute of Biotechnological Law and Ethics, **Sheffield, England**. The colloquium offers the unique opportunity to 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 are interested in presenting a paper, or would like more information, please contact the

colloquium organisers Shaun Pattinson at s.pattinson@sheffield.ac.uk or Mark Taylor at m.j.taylor@sheffield.ac.uk, Sheffield Institute of Biotechnological Law and Ethics, Crookesmoor Building, Conduit Road, Sheffield, S10 1FL. Check out the PFGS website to find out more about us, and for details of previous colloquia, at www.comp.lancs.ac.uk/sociology/pfgs.html

The Digital World Research Center and Hewlett-Packard announce a workshop and edited collection on Wireless World: Social, Cultural and Interactional Issues in Mobile Communications and Computing, April 7, 2000, at the Digital World Research Centre, University of Surrey, England. This workshop aims to provide an interdisciplinary and multi-sector forum to consider the social, cultural and interactional issues involved in the design and use of mobile devices.

Recent media reports have described the uptake and use of mobile devices as a 'revolution?' which will have a significant impact on innovation in computing and telecommunications industries, as well as widespread effects in the conduct of everyday work and home life. Existing mobile technologies hold the potential to modify established social relationships, and create new ones. Furthermore, increasing convergence in computing and telecommunications technologies provide opportunities for numerous socio-technical futures. What will these futures look like, and what social, cultural and interactional factors will influence their development? How do present uses and social organisation influence the innovation and design process? What relevant social factors impact on the production of mobile technologies, and what are the effects of mobile technology diffusion on social and cultural relationships?

So far, there have been few interdisciplinary forums that provide the opportunity for both academics and industry to discuss current research on social, cultural, and design issues in mobile technologies. The workshop aims to bring together researchers from academic disciplines and IT industries, and is designed to facilitate communication and discussion between qualitative and ethnographic approaches from the social sciences and media/ technology studies, and approaches derived from HCI (human-computer interaction) research.

Net News

The Media Resource Service (MRS) has merged with AlphaGalileo to form AlphaGalileo: the media resource service for European science. (AlphaGalileo is a project of the British Association for the Advancement of Science to provide an Internet-based press centre for European science, engineering and technology.) The combination of AlphaGalileo with the MRS will offer journalists world-wide an integrated science and technology news and expert service. Full information about the AlphaGalileo service is at <http://www.alphagalileo.org>.

A large web site edited by Donald Forsdyke contains selected papers and commentary on various aspects of evolution, both current and historical at <http://post.queensu.ca/~forsdyke/evolutio.htm>. An online calendar of the Correspondence of Charles Darwin, which includes a summary of every letter, is at <http://www.lib.cam.ac.uk/Departments/Darwin/calintro.html>.

The Netherlands graduate school of Science, Technology and Modern Culture has moved its website to <http://www.fdcw.unimaas.nl/wtmc>.

The new issue of *M/C - A Journal of Media and Culture* on 'future' is now online at <http://www.uq.edu.au/mc/>. *M/C Reviews*, a companion to the journal, is at <http://www.uq.edu.au/mc/reviews/>. 'Audience' will be released on 8 March 2000. Dates for other themed issues are 'culture' (deadline 3 Apr. / release 3 May); 'speed' (deadline 29 May / release 28 June); 'chat' (deadline 24 July / release 23 Aug.); 'game' (deadline 18 Sep. / release 18 Oct.); 'festival' (deadline 13 Nov. / release 13 Dec.). Email Axel Bruns at mc@mailbox.uq.edu.au.

The on-line edition of *European Journal of Cultural Studies* is a reproduction of the print edition. <http://www.sagepub.co.uk/>

The first issue of "Forum Qualitative Sozialforschung / Forum: Qualitative Social Research" (FQS), maintained at the Technical University of Berlin, is now available online at <http://qualitative-research.net/fqs>.

Announcing the PhilPsych (Philosophical Psychology) List for the discussion of philosophical psychology. What is philosophical psychology? It is the informed exploration and discussion of psychological theories and issues in both their scientific and philosophical dimensions and interrelationships. Join the list at: <http://www.onelist.com/subscribe/PhilPsych>

Moysis Boudourides invites you to participate at an online survey on the public understanding of science & technology which is located at <http://hyperion.math.upatras.gr/survey/pus/>.

The new issue of *Riding the Meridian: Women and Technology* is online at: <http://www.heelstone.com/meridian/>

Please note that the February issue of *RTD info*, with its 12-page special feature entitled "Progress and doubts", has several articles addressing issues such as communicating science to the public (around the report published by Bertrand Labasse), scientific expertise, transmission of scientific knowledge, and an interview with Prof Gago, Portugal's Science and Technology Minister. *RTD info* is free of charge and available in English, French and German, also on-line at <http://europa.eu.int/comm/dg12/rtdinfo.html>.

The Cyber Society mailing list is a growing moderated discussion list on the interdisciplinary study of Cyber Society. Focusing on academic discussions and debates about the social, political, economic, and cultural issues surrounding the emergence of Cyber Society, our research questions and topics for discussion and debate include: cyber communities; cyberspace and everyday life; cyberfeminism; the virtual class; cyber ethnicities and identities; the cyber classroom; cybermedicine; cyber research methods; information age government and public administration; power and control; geopolitics; Net politics and activism; censorship; privacy; the

state; regulation and surveillance; access; interactivity; democracy; cyberwarfare; cybercrime. To join the list contact one of the moderators at joanne.roberts@unn.ac.uk or john.armitage@unn.ac.uk.

Opportunities Available

There is to be a new Ionian Centre for Research and Technology, established with European structural funds on the island of **Kefalonia**, one of whose themes will be science policy studies. One part of the Centre's programme is likely to be one or more summer schools each year where academics can meet, or initiate exchanges with policymakers and practitioners in industry, government or academic management. Moses Boudourides of the University of Patras in Greece and Peter Healey of the Science Policy Support Group in London will be working together to organise the programme, in collaboration with colleagues who have particular meetings to offer. It is hoped to organise at least one such summer school in September 2000 although the Centre itself may not yet be open. Programmes for the summer school can originate in, or address issues or concerns, from the conceptual to the applied, concerning any or all of the European Union member or candidate member states, and/or issues at the European level. A comparative element is encouraged, and we are hoping to organise a specifically Greek day during every programme during which mutual learning can take place on local issues. Meetings are expected to be to the benefit of European research policy or management, but this does not preclude comparisons with, or learning from, other world regions. Kefalonia is the largest and many would say the most beautiful of the Ionian islands, combining spectacular beaches with dramatic mountain scenery and cave systems. The Ionian Centre will aim to be one of the most cost-effective conference centres in Europe, but cannot finance or subsidise meetings. If you are interested in holding a meeting under the auspices of the Ionian Centre either this year or in 2001 or 2002 in the first instance you should send an e-mail to either: mboudour@upatras.gr or Peter.Healey@spsg.org. Peter Healey, Science Policy Support Group (SPSG), 1 Birdcage Walk, London, SW1H 9JJ, UK, <http://www.spsg.org> and <http://www.sciencecity.org.uk>.

The Department of History of the **University of California at Los Angeles** invites applications for a postdoctoral appointment in the history of science for 2000-01. We invite applications from

scholars working on the history of any area of science in any part of the world, and especially from those whose historical research includes a social, cultural, or economic dimension. We also welcome applications from scholars who can link history of science to history of technology, medicine, social science, expertise or the professions. The successful candidate will teach one course in each of the three quarters of the academic year (late September to mid-June). Competitive salary, plus health benefits. Position subject to final funding approval. Send letter of application, cv, one publication or writing sample, a short statement of teaching and research interests, and three letters of recommendation by 30 March 2000 to: Professor Theodore Porter, Postdoctoral Search Committee, Department of History, 6265 Bunche Hall, Box 951473, UCLA, Los Angeles, CA 90095-1473, USA.

Virginia Tech announces a tenure-track appointment in Science and Technology Studies (STS) at the Assistant Professor or early Associate Professor level beginning August 16, 2000. The successful candidate will serve as a member of the STS faculty and as Assistant Director of the STS Graduate Program at the University's Northern Virginia Center in Falls Church, located in the northern Virginia/Washington, D.C. metropolitan area. We seek applications from scholars with demonstrated experience in one or more research traditions in STS and willingness to learn about others. Candidates must have the Ph.D. in hand by August 2000 as well as ability to engage productively in program development; ability to offer guidance to students who are working professionals and are diverse in background, race, gender, and ethnicity; strong teaching record and willingness to contribute to distance learning; and commitment to an active research program. A major responsibility of this position is to continue building a strong regional presence for the STS Program, expand enrollments for STS courses, and recruit candidates for the M.S. and Ph.D. degrees. The Assistant Director receives some release from teaching in exchange for this important administrative work. The hiring unit for this position is the Center for Interdisciplinary Studies (CIS) in the College of Arts and Sciences.

Formed in 1995, CIS is comprised of a number of interdisciplinary programs, including the STS Graduate Program and undergraduate programs in Black Studies; Humanities; Humanities, Science, and Technology; Interdisciplinary Studies; Judaic Studies, Religious Studies; and Women's Studies. The STS Program is run jointly with the Departments of History, Philosophy, and Sociology. The STS Program provides opportunities for students to pursue the M.S. and Ph.D. degrees. The Program has a strong record placing 23 Ph.D. recipients and 54 M.S. recipients in appropriate positions. At present, 44 students are in residence at the Blacksburg campus and 28 students at Falls Church, established in 1995. Interested candidates should send a detailed letter of application, current CV, recent writing sample, syllabi for courses taught or teaching portfolio if available, and at least three letters of recommendation. We will begin screening applications on February 21, 2000. The review process will continue until the position is filled. Please send applications to Gary Downey, Chair, STS Search Committee, Center for Interdisciplinary Studies, Virginia Tech, Blacksburg, VA 24061-0227. You may also call or write: 1 540-231-4761 (o), 1 540-231-7615 (dept), 1 540-231-7013 (fax), downeyg@vt.edu. For a more complete description of the position, consult <http://www.cis.vt.edu/stspositions/>.

CERN, the European Organization for Nuclear Research, in Geneva has an opening for an Information Officer (science writer). Details of the post, in English & French, can be found at <http://www.cern.ch/CERN/Divisions/PE/HRS/Recruitment/vn/as991241d.PDF> Conditions regarding nationality of eligible candidates and instructions on how to apply can be found at : <http://www.cern.ch/CERN/Divisions/PE/HRS/Recruitment/staff.html>

The Department of Human Sciences at **Brunel University** invites applications for ESRC and Departmental PhD Studentships. The Department offers an exciting and stimulating environment for postgraduate research. Applicants should be UK residents and should have, or expect to obtain, a First or Upper Second Class honours degree in a relevant discipline. You should in the first instance contact a potential supervisor directly (preferably by e-mail) to discuss your application and proposal for research. The closing

date for applications to the Department is 31st March 2000. Late applications may be considered in exceptional circumstances. We invite applicants who wish to conduct research within the following disciplines: Psychoanalysis, Psychology, Social Anthropology, Sociology (including Media and Communications) and Science, Technology and Innovation Studies. The Departmental PhD Studentships are competitive. They include the cost of home fees and a small bursary (currently £6,200 Per annum) for up to three years. There is a small teaching requirement. Applicants should have, or expect to obtain, a First or Upper Second Class honours degree in a relevant discipline. You should in the first instance contact a potential supervisor directly (preferably by e-mail) to discuss your application and proposal for research. Applicants should send a completed application form, a detailed CV, a research proposal and the names and addresses of two academic referees. The deadline for applications for the Departmental Studentships is 30th May 2000. Late applications may be considered in some circumstances. Interviews will be held in the middle of June. If you wish to be considered for a Departmental Studentship as well as for an ESRC Studentship, please indicate this on your application form. For further information and an application form, please contact: Liz Ackroyd, Departmental Research Administrator, Department of Human Sciences, Brunel University, Uxbridge, Middlesex UB8 3PH, United Kingdom, E-mail: liz.ackroyd@brunel.ac.uk, URL: www.brunel.ac.uk/depts/hs