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jsieber@nsf.gov and at the phone and fax and office numbers listed below. John Perhonis handles dissertation proposals; he can be reached at jperhoni@nsf.gov; his phone number is 703-292-7279. Societal Dimensions of Engineering, Science, and Technology Program - Ethics and Values Studies, Research on Science and Technology NSF Room 995, Arlington, VA 22230 703-292-7272, fax -9068 e-mail: jsieber@nsf.gov www.nsf.gov/sbe/ses/sdest To submit FastLane proposals, select 01-152 and either EVS or RST on the program dropdown menu.

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Frontpage illustration: a newly found lizard species in the Caribbean.
Living on an island, it will be especially prone to extinction.

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Telling Stories – To Some Effect

by Arie Rip
University of Twente

Essay Review of David Turnbull, *Masons,
Tricksters and Cartographers*, Amsterdam:
Harwood Academic Publishers, 2000, ISBN
90-5823-001-5

Wonderful stories are collected in this book. About the masons who built Chartres cathedral. About French (and other) cartographers contributing to the unification of the nation. And also about Polynesian navigation, and about turbulence research, and about the limitations of research on malaria vaccine. David Turnbull cannot wait to tell such stories. As when, in his first chapter on 'The contingent assemblage of knowledge spaces', after a masterful two-page diagnosis of the nature of knowledge production, he wants "to turn immediately to a brief consideration [of three examples]" "in order to give some flesh to the (...) thesis" (20/21). The stories, here and in the later chapters, are carefully researched and told beautifully. Everyone of them can be read in its own right, and most have been published as such already. The story of the building of Chartres Cathedral, for example, without architects or plans – "Chartres is a motley, an ad hoc mess, put together with talk, tradition and templates" (14) –, was published in *Science, Technology & Human Values* in 1993.

David Turnbull is a collectionneur of stories, but there is a reflexive point involved as well. As he notes in passing: "Indeed, this book is itself a motley, a contingent assemblage" (14). And since that is the way knowledge is achieved according to his thesis, the argument of the book has to be presented that way as well. "(W)e need to recognise, even celebrate, its unplanned and messy nature" against "modernity's [overt] drive for order." This point about modernity is emphasized on the opening page of the book. Compared to Bruno Latour's similar point in *We Have Never Been Modern* (1993), Bruno's polemical push is

absent. David's book is self-exemplifying: it offers its insights in an unplanned and perhaps messy way.

Still, a "contingent assemblage" may add up to something which transcends local contingency. In the book, when David positions the message of his story-telling as important for the sociology of knowledge. And in knowledge production in general. The message is not the relativistic one that anything goes – "so that everything stays what it is" (quoted approvingly after John Krige). David Turnbull sees himself as part of the critical tradition, and wants to create openings for change towards the "transmodern" (rather than the postmodern). Thus, while emphasizing the insights of the sociology of (scientific) knowledge, and enlarging them through his own research, he also wants some non-contingency, some real prospects for alternatives to simplistic modernism.

Celebrating messiness is not enough, one must also identify new possibilities. In particular, the recognition of the role of "third spaces" for the interaction between different knowledges and knowledge traditions, and actually building such spaces and have different knowledge traditions perform in them – the closing sentences of the book. There, story-telling returns as important in its own right. A story-teller, like a trickster, can create openings.

From this brief resume, it will be clear that this book must offer important building blocks for a substantial, even if still first-round, answer to questions about the nature and value of (scientific) knowledge in a multi-cultural and otherwise heterogeneous world. David Turnbull's effort is part of a larger movement visible in recent work of historians and social scientists, from Peter Galison, Geoff Bowker, and Andy Pickering, to Leigh Star, Harry Collins, Helga Nowotny, Arie Rip, Brian

Wynne and Bruno Latour (and I should add philosophers like Ian Hacking and Joseph Rouse), who all address issues of quality and robustness of knowledges (in the plural, in contrast to traditional philosophy and sociology of knowledge). In David Turnbull's diagnosis: what is the *outcome* of assembling (contingently) in concrete spaces, and how can such "outcomes" *travel* across places and times.

For this question it is important to compare "the ways in which understandings of the natural world have been produced by different cultures and at different times" (19). Distantiated comparison merges into an argument for "fully equitable comparison" which leads on to a plea that "subjugated knowledges" (Foucault's term) deserve a better hearing (45). A necessary condition for such a comparison is the recognition that all knowledge systems, including Western technoscience, share the characteristic of localness (19). "However, knowledge is not simply local. It is located. It is both situated and situating. It has a place and creates a space. An assemblage is made up of linked sites, people and activities; in a very important and profound sense, the creation of an assemblage is the creation of a knowledge space. The motley of scientific practice, its situated messiness, is given spatial coherence through the social labour of creating equivalences and connections." (19) I read this as saying that translocal characteristics of knowledge are achieved in the movement of creating spatial coherence. In actor-network theory, of Bruno Latour and others, the equivalences and connections constitute knowledge. For David Turnbull, these are prerequisites to speak of a knowledge system, "but are not characteristics of knowledge itself" (20). It is not clear what would be characteristics of knowledge "itself", other than that David needs something transcending contingent outcomes of the labour of creating equivalences and connections in order to support "the liberatory enlightenment project [of improving the human condition through our own efforts (211)] without a universal rationality" (227).

I am running ahead of my presentation of David's thesis here by offering some evaluation already. His primary point is about

translocality: "From [the] spatialized perspective, universality, objectivity, rationality, efficacy and accumulation cease to be unique and special characteristics of technoscientific knowledge; rather these traits are effects of collective work of knowledge producers in a given knowledge space. To move knowledge from the local site and moment of its production and application to other places and times, knowledge producers deploy a variety of social strategies and technical devices for creating the equivalences and connections between otherwise heterogeneous and isolated knowledges." (20) For later use, I raise another evaluative question: why would knowledge producers want to go to all that trouble? In other words, there are additional questions to be answered and the location of the efforts of knowledge producers in wider contexts will be important.

The notion of 'travel', and movement more generally, is the key feature. The cathedral-building masons in medieval Europe moved around themselves, were exposed to new sites, handed on their insights and skills, and in that way built up a knowledge tradition. To make maps, knowledges from various places had to travel to a centre of calculation – "bringing the world back home" (113) – even if further transformations and alignments were necessary to actually assemble a map (112). Turbulence research was itself in a state of turbulence because the classifications and simplified models remained local, did not travel – until simulation models and techniques to produce three-dimensional images of turbulent flows allowed the Princeton approach to spread (204). David Turnbull himself travels from Melbourne to Papua New Guinea to find out about field trials of a malaria vaccine, and to Princeton to follow turbulence researchers, and "as a jester/sociologist, (...) attempt[s] to impose order on the field" (205). A further variety of travel is embedded in the phrase about "the capacity for movement that enables local knowledge to constitute part of a knowledge system" which suggests that local knowledge is already produced with the potential for translocal travel as a requirement. I read this as a generalization of the idea, first emphasized by the Starnberg group in the 1970s, that knowledge is produced in anticipation of the

context of justification;¹ but this context is now not limited to that of a scientific specialty for which the knowledge is packaged as a journal article. A similar anticipation occurs in "the rendering of knowledge and context sufficiently similar as to make the knowledge applicable" (20). Often, it is the context which has to be adapted or disciplined. In other words, there is no force of knowledge as such. Its force depends on the collective work that is expended to make it forceful – or sometimes only seem to be forceful, as David Turnbull intimates for malaria vaccines.

While this combination of contingent assemblage and movement to other places and times is an apt description of the masons building the cathedral of Chartres (Chapter 2), and contemporary malaria researchers attempting to create a vaccine (Chapter 5) and physicists and engineers experimenting on turbulence (Chapter 6), it does not apply without modification to knowledge related to maintaining social order, even if local knowledge is moved and equivalences and connectivities are made there as well. For example, "(t)he Inca developed a range of technical devices and social strategies that enabled all the elements of society to be assigned a spatio-temporal location, to be inscribed, accumulated and transmitted." (26) There is assemblage without written texts, with devices like the calendar, stone alignments or *ceques*, knotted strings or *quipus*, and roads and runners or *chasquis*, which enable the orderly provision of knowledge capable of being used to organise and direct large groups (26, 31). While this example reinforces the need to take material infrastructures into account, rather than focus on texts and textual documents as is common in Western science (144), the point here is about knowledge needed to order and discipline groups and society in general. Chapter 3, on maps and cartography, further exemplifies this when it shows how the state, science and cartography co-produce one another since the 16th century (92). National surveys, since the 18th century ("Tying France Together" (114)), are an obvious example. Thus, there are two types of assemblage: those which are directly enmeshed in the socio-political order, and those which are at one remove, often because of the relative freedom

of modern scientists and their distance from immediate socio-political questions. The latter is very visible in the way David Turnbull analyses the internal and external ordering activities and strategies of the turbulence researchers: these are confined to the struggles within the specialty. The former is exemplified by the effort to produce the *Carte de Cassini*, the first thorough topographical survey of a whole country [France]: "it took 121 years of arduous labour by vast numbers of people" (119). "It also taught the rest of the world what to do and what not to do" (119): it became an exemplar – even if the British attempts in South Asia to follow the example had to import local knowledge and techniques to actually make general maps (119).

There are further and deeper points involved in the issue of maps and mapping: their emphasis on representation on a two-dimensional surface, and the visual accessibility that goes with it, hide the work which has gone into them.² Maps are lies, because they can never completely represent (99). To counteract naturalistic interpretations and escape "our past bondage to mimetic representation" (183), the societal construction of maps has to be recognized for what it is. Such an understanding also enables resistance to undesirable classification, particularly when this derives from the co-production of state, science and cartography.

Chapter 4, about Pacific navigation as an alternative scientific [i.e. knowledge] tradition, reinforces this point by showing that Polynesian mappings are performative rather than representational (122).³ Western analysts of Polynesian voyages in the Pacific have often reduced the achievements to chance discoveries, neglecting the fact that the knowledge about the new islands had to be brought back in order to maintain connections. Even when accepting the value of Polynesian navigation techniques and insights, there has been a tendency to see their mapping as charts for calculation (e.g. dead reckoning), rather than devices for establishing connections (135).

There are two main components to Pacific navigation. The first is a 'star compass': "the use of rise and setting points of stars to name divisions of the horizon" (133). A glimpse of one or two stars near the horizon allows the

practiced navigator to position the whole compass (136). They “keep the star paths in [their] head wherever [they] go” (139). The other component is called ‘etak’, the reference island. Traveling in a canoe, the reference island is looked toward, passed and left behind. Viewed from the canoe, taken as the origin, the ‘etak’ traverses segments of the horizon of the star compass. Thus, the key concept for Polynesians is the voyage, also of the reference island across the horizon. Western representationalists would insist on a bird’s eye view, where the canoe is looked at from above, and its navigators positioned as having changing perspectives of the reference island because they are moving with respect to it (138-139).

Given the accomplishments of the Polynesian navigators, their knowledge tradition must have been effective in moving beyond the local and integrating a wide range of heterogeneous information (135). While this is a matter of reconstruction (of what happened) and debate (about the plausibility of such reconstructions), it offers a *prima facie* case to argue for the value of other knowledge traditions.⁴ For David Turnbull, this is linked with the primacy of performativity rather than representation (and attendant calculation). And with the primacy of practice over theory, the latter being positioned as boundary objects rather than overarching frames (11-12) and/or a source of robust insights.⁵

The notion of ‘travel’ returns here, and with a vengeance: “There is a sense in which all knowing is like travelling, like a journey between parts of the matrix. Connecting spatially or cognitively distinct and distant elements is a function of metaphor which allows narratives to be seen as journeys and journeys as narratives.” (152/153) Maps can then be positioned, I would argue, as narrative infrastructures, enabling (and constraining) concrete narratives/journeys.⁶ Anyway, as David recently phrased it, there is a deep spatio-temporal cum-narrative structure (with creative tensions).⁷

This part of David Turnbull’s argument rests on evocative phrases and imagery. But I find the imagery powerful, and promising as a way to break through the impasse in the discussion about representation (of the world) in science.

Rorty’s criticism of the “mirror of nature” is exemplary in how it undermines representationalist views; but it does not offer an alternative. David Turnbull claims there is an alternative, if only one would recognize the messy assemblages for what they are, instead of going for cleaned-up representations (61). Performativity and practices are the entrance points for this alternative perspective, and the notion of ‘knowledge space’ is to encapsulate it: “...out of these collective practices of linking disparate sites, practices and people that knowledge spaces are created.” (205) And “all knowledge traditions, in assembling the heterogeneous components of people, practices and places, create knowledge spaces. All such knowledge spaces have transparent elements, concerning ontological assumptions about whom to trust, what counts as evidence and so on.” (226) (The quote continues with a reference to interaction between knowledge traditions: “It is in the revelation of these hidden messy and actively constructed components that the possibility lies of working together with people in other spaces.”) I would highlight story-telling, and how representation can then be handled as a matter of introducing characters and story-lines.⁸ Including songlines, as with Australia’s Aborigines (cf. 35).

In the book, David gives priority to deconstructing Western science and its purported gift of universalism. Mapping and calculation reinforce this modernist dream, and for that reason alone they deserve a critical look. Indicative of David’s interest is his story of Mpemba’s physics (Turnbull 1998): The African schoolboy reporting in school on the more rapid cooling of a warm ice-cream mixture in the fridge as compared with a cold ice-cream mixture – so that he could sell his ice cream after school earlier than his competitors. The schoolmaster said this could not be true, and got angry when Mpemba repeated his observation during a visit of the school inspector. The latter was intrigued, and through him some experiments were done and published (in a physics education journal, with Mpemba as co-author). As it turned out, similar observations were noted by Aristotle and Francis Bacon, and Thomas Kuhn (1970, p. 16) made short shrift of “this strange

observation” “that we are now quite unable to confirm”. By now, for a few physicists, the phenomenon has become a challenge for explanation. And websites are devoted to it. It is a wonderful story, even if it is not quite clear what the moral is. That there is still hope for Western science?

The obvious moral of David’s overall deconstructive approach is that one must not accept universalism of science (and its attendant imperialism) just because it is often presented that way. Rationality, objectivity and universalism are not essential characteristics of (scientific) knowledge, but cultural requirements in the modern West. It has to be presented that way (215). Showing that messiness is behind it, and that such messiness actually works, opens up cultural space.⁹

On the other hand, however important the recognition of the value of local and situated knowledge is, “we should not be too easily seduced by the apparently liberatory effects of celebrating the local, since it is all too easy to allow the local to become a new kind of globalising imperative” (45). There is an analytical point here, about the “joint dialectic of theory and practice, the local and the global”, where modernistic claims about the universality of Western scientific theories are tempered by the recognition that “theorising is also a local practice”. But also a political point about “all knowledge systems to have a voice and to allow for inter-cultural comparison and critique” without falling back into “unbridled cultural relativism” which only leads to “proliferation of ghettos and dogmatic nationalisms”. This then leads to a constructive indictment of the sociology of scientific knowledge: its great weakness is the quietist tendency to limit itself to show that we need not accept science and technology as they are.¹⁰ Instead, one might “devise ways in which alternative knowledge systems can be made to interrogate each other and work together” (46); a “third space” or a “transmodern space” (228).

For David, this is important because “our cultural survival (is) dependent on a diversity of knowledge” (7) and progress of science (as we know it) is a monoculture, which condemns us, in the long run, to an inevitable death brought on by its inflexibility and

sterility (227). These are strong statements, and linked to the theme of “celebrating the messiness” which runs through the book, from page 1 to page 226. However, the idea of a ‘third space’ is interesting also without this particular justification. It is a space where tensions can be entertained and stories are told, as David phrased it in a conference paper (Turnbull 2001). It is a communal space and requires the right constitution of the group (216). It also requires mutual translation; Helen Verran’s role in a fire workshop of Australian Aborigines and Western environmental scientists was exactly that (Verran 2001).

The way I read the book, the figure of the jester/trickster comes into its own here. The jester can point at the messiness and the motley (even if he confirms the king’s power by being allowed to mock him), and the trickster – the “enemy of boundaries” (91) – creates openings by going against the grain. That is what Mpemba did, without intending to. That is also what David does, reflexively, and he speaks of “we jesters” (97, 122) and “I, as a jester/sociologist” (205). A map can trick you with its lies, as tricksters are wont to do. Thus, the illustration on the cover of the book can be positioned as a portrait of the artist: it is the head of a fool with his cap, but with a map of the world where the face would be. It is a coloured drawing from the late 16th century, its various inscriptions allowing further interpretations. David says he has “adopted the role of the jester” (89), and broadens the idea further by saying “We who purport to be historians, sociologists, or cultural critics, are also tricksters.” (91) Putting the Fool’s Cap Map on the cover of the book is one of his tricks.

How will the contingent assemblage of this book itself travel? It tries to combine the critical tradition with a re-thinking of the nature of knowledge and how we handle knowledge traditions. Readers with affinity for the one or the other might get bothered by the combination. On the other hand, the stories are told with some effect, and they illustrate a number of the points which make up the general perspective. There is no story about actual and productive interaction between knowledge traditions, which is a pity, given

David's emphasis on the need for 'third spaces'.

What is also missing is a discussion of the issue of quality or robustness of knowledge. That should come after the first-round answers have been given. There are some intimations about the way local knowledge is moved. Trust and social capital is mentioned (19, 209-210), and this clearly plays a role in professional and scientific communities which can carry translocal knowledge because their social capital is non-local. The deployment of social strategies and technical devices to move knowledge from its site of production to other places and times is referred to often, but there is no indication of what this then adds up to (other than as a criticism of maps and calculation). Nor is there a discussion why scientists or others would invest all the effort, as I noted already.

Here, I think David's argument suffers from a shortcut between his overall diagnosis of messiness, and his interest in the value of other knowledge traditions: "They are, at root, the same, because all knowledge is a local and contingent assemblage." (132) One way to discuss the missing link is through the notion of 'cosmopolitan' (rather than universal or objective) knowledge and the way circulation and mediators can transform local knowledge into cosmopolitan knowledge (Rip 1997). The story of reinforced concrete in the late 19th and early 20th century, with its stubborn cognitive, technical and economic localness, which was gradually overcome because of input of professional engineers, which itself was seen as needed and acceptable because a range of customers wanted assurance beforehand that the bridge or building would not collapse, offers a good example.¹¹ The idea of 'cosmopolitanization' used to understand this story can also be applied to scientific research areas and to indigenous knowledge. If further developed, it may allow a judgment of the value of the knowledge, however precarious that is from a constructivist perspective.

It is important to invest in such "missing links", also for David Turnbull. He is clear about his position towards other knowledge traditions: they must have their place under the sun, but it is less clear why. The emancipatory point about subjugated knowledges which deserve a better hearing (45) raises the

question whether the quality of these knowledges is sufficient to entertain their claims, after the first hearing has occurred. David can give examples, in particular Pacific navigation. But he also notes that this knowledge tradition is in danger of extinction. "The young Pacific Islanders of today no longer regard navigational knowledge as inherently valuable", and that is because they are not "the source of meaning and power in their society" anymore (157). Can a jester/sociologist do anything about that?

NOTES

¹ Böhme, Van den Daele & Krohn 1978; the original German version was published in 1972.

² There is a further issue of the role of mapping in how we look at (Western) science. A map is a space (a spatial structure) in which knowledge is ordered, and it can do so because knowledge spaces have been created in which maps can be made. Thus, a quasi-transparent dual spatiality, which requires difficult reflexive exploration (89).

³ And therefore less of a lie?

⁴ Jarita Holbrook (University of Arizona) has studied navigational practices of Tunesian fishermen, and shown how they use local knowledge to maintain their bearings in the coastal waters, but also take up Western navigational instruments to help them. A productive mix is what they are after. (Holbrook, personal communication, November 2001)

⁵ Theories, in David Turnbull's view, are inherently map-like (92), and thus vulnerable to the same criticism as maps. He approvingly quotes Nancy Cartwright (1983) on theories as lies.

⁶ Deuten and Rip (2000).

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Helen Verran, 'Ecologies and Ontologies', paper presented to the Annual Meeting of the Society for Social Studies of Science, Cambridge, Mass., November 1-4, 2001.

In the Land of Lomborg

by Andrew Jamison

In November 2001, Anders Fogh Rasmussen led his liberal *Venstre* party to a resounding victory in the Danish parliamentary elections. Since then, he has sought to undo much of the work of the previous government, and, as one element in his agenda, help his fellow Danes forget the traumatic experience of facing, and trying to deal intelligently with, environmental problems. For the new Danish government, the improvement of health care and the quality of life for the elderly are, we are told, the main political objectives, and like earnest accountants trying to balance the books, Fogh Rasmussen and his ministers are quickly reversing many of the policies of the previous social-democratic led government.

The general idea is that there is only so much money to go around - there are to be no new taxes - and if health care and the elderly need more resources, then the funding for foreign aid and environmental protection, for example, has to be reduced significantly. The government has decided to cancel several large wind-energy projects and close down a number of innovative programs in environmental research and policy - the so-called green jobs fund, for example - that had been supported by the previous government's ministry of the environment, and which have generally received positive evaluations, as well as a good deal of international interest.

In pursuing his objectives, Fogh Rasmussen and most especially his minister for the environment have been highly influenced by the teachings of Bjorn Lomborg, who sprung onto the international stage in the summer of 2001 to great fanfare when his book, *The Sceptical Environmentalist*, was published by Cambridge University Press. And while Lomborg is certainly exciting as a media phenomenon, he and his new found friends in the Danish government are not particularly exciting when it comes to protecting the environment.

As a professor in Denmark, I have followed Lomborg, a young statistician, since he first wrote four articles in 1997 in one of the main Danish daily newspapers, in which he challenged the "litany" of environmental bad news with his statistical tale of things getting better. Like many other middle-aged friends of the environment who have been around for awhile, I felt that here was simply one more in the long line of anti-environmentalists, who had come along to attack environmentalism in the name of business as usual. Already in the 1960s, Rachel Carson's *Silent Spring* had been subjected to a veritable backlash of pro-industry "experts" and Lomborg didn't really strike me as all that different. After all, the guy was a game theorist and apparently had never done any work in environmental research.

But what started to be apparent, as Lomborg continued his rise to fame, was that his ambition knew no bounds. Nothing seemed to be able to stop him, certainly not reasoned debate and argument, with which he was immediately confronted; scientists, environmental activists and many others filled the newspapers with a steady stream of refutations of Lomborg's assertions. But Lomborg did not seem to be interested in academic niceties; like a missionary out to save the heathen, Lomborg wanted to save the world with his gospel of cost-benefit analysis. Just get your figures right, and things can look much brighter.

It didn't really matter whether the figures were based on careful consideration of scientific findings, the sort of thing that scientists did at their conferences and their endless meetings. If you had seen the light, as Lomborg had done, that kind of academic effort was a waste of time. The important thing was to reduce everything to money, however arbitrarily that had to be done, so that you could quickly come to a decision about what was the cheapest measure to be taken. As a

media ploy, it was and is rather interesting; as real life politics it is rather depressing.

As he started to gain political friends, such as the new minister of the environment, his ambition grew out of all proportion. His book, published in Danish in 1998, was called the "Real State of the World," and now he had a few students working for him, and so the book was filled with so many more concocted figures than he had managed in his articles. I think it is important to realize that cost-benefit analysis for Lomborg is a kind of religion rather than what most of us think of as science; if you believe that the environmental situation is improving, then you find the figures to support that belief.

And now the Danish government, eager to correct the mistakes of the previous government and its experts, is acting on that belief. A new institute of Lomborgology (that is, economic environmental assessment) has been established - with guess who as the director, while a large number of the previous government's environmental research programs are being cut. For Fogh and his ministers, environmental protection costs too much money, and other priorities are simply more important. The pioneering role that Denmark has played in relation to international environmental negotiations, wind energy development, urban ecological experimentation, and so many other areas, is fast becoming a thing of the past.

Of course, none of this is Lomborg's fault, but his media show has certainly helped fuel a populist reaction to the policies of the previous Danish government. And, of course, those policies were certainly not perfect; like all policies in our increasingly risky societies, they were based on their own chosen expertise, and as Lomborg has so gleefully pointed out, the experts do not always agree. To recognize that disagreement is one thing, however; to twist that recognition into a long-winded and misleading series of arguments for complacency, as Lomborg has done in his book, is downright dangerous, especially when the arguments get used by people in power with a clearly anti-environmental agenda.

For friends of the environment everywhere, it is important to learn from the Danish experience, and, in particular, to understand how the media can be used and manipulated in order to manufacture disinformation in this age of information. In Denmark, we can see what this kind of thing can lead to, and we can also see that no matter how much one "plays by the rules" of public debate, Lomborg and his kind play by a different set of rules. However depressing and unappealing it might be, we should begin to understand those rules better. We can no longer assume that knowledge and qualified scientific argument will win out in the end.

DRAFT SCHEDULE

WEDNESDAY

11:00 – 12:30 Plenary

14:00 – 15:30

Genetics and Biomedicine

Human Genetics and Inequality on the Periphery: the Island of Ireland, Jill TURNER
Who Decides What: Procreative Autonomy and PGD in Liberal Democracies, Harald SCHMIDT
Merchant Science & Co: Exploring New Terms, Terrains and Typologies, Janet ATKINSON-GROSJEAN

16:00 – 17:30

Sexuality and STS: Knowledge and Reflexive Practice

Organisers: Nina WAKEFORD & Peter HEGARTY
Dealing With Paradox in the Space of Uncertainty: HIV, Treatments, Gay Men and Prevention, Marsha ROSENGARTEN, Paul FLOWERS, Jamie FRANKIS, Mark DAVIS, Graham J. HART, John IMRIE
'Gaydar' Moments in Research on New Technologies, Nina WAKEFORD
Medically Constructed Subjects and HIV Treatment Failure: A Systematic and Critical Review, Paul FLOWERS, Jamie FRANKIS, Marsha ROSENGARTEN, Mark DAVIS, Graham HART, John IMRIE

14:00 – 15:30

Medicine, Knowledges and Lives: Translational Processes Between Labs and Practices (1)

Organiser: Elin BOMMENEL
Session Discussant: Lene KOCH
Toffees and Caries Cavities. From A Littered Schoolyard to National Dental Policies in Sweden 1938-1956, Elin BOMMENEL
Knowledge Transfer and the Practices Surrounding Virtual Reality Surgical Simulators, Ericka JOHNSON

16:00 – 17:30

Medicine, Knowledges and Lives: Translational Processes Between Labs and Practices (2)

Organiser: Elin BOMMENEL
Session Discussant: Lene KOCH
Treating Lifestyle Diseases: Medical Science, Health Care and the Evaluation of Therapies Against Obesity, Petra JONVALLEN
Sperm Politics: Negotiating Masculinities in the Medical Practices and Knowledge Production Related to Sperm Donation, Adrian STINE
Xenotransplantation in the Making: the University Clinic As an Innovation Milieu of Medical Knowledge, Markus IDVALL

14:00 – 15:30

Diverse Imaginaries in Design

Organiser: Judith GREGORY, Sampsa HYYSALO & Jonna KANGASOJA
Session Discussant Lucy SUCHMAN
From 'Businessmen' to 'Snowboard Kids': Cultural Landscapes in Product Development, Tanja KOTRO, Mika PANTZAR
Incomplete Utopian Projects: Resources of Imagination in Design of Innovation-In-The-Making, Judith GREGORY
Imagined Change? Continuities in Computing Development, Jaakko SUOMINEN

16:00 – 17:30

Technology Studies I

Beyond Technological Project - Practice Bound Imaginaries in Technology Production, Sampsa HYYSALO
Selling 'Promiseware' and Securing Public Good: the Dialectics of Constructing an Information Infrastructure For the Future City, Jonna KANGASOJA
Delegation to Technology: Automatic Defibrillation and the Management of Risk, Stephen TIMMONS, Russell HARRISON-PAUL

14:00 – 15:30

Doing Architecture, Accounting Society: Social Studies of Architecture Practices

Organisers: Albena YANEVA & Sophie HOUDART
Session Discussants: Albena YANEVA & Sophie HOUDART
Politicising Nature: Architectural Invisibility As Part of the Making Process of the Japanese International Exposition, Aichi 2005, Sophie HOUDART
How does a Building Come into Being? Scale Models and Scaled Publics, Albena YANEVA

16:00 – 17:30

Technology Studies II

The Configuration and Appropriation of New Technologies Within the Organisation, Chris HARTY
Computer-Simulation, Anticipation and Participation. the Role of A Technical Method in the Social Shaping of Technology, Philine WARNEKE
Bracketing the wor[l]d [system] or How to Analyze Emerging Problems, Risks & Impacts of Interacting Environmental and Societal Realms?, Andreas METZNE

14:00 – 15:30

Science Shops - A Community Based Research Approach and Its Interaction With University Research and Education

Organiser: Caspar DE BOK

STS and Science Shops: the Next Generation, Nicole FARKAS
Science Shops: A Tool to Bridge A Science and Society Gap, Caspar DE BOK
The Impact of Science Shops on University Curricula and Research, Michael Sogaard JØRGENSEN

16:00 – 17:30

Between Policies and Practices: Promoting Improved Science/Society Relationships Across Europe

Organisers: Ulrike FELT & Maria Eduarda GONCALVES
Publics - Citizens - Consumers: Shifting Roles and Changing Political Paradigms, Ulrike FELT
The Politics of the Public Understanding of Science Across Europe, Maria Eduarda GONCALVES
Scientific Advisory Systems and Public Participation, Josephine Anne STEIN
Scientific and Technical Culture Versus Scientific "Acculturation": Beyond the Democratisation of Science (The French Case), Philippe CHAVOT, Anne MASSERAN

14:00 – 15:30

Public Understanding of Science

Anyone Asked if the Public Care About Science?, Tammy SPEERS
Deepening Democracy in A Global World of Science and Technology, Marli HUIJER
Public Understanding of Science As A Political Project, Hugo MENDES

16:00 – 17:30

Representing Science

When Science Is Made Worlds Again: Scientific Representation in A Study on Two Science Centres, Priska GISLER
Crossing Situations: Representing Science in A Children's Television Drama, Linda HITCHIN
Signification, Text, Time and Space: A Case Study of Scientific Educational Texts, Simon CARTER, Mike MICHAEL

14:00 – 15:30

Telecommunications

Evaluation Criteria For the Social Acceptance of Novel Technologies: the Case of the Mobile
Telecommunications Market, Dimitrios G. XENIKOS, Michalis ASSIMAKOPOULOS
Time and Accountability in a Regulatory Environment of Novel Telecommunications Technologies, Konstantinos DROSSOS, Dimitrios G. XENIKOS, Michalis ASSIMAKOPOULOS
Locating the Mobile, Geoff COOPER

16:00 – 17:30

Production and Communication of Knowledge, Relations of Trust and the Internet

Organiser: Anne BEAULIEU
Lay Or Expert Health Information? Trusting Online Health Information From an Internet User's Perspective, Joëlle KIVITS

Trust in Cyberscience: Social Relations and Databases in Data-Sharing Infrastructures, Anne BEAULIEU
Sharing Scientific Data: the Social Dynamics of Database Design, Christine HINE

14:00 – 15:30

The Boundary Work Approach in STS: New Applications and New Challenges

Organisers: Sujatha RAMAN & Simône HUIJS
Constructing the Boundary Between 'Academics' and 'Practitioners': A Closer Look At the Relevance Discourses of Sweden's Strategic Research Councils, Tomas HELLSTRÖM
Equality With Artefacts, Alessandro MARANTA
Changing Relationships in Knowledge Production and Their Implications For Science-Policy Boundary Work, Merle JACOB

16:00 – 17:30

Boundary Institutions, Boundary Work, and Public Discourse

Organisers: Robert HOPPE & David GUSTON
Comparative Analyses of the Science/Policy Boundary: What Are We Comparing? Willem HALFFMAN
Rethinking Political Judgment and Science-Based Expertise: Boundary Work and the 'Transgression' Between STS and the Policy Sciences, Robert HOPPE
The Dutch Health Council and the Management of Hybrids - Coordinating Devices in the Production of Credible Scientific Advice, Roland BAL, Ruud HENDRIKS, Wiebe E. BIJKER

14:00 – 15:30

Conceptualising Identity in Science Studies

Organiser/Chair: Richard TUTTON
In Between: Identities and the Field, the Theories and the Methods, Amade M'CHAREK
The 'Absent Body' and the 'Dividual': Aspects of Personhood and Identification in Clinical Breast Cancer Genetics, Sahra GIBBON
Reproducing Identity in the Context of Pre-Implantation Genetic Diagnosis, Sarah FRANKLIN, Celia ROBERTS

16:00 – 17:30

Viagra: Technoscience in Search of A Problem

Organiser: Sally WYATT
'Not Tonight Dear, I Have A Dysfunction': Sexual Disorders and the Medical Management of Heterosex, Barbara L. MARSHALL
The Viagra Files: the Web As Anticipatory Medium, Richard ROGERS, Noortje MARRES
Taking Viagra: Narratives of Risk and Decision-Making, Sally WYATT, Angie HART, Flis HENWOOD, Julie SMITH

09:00 – 10:30

Sciencometrics

Problems in the Use of Web Indicators For Research Assessments, Paul WOUTERS
A Consecutive View of Bibliographical Methods in Scientometrics and Its Implication, Masashi SHIRABE

Aggregated Journal-Journal Citations As Indicators of Change in the Social Sciences, Loet LEYDESDORFF

11:00 – 12:30

The Challenge of Measuring the Web

Organiser: Paul WOUTERS
The Web As an Evolving Non-Linear System – Consequences From Statistical Physics and Non-Linear Dynamics Research For S&T Studies of the Web, Andrea SCHARNHORST
Measuring Informal Scientific Publication in the Web, Isidro F. AGUILLO
Analysing the Link Structure of the Web Sites of National University Systems, Mike THELWALL
The Role of Electronic Communications in Research - A Case Study, Gaston HEIMERIKS, Peter VAN DEN BESSELAAR

09:00 – 10:30

Technology and Accountability in International Development: Natural Resources, Climate Change and Food Security Viewed From Science and Technology Studies and Development Studies (1)

Organisers: Paul RICHARDS & Harro MAAT
Getting the Big Picture in the History of Technology: Building Tensions of Europe: Technology and the Making of Twentieth Century Europe, an International Research Network, Donna C. MEHOS
Citizenship, Science and Risk in International Perspective, Melissa LEACH, Ian SCOONES, Lisa THOMPSON
Models of New Forms of Knowledge Production and Changing Systems of Accountability - the Implications of Globalisation, Brian WYNNE

11:00 – 12:30

Technology and Accountability in International Development: Natural Resources, Climate Change and Food Security Viewed From Science and Technology Studies and Development Studies (2)

Organisers: Paul RICHARDS & Harro MAAT
Accountability to the Poor in Biotechnology: the Case of the Rice Genome, Paul RICHARDS, Harro MAAT
Philosophical Deconstruction and Relations of Technoscientific Dominance, Ivan DA COSTA MARQUES
Racing the Future: Science, Technology and the Politics of Difference, David SKINNER

THURSDAY

14:00 – 17:30

Mobilising S&T: Public and Policy Debate in Comparative Regional & National Contexts

Organiser/Chair: Andrew WEBSTER
Integrating the Public Into A Sociotechnical Project. the Case of the Strasbourg Tramway Project (1989-1994), Luis APARICIO
The Governance of Uncertainty in the Field of Biotechnology: Citizens, Experts and GMOs in Switzerland, Alain KAUFMANN, Marc DUCREY, Marc AUDETAT, Claude JOSEPH

Politics of Framing in the GM Consensus Conferences in Japan: How Did Publics Frame the Issues of GM Crops? Hideyuki HIRAKAWA
Communities and the Internet: A Case Study of European Digital Cities, Dennis BECKERS, Peter VAN DEN BESSELAAR

The Impact of Satakunta Macro Pilot on the Socio-Technical Change of Working Practices in Finnish Social and Health Care, Juha KOIVISTO
Decentralization and Public Participation in Japanese Science and Technology Policy, *Mitsuaki Hosono, Shinichi Kobayashi*

17:45 – 19:00

Sub Plenary
New Public Sphere

09:00 – 10:30

Genetics & Screening

Professional Responsibility and Uncertainty in Medical Genetics, William LEEMING
Dilemmas Encountered By Health Practitioners Offering Antenatal Nuchal Translucency Screening, Clare WILLIAMS, Priscilla ALDERSON, Bobbie FARSIDES
Body Matters, Naomi PFEFFER, Rachel ROBERTS

11:00 – 12:30

Patient Perspectives

Using the Future to Make Sense of the Present: A Discourse Analysis of Accounts of IVF Failure, Karen THROSBY
Knowledge and Credibility: Patient Groups and Biomedical Research Networks, Dwijen RANGNEKAR
Transdisciplinary Research As Systematic Approach to the Implementation of Patient Participation in Biomedical Research, J.Francisca FLINTERMAN, Jacqueline E.W. BROERSE, Joske F.G. BUNDERS

14:00 – 15:30

Energy and Environmental Politics/Policies I: Decision Making and Policy Processes

Organisers: Jane SUMMERTON & Pål NAESJE
Session Discussant: Harald ROHRACHER
Local Energy and Environmental Policy - A Case Study on the Policy Process of Shaping A Local District Heating System, Jenny PALM
Grounded in Clean Soil: Knowledge Utilisation and the Institutionalisation of Standard Setting For Soil Quality in the Netherlands, Astrid F.M.M. SOUREN, Peter GROENEWEGEN, Nico VAN STRAALEN, Pieter LEROY

16:00 – 17:30

Energy and Environmental Politics/Policies II: Sustainability, Technology and Politics

Organisers: Jane SUMMERTON & Pål NAESJE, Session Discussant: Jane SUMMERTON
Developing Sustainable Energy Technologies: Translations Between Technology and Politics, Margrethe AUNE, Knut H. SØRENSEN
On the Outskirts: Social Science Research on New Renewable Energy Technologies, Jorund BUEN
The Making of Green Knowledge, Andrew JAMISON

17:45 – 19:00

Sub Plenary

Rethinking Science and Commodifying Knowledge, Merle JACOB

09:00 – 10:30

Transparency and Expectations

Risk, Meta-Risk and the Performance of Transparency: From Authority to Authenticity in the Xenotransplantation Case, Mike MICHAEL, Nik BROWN
Situating Biotechnical Expectations: Desire, Hope and Hype, Nik BROWN, Mike MICHAEL
The Promising Gene: the Mandate and Agenda of Genomics, Harro VAN LENTE

11:00 – 12:30

Patient Advocacy Groups in the New Genetics

Organisers: Rob HAGENDIJK & Annemiek NELIS, Session Discussant Rob HAGENDIJK
Genetics and Its Publics: Citizen Activists and the Emergence of Molecular Medicine in the United States, Karen Sue TAUSSIG
Patient Organisations in the New Genetics, Annemiek NELIS, Rob HAGENDIJK

14:00 – 15:30

International Comparative Analyses of Environmental Responsibility and Policy Towards GMOs,

Organisers: Tee ROGERS-HAYDEN & Steve YEARLEY
Chair/Session Discussant: Steve YEARLEY
Progressing Sustainability Or Sustaining Progress: Offering A Sustainable Alternative to Progress in Aotearoa /New Zealand's Royal Commission on Genetic Modification? Tee ROGERS-HAYDEN
GMOs and the Opening of A Discursive Space For the Re-Foundation of Democracy in France, Monique FOURNIER
The Reversed GMO Information-Acceptance Argument - Will Information About GMO Concerns Lead to Expert Acceptance of Concerns and Changed Innovation Agendas? Annegrethe HANSEN, Michael Soegaard JØRGENSEN

16:00 – 17:30

Health Technology

Between Living and Dying: Defining and Diagnosing Brain Death in Switzerland 1960-2000, Silke BELLANGER, Aline STEINBRECHER
'Efficacy', Empiricism and Elisions Within Studies of Anti-HIV Treatments: A Systematic and Critical Review of the Literature, Jamie FRANKIS, Paul FLOWERS, Marsha ROSENGARTEN, Mark DAVIS, Graham HART, John IMRIE
The HIV Antibody and Viral-Load Tests As Technologies of Risk Management: Qualitative Perspectives on Medical Technology As Risk Reduction and Production, Mark DAVIS, Tim RHODES, Linda CUSICK, John IMRIE

09:00 – 10:30

Standardisation: Participation and Change (1)

Organisers: Ragna ZEISS, Alexander VOß and Tineke EGYEDI
Standards, Gateways and Flexibility in Large Technical Systems, Tineke M. EGYEDI
'It's All A Big Clockwork': Standards Selection and Appropriation in Manufacturing, Alexander VOß, Rob PROCTER, Mark HARTSWOOD, Roger SLACK, Robin WILLIAMS, Mark ROUNCEFIELD
Standards and Standardisation Processes in the Context of Water Quality: Investigating Their Limits, Ragna ZEISS

11:00 – 12:30

Standardisation: Participation and Change (2)

Organisers: Ragna ZEISS, Alexander VOß and Tineke EGYEDI
Standardizing Medical Expertise: Changing Networks and Care in Glaucoma Care, Monique NIJKAMP, Roland BAL
Evolving Approaches to Technical Standardization in A Knowledge Economy, Timothy SCHOECHLE
Reflexivity of Standards, Ole HANSETH
The Role of Users in the IT Standards Setting Process, Kai JAKOBS

14:00 – 15:30

Standards Setting in Highly Dynamic Environments

Organiser/Chair: Kai JAKOBS
Social Shaping of Character-Coded-Set Standards, Jinsang HWANG
Positioning Strategies of Standard Development Organizations in the Internet: the Case of Internet Telephony, Marc VAN WEGBERG
When Is Standardization Slow? M. H. SHERIF

09:00 – 10:30

Skilled Uses of Technology: Mediated Inter/Actions in Surgery

Organiser: Lorenza MONDADA & Tiago MOREIRA
Session Discussant: Stefan HIRSCHAUER
'Ordering Surgery in the Operating Room', Tiago MOREIRA
Analysing Work and Collaboration in Anaesthesia, Jon HINDMARSH
Surgery As Inter-Action, Lorenza MONDADA

11:00 – 12:30

Representations of Use and Users and Their Role in Innovation

Organiser: Stewart RUSSELL
Important Or Not? the Role of User Representations in the Strategies and Practice of Technoscience, Mads BORUP
Representations of Use and Need in R&D: A Case Study of Work on Intelligent Polymers, Stewart RUSSELL
Mediated Consumption and Consumers: Dutch Multinationals and the Diffusion of Hi-Tech Products, Adri ALBERT DE LA BRUHÉZE, O. DE WIT

14:00 – 15:30

Cyber Suburbs

Street-Wise in the Cyber Suburbs: the Making and Mapping of an E-Innovation Journey, Kerry CARMODY, Michael ARNOLD
The Co-Construction of Video Surveillance and Public Spaces - A Media Snapshot, Ann RUDINOW SÆTNAN

09:00 - 10:30

Science on Display: Boundaries, Identities, and the Politics of Popularization

Organiser: Sonja SCHMID, Session Discussant: Sharon MACDONALD
Good Bye Tomato - Good Morning Rice! Public Understanding of Science. More of the Same? Bernd KRAEFTNER, Judith KROELL
Molding the Soviet Science Spectator: A Pavilion For the Peaceful Atom, Sonja SCHMID
Lay Knowledge and Functional Foods, Mari NIVA

11:00 - 12:30

Popular Science I

Anticipatory Technology in 19th-Century Popular Science Magazines, Jean-Louis TRUDEL
Researching Readings of A Scientific News Story, Susan MOLYNEUX-HODGSON, Keri FACER

14:00 - 15:30

Responsibility, Uncertainty and the New Governance of Science Part I

Organiser/Chair: Peter HEALEY
Public Participation: New Methods, Old Politics? the 2001 GM Food Debate in the Netherlands, Rob HAGENDIJK
The Latest New Atlantis in the North: Mapping the Current Confidence of the Swedish Technoscientific Community, Mark ELAM, Hans GLIMELL
Controversy Over Institutional Design and Structure in Norwegian Governance of Genetic Technologies, Egil KALLERUD

16:00 - 17:30

Responsibility, Uncertainty and the New Governance of Science Part II

Organiser/Chair: Peter HEALEY
Democracies of Technology and Technologies of Democracy: Constructing the Scientific Citizen, Alan IRWIN
Policy Networks For Science & Technology Governance, Moses A. BOUDOURIDES
Managing Risk Or Acting Under Uncertainty? Precautionary Tales of Biomedicine and the Environment, João Arriscado NUNES, Marisa MATIAS

09:00 - 10:30

Science & the Citizen

In the Crossfire: Citizen-Empowering Risk Journalism, Anna SALLEH
The Good Scientist, the Bad Layman and the Ugly Smuggler: How to Transgress the Boundaries of Science, Anne BERTRAND
Dealing With Uncertainty: Environmental Movements and the Use of Scientific Knowledge, Maria Eugénia RODRIGUES

11:00 - 12:30

Governance & Environment

Science and Governance in Europe: Lessons From the Case of Agbiotech, Les LEVIDOW, Claire MARRIS
Politics of Modernisation and Expertise - the Case of Fishery Sciences in Norway, Vera SCHWACH
Dutch Environmental Science: Transitory and Contemporary Science, Bertien BROEKHANS

14:00 - 15:30

Popular Science II

Debating Darwin(ism): Popular Evolutionary Psychology in the UK, Angela CASSIDY
Politics of Metaphors and Visual Images: Medical Genetics on Finnish Television News, Iina HELLESTEN

16:00 - 17:30

Science in the Public Sphere

Social Science in the Public Sphere: Debating the Single European Currency, Robert EVANS
Evaluating the Effectiveness of Scientific Advice to Policy-Makers, Steven GLYNN, Kieron FLANAGAN, Michael KEENAN
Science-Policy Interactions in the European Union: Experiences of the EFIEA's Policy Programme, Anita ENGELS

09:00 - 10:30

Senior Citizens in the Information Society

Organiser: Birgit JAEGER
Inclusion and Exclusion in the Meeting Between Senior Citizens and ICT, Marianne STERLIE
Barriers and Challenges Concerning Democratic Use of ICT in an Ageing Population, Sune JOHANSSON
The Grey Panthers Wants Political Influence - Democratic Effects of Utilising ICT, Birgit JAEGER, Lars FUGLSANG

11:00 - 12:30

Mobilising Medicine: Telehealthcare, Bodies, Practices and Risks

Organisers: Maggie MORT, Carl MAY and Tracy WILLIAMS
Performing Image Quality in Surgical Telemedicine, Margunn AANESTAD, Bjørn EDWIN, Ronald MÅRVIK
Tele-Imaging and the Politics of Distribution: Mobility and Mobilisation in Clinical MRI, Yutaka YOSHINAKA
Telemedicine and Disruptions Within Time and Space Dimensions, Claude SICOTTE, Pascale LEHOUX

14:00 - 15:30

ICTs & Identities

Negotiating Identities/Reconfiguring Collectives in Emerging Information Infrastructures, Randi MARKUSSEN, Finn OLESEN
Studying ICT Users: Between 'Technography' and Ethnography, Maria BAKARDJIEVA
Reflections of Local Practice in Corporate Icts: A (Virtual) Ethnography, Vanessa DIRKSEN

16:00 - 17:30

Standardization & Growth

The History and 'Biography' of Computer Systems and Software Packages: Implementing Standardised Software in Diverse Settings, Neil POLLOCK
Conforming to Standards: Erp-Systems and Technical Isomorphism, Heico VAN DER BLONK, Jos BENDERS, Ronald BATENBURG, Wim SCHEPER
Anticipating Growth and Change in Critical Infrastructure: the Case of Wireless Enhanced Emergency (911) Service in North America, Gordon A. GOW

09:00 - 10:30

Multi-Level Governance, Problem Structuring and the Implications For Boundary Work in Science Policy

Organisers: Sujatha RAMAN & Simõne HUIJS, Chair: Rob Hoppe, Session Discussant: Roland BAL
Shifts in Policy Problems: Dynamic Boundary Work and Changing Policy Strategies, Simõne HUIJS
Political Rationality and the Assessment of Science-Policy Boundary Work, Sujatha RAMAN
The Role of Nature Visions in Boundary Work Between Science and Policy For Dutch Nature Conservation: Beyond an Interest Based Explanation?, Esther TURNHOUT, Matthijs HISSCHEMÖLLER, Herman EJSACKERS

11:00 - 12:30

Regulating Genetics I

Genetics and Governance: Limits on Citizenship, Anne KERR
Vanguard Or Checkmate? the Reach of Law and the Regulation of Gene Technologies, Filippa CORNELIUSSEN
North Sea Bubble Or A Revolution in Medicine?, Hilary ROSE

14:00 - 15:30

Regulating Genetics II

The Transatlantic Rift in Genetically Modified Food Policy, Celina RAMJOUÉ
Governance Regimes and Citizenship in Biotechnology Debates and Regulation in the Netherlands, Barend VAN DER MEULEN, Femke MERKX
A Co-Evolutionary Perspective on ELSI, CTA and Other Attempts At Re-Contextualisation of Science and Technology in Society, Arie RIP

16:00 - 17:30

Precaution and Foresight

Organiser: Rene VON SCHOMBERG
International Policy Aspects Concerning the Application of the Precautionary Principle, Rene VON SCHOMBERG
Andrew STIRLING
A policy framework for the application of the Precautionary Principle, Christine LOSERT

09:00 - 10:30

Gender & Technologies

Paradoxes in Gender and New Technologies, Marja VEHVILÄINEN

Health Technologies For Midlife Women: Uncertainty, Responsibility and 'Expert Intervention', Eileen GREEN, Frances GRIFFITHS
An Epidemiology of Women's Lives: the Environmental Risk of Breast Cancer, Laura POTTS

11:00 - 12:30

Constructing Bodies

Turbulent Bodies, Robust Technofacts? on the Shaping of Bodies in Contemporary Life Science, Jutta WEBER
The Transparent Technician: Perceiving and Eliding Sex in Fetal Cell Isolation, Aryn MARTIN
Breast Reconstruction: (Re)Making the Normal As A Practical Measure, Magic Ritual Or Risky Procedure? Kerstin SANDELL

14:00 - 15:30

Women, Science & Technology

Women in Science: Making the Dialogue Between Research, Policy and Science and Engineering Practice Effective, Diane BEBBINGTON, Jan PETERS
Where Have All the Women Gone? Gender on the 'Computer Biographies' of Finnish IT Students, Johanna UOTINEN

16:00 - 17:30

Uncertainty & Information

Uncertainty in the Construction of Scientific Knowledge in Experimental Psychological Research - A Pilot Interview Study, Claudia COELHO
Evidence Based Uncertainty: Hereditary and Sporadic Breast Cancer Screening As Predictive Medicine Practices, Marianne BOENINK
Health Information and the Public: Who Decides, Jacque-Lynne SCHULMAN

09:00 - 10:30

Research Science and the New Economy:

Commercialising Knowledge

Organiser/Chair: Andrew WEBSTER
Collaboration and Commodification in the Biotechnology Industry, Luis SUAREZ-VILLA
Old Categories and New Research: the Case of 'Basic' Biotechnology, Jane CALVERT
The End of Academia? Uncertainty and Path Dependency in the Commercialization of University Research, Georg DRÜCKEN

11:00 - 12:30

Global & Local Science.

Environmental Research and Organisational Structure in Sweden, Malin MOBJÖRK
Global Science, Local Research: the Adoption and Development of Physics in South Korea, Ki-Wan KIM
International Expert 'Commando Raid' Research Evaluation, William J. NUTTALL, P.D. DIAMOND, P.R. COOPER, T.S. PANESOR, U.M. WIELGOSZ

14:00 - 15:30

National & International Scientific Research

"Entrepreneurial Universities" and the Impact of University-Industry Collaboration on the Scientific and

Technological Productivity of Academic Research Groups, Liana Marina RANGA
Research Institutes in A Globalizing World, Tina RUSCHENBURG, Anita ENGELS, Peter WEINGART
Ukrainian Science System After Ten Transition Years, Lidiya KAVUNENKO

16:00 – 17:30

Assessment of Thresholds on the Way of Innovative Development of Countries and Regions in Transition Economies

Organiser: Mikhail GOUSSAKOV
Session Discussants: Mikhail GOUSSAKOV, Elena M. ROGOVA, Michael DJANELIDZE, Angelina GUDKOVA, Dominique MARTIN-ROVET & Tatiana GOUSSAKOVA, Daria EGOROVA
Formation of an Innovational Economy in Russia, Mikhail GOUSSAKOV
Regional Approach to Environmental Performance Improvement, Daria EGOROVA
Formation of an Innovational Culture in A Sphere of Business, Tatiana GOUSSAKOVA
Mechanism of Pulling R&D in Industry on the Base of Venture Capital in Russia, Elena M. ROGOVA

09:00 – 10:30

Consumers & Users

Scenarios of Future Kitchen in Consumer Group Discussions. Some Methodological Considerations, Johanna MÄKELÄ, Päivi TIMONEN, Kaarina HYVÖNEN, Mari NIVA
Shaping of Sustainable Future Kitchen – Consumer Participation, Päivi TIMONEN, Johanna MÄKELÄ, Kaarina HYVÖNEN, Mari NIVA, Esa VESMANEN
Matching Supply and Demand of Electricity in Micro-CHP Design: Script-Induced Shifting of User Behaviour in Time, A. KETS, P. BOONEKAMP, J. JELSMA

11:00 – 12:30

Culture & Computers

Context and Culture in Human Computer Interaction, Jose L. ABDELNOUR-NOCERA, Pat HALL, Hugh MACKAY
Turn It On! – How the Swiss <CHancelbot> Came to Be, Christoph MUELLER

14:00 – 15:30

The Social Life of Medical Images

Organiser: Simon COHN
The Social Life of Medical Images, Andreas ROEPSTORFF
Hard to Handle: Substances, Materials and Bodies in the X-Ray Laboratory - and Outside, Monika DOMMANN
The Social Life of Medical Images, Jo-Anne BICHARD

16:00 – 17:30

Technoscientific Futures: Visions of Alternative Capitalisms

Organisers: Natasha LETTIS & Lorna RONALD

Titheing to the Market, Or How to Build A Robust Non Free-Market System, Natasha LETTIS
Consumer Democracy? Toward an Alternative Market System That Better Melds Public and Private Purposes, E. J. WOODHOUSE
Decommodifying Drugs - Forging A Path to an Alternative Capitalism, Lorna RONALD

FRIDAY

11:00 – 12:30

Science in Society

Introduction to the Programme, Steve RAYNER
'Making Science History': the Regionalization of Science Policy, Simon MARVIN
Experiments in Science Communication: A Pilot Study With A Digital TV Channel, Richard HULL
Accountability and the Governance of Expertise: Anticipating Genetic Bioweapons, Brian RAPPERT
Reproducing the Centre: Performing Innovation At Xerox PARC, Lucy SUCHMAN (tbc)

14:00 – 15:30

Roundtable Discussion: Patients, Persons & the Political

Organisers: Amade M'CHAREK & Jeanette POLS

16:00 – 17:30

Sub Plenary

Inter – Sex

12:30 – 14:00

Postgraduate Forum: How to Publish Your Work'

Chair: Ragna ZEISS, Session Discussants: Mike LYNCH & Ulrike FELT

09:00 – 10:30

Energy and Environmental Politics/Policies III: Energy Efficiency, Cooperative Projects, Users and Other Actors

Organisers: Jane SUMMERTON & Pål NAESJE, Session Discussant: Pål NAESJE
Danish Appropriation(s) of the Precautionary Principle, Søren LØKKE
Energy Efficiency Policy and the Role of Users, Harald ROHRACHER
Inter-Organisational Cooperation- A Strategy For Swedish Municipal Energy Companies 1975-2000, Henrik BOHLIN

11:00 – 12:30

Land, Science, People (I)

Organisers: Julia GARRITT & Andy SAMUEL, Chair: Julia GARRITT
Making and Enacting Expert Knowledge in Nature Conservation: Coordinating the Conservation of A New Nature Reserve, Matt WATSON
The Scientific Management of 'Nature' on A Cultured Landscape, Andrew SAMUEL
Nature Strikes 'Us' Again: Governing Nature As A Post-Social Object, Ricardo ROQUE, Gonçalo PRAÇA

14:00 – 15:30

Land, Science, People (II)

Organisers: Julia GARRITT & Andy SAMUEL, Chair: Andy SAMUEL
Who Are You? the Impoverished Identity of Non-Science 'Stakeholders', Lorrae VAN KERKHOFF
Science and the Biodiversity Convention: A Case Study of Local Enactment, Julia GARRITT
Government Applied Science Versus Community Awareness in Pest Management. the Example of Village Projects in Northern Cameroon, Josiane OLFF-NATHAN

16:00 – 17:30

Modelling Future Environments, Scientific Expertise and Public Understanding

Organisers: John FORRESTER & Julia GARRITT, Chairs: John FORRESTER & Julia GARRITT, Session Discussant: Steve YEARLEY
Lay Participation in Scenario Development: Lessons From Recent Experience
Dale S. ROTHMAN, Marjolein B.A. VAN ASSELT, Jan ROTMANS, Susan VAN 'T KLOOSTER, Sandra GREEUW, Kasper KOK, Nicole RIJKENS-KLOMP
Participation, Models and the Local Governance of Air Pollution, Steve CINDERBY, John FORRESTER, Steve YEARLEY, Paul ROSEN
Science Or Society? the Public's Framing of Radioactive Waste Management, Jane HUNT

09:00 – 10:30

Panel 1: Human Biological Sample Collections: Ideas, Approaches and Findings

Organiser: Martin SEXTON, Session Discussant: Jeanette EDWARDS
Empirical Research on Informed Consent and Biobanks, Lena RING, Åsa Kettis LINDBLAD
Ethical Protections in Epidemiological Genetics: Participants' Perspectives, Richard ASHCROFT, Emma WILLIAMSON, Trudy GOODENOUGH, Julie KENT
Public Attitudes to Participating in A Population Cohort to Examine the Relationship Between Genes, Lifestyle and Illness (Biobank UK), arren SHICKLE, Chris MCCABE, Philip SHACKLEY, Rhydian HAPGOOD

11:00 – 12:30

Panel 2: New Directions in Bioethics

Organiser: Martin SEXTON, Session Discussant: Jon TURNER
Balancing Efficiency and Integrity When Using Human Biobanks, Mats G. HANSSON
A Comparative Study of Participation and Non-Participation in the North Cumbria Community Genetics Project, Erica HAIMES, Michael WHONG-BARR
Post-Genomic Bioethics: Social, Ethical and Legal Issues Raised By the Commercialisation of Human Genetics, Paul MARTIN

14:00 – 15:30

Pharmacogenetics: Visions and Stories 1: Industry's Views

Organiser: Adam HEDGECOE

Determining Difference: Pharmacogenomics As Scientific Fact and Business Model, Kaushik SUNDERRAJAN
How Might PGx Alter the Drug Development Process? Andrew SMART
A Systematised Review of the Evidence For Real Pharmacogenetic Tests, Rhydian HAPGOOD

16:00 – 17:30

Pharmacogenetics: Visions and Stories 2: Patients and Doctors

Organiser: Andrew SMART
Clinicians' Views on the Ethics of Pharmacogenetics, Adam HEDGECOE
Pharmacogenetics: Informing the Doctor Patient Encounter, Ann RAVEN
Politics, Profits, Ethics and Pills: Charting the Development of Pharmacogenetics in Clinical Trials, Oonagh CORRIGAN

09:00 – 10:30

Embracing Uncertainty in Technological Design: Appropriate Expertise, Intelligent Trial and Error

Organiser/Chair/Discussant: Edward WOODHOUSE
Appropriate Expertise: Alternative Energy Technology Design in Sri Lanka, Dean NIEUSMA
Can Technological Design Be Done More Intelligently? Lessons Learned From the World of Technical Standards, Patrick FENG
Are Sustainable Designers Facing Up to Uncertainty? Jeff HOWARD

11:00 – 12:30

ICTs & STS

New Socialities on and Off the Net: User Cultures At the Internet-Café, Anne Sofie LÆGRAN
Changing Agendas in the ICT-Sector: Direct and Indirect Orientation of Actors and Projects By Collective Anticipations, Kornelia KONRAD
STS Calling: Is Anybody Out There? How to Use the Web For Collaboration With Non-STs Publics, Martina MERZ

14:00 – 15:30

Restoring Order From Moments of Crisis

Organiser: Johan M. SANNE
Calculated Concerns. the World of Risk Engineers, Birgitte MUNCH
Post-Accident Attempts to Restore Order in A Transitional Society: Collapsed Platform Accident in Talsi, Latvia, Lindy M. NEWLOVE
The Construction of Acceptable Risks and Masculinity in A Paper Mill, John SJÖSTRÖM

16:00 – 17:30

Constructing and Handling Risks in Transportation

Organiser: Johan M. SANNE
Learning Risk and Constructing Social Identity - Achieving Trust and Cooperation in the Railway System, Johan M. SANNE
Co-Operation and Co-Ordination - Interprofessional Communication and Information and Communication

Technology (ICT) in Maritime Search and Rescue (SAR), Eva K TÖRNQVIST
Hierarchies, Traditions and Safety Policy Onboard A Passenger Ferry, Christer ELDH

09:00 – 10:30

Co-Construction of Users and Technologies I: Icts and Organisations

Organiser: Hugh MACKAY & Nelly OUDSHOORN
Crossing Boundaries: Patient Organizations As Users and Designers of the World Wide Web, Nelly OUDSHOORN, Andre SOMERS

11:00 – 12:30

Co-Construction of Users and Technologies II: Health and Medicine

Organisers: Hugh MACKAY & Nelly OUDSHOORN
Distance and Trust: How Does Telemedicine Change Social Relations Between Physicians?
Pascale LEHOUX, Claude SICOTTE
Uncertainty and Ambiguity in the Operating Theatre - Routines and Risks of "Distributed Action" in High Tech Work Situations, Holger BRAUN, Werner RAMMERT, Cornelius SCHUBERT

14:00 – 15:30

Co-Construction of Users and Technologies III: Energy and Environment

Organiser: Hugh MACKAY & Nelly OUDSHOORN
Politics of Exclusion: Exploring Gender, Class and Power Among Non-Users in Electricity Reforms, Jane SUMMERTON
Saving the Environment Through the Market: Configuring of Users and Designers in the Development of Environmentally Friendly Technology, J. JELSMÅ

16:00 – 17:30

Co-Construction of Users and Technologies IV: User-Designer Relations

Organiser: Hugh MACKAY & Nelly OUDSHOORN
Digital Television Users: Shaping Technology and Constructing Identity, Hugh MACKAY
Users As Boundary Shifters: the Case of the Electronic Music Synthesizer, Trevor PINCH
Domestication of A Digital City: the Force of A Gender-Script Versus the Power of Users, Els ROMMES

09:00 – 10:30

Science – Publics & Policies

Socio-Economic Research on Fusion (SERF): Fusion and Public Opinion: A Reluctant Relationship, André GAZSÓ, Wolfgang LIEBERT, Wolfgang KROMP
Understanding Public and Other Stakeholder Perceptions of Risk During the Siting Process For A Waste Transfer Station (WTS) in an Urban Neighbourhood, Salim VOHRA
Anticipating on and Shaping Socio-Technical Change: New Experimental Roles For Science, Policy, Industry and the Public in Austrian Technology Policy, K. Matthias WEBER

11:00 – 12:30

Science, Law & Expertise

Judicial Metascience and the Credibility of Expert Evidence, Michael LYNCH
Forensic Sciences, Legal Discourses and the (Re) Configuration of Citizenship, Helena MACHADO, João Arriscado NUNES

14:00 – 15:30

Technology Assessment

Technology Assessment and Social Control of Technology, Jasminka LAZNIJAK
The Evaluation of Technology Development Risks: Building Reflexive, Constructive Technology Assessment Through Consensus Meetings, Audley GENUS, Anne-Marie COLES
New Approaches in Technology Assessment Aiming At Innovations Towards Sustainability: Dealing With Uncertainty and Ambiguity Through Normative Scenarios and Stakeholder Workshops, Jaco QUIST, Philip VERGRAGT

16:00 – 17:30

Reading Science: Popular Literature and the Image of Science

Organiser: Jon TURNER
Hostile Space: Risk and Uncertainty in Popular Science Books, Felicity MELLOR
Explaining Science: A Literary Technology Assessment, Jon TURNER
Fantastically Reasonable: Ambivalence in the Representation of Science and Technology in Super-Hero Comics, Simon LOCKE

09:00 – 10:30

Expert, Evidence & Accountability

Expert Advice, Discourse Coupling, and Accountability: Problems of Context Dependent Validation in the Use of Modelling, Frans A.J. BIRRER
Interaction and Reversal Between Validation Boundaries For Experts and That For Public: Case Analysis on Health and Environmental Science, Yuko FUJIGAKI
What Is Anecdotal Evidence, and What Part Does It Play in Scientific Advice - the Case of Mobile Phones and Health in the UK? Jack STILGOE

11:00 – 12:30

GMOs

The Assumption and Reality of Experts Vs Laymen Scheme: the Extension of the Two-Sector Model of GMO Safety Issues, Miwao MATSUMOTO, Atsushi SADAMATSU
Genetically Modified Organisms (GMOs): Precautionary Science and Public Trust, Anne Ingeborg MYHR, Terje TRAAVIK

14:00 – 15:30

Patients, Persons and the Political I: Health and Interactive Technology Assessment

Organisers: Amade M'CHAREK & Jeanette POLS

Interactive Technology Assessment of Paediatric Cochlear Implantation: A Promising Experience, R.P.B. REUZEL, J. GRIN, G.J. VAN DER WILT
Women's Health Needs and the Development of Microbicides, Anita HARDON
Four Decades of Communication About Health and Medicine Related to Depression, Anxiety and Sleeplessness in A Typical Dutch Women's Magazine in the Netherlands (1950-1990), Jan UTTIEN, Toine PIETERS, Frans MEIJMAN
Caring (For) Technology At the End of Life: Which Patient Perspective?, Dick L. WILLEMS

16:00 – 17:30

Patients, Persons and the Political II: Ethnographies of Medical Practices

Organisers: Amade M'CHAREK & Jeanette POLS
The Making of the Person Through the Process of "Habilitation". the French Muscular Dystrophy Association Facing the Disability, Myriam WINANCE
Doing Abilities and Disabilities: Uncertainty and Time in Processing Dis/Abilities in A Rehabilitation Centre, Rita STRUHKAMP
How to Become A Person: Patient Emancipation in Mental Health Care in Care For the Body, Jeannette POLS

09:00 – 10:30

ICTs & STS

Applying Social Shaping of Technology to Information Systems Research
Debra HOWCROFT, Nathalie MITEV, Melanie WILSON
The Social Shaping of Software: A Case Study of Linux, Yuwei LIN
Decentering Design By Installing Technical Mediation in Systems Development Research, Jens Kaaber PORS, Dixi HENRIKSEN

11:00 – 12:30

The Virtualization of Society I

Organisers: Steven BROWN & Miquel DOMÈNECH
The Virtual and the Social, Miquel DOMÈNECH, Francisco J. TIRADO
The Baby As Virtual Object: Agency and Accountability in A Neonatal Care Unit, David MIDDLETON & Steven BROWN
The Virtualization of Nature: Rethinking Social Ordering, Israel Rodriguez GIRALT, Aleix CAUSSA, Daniel LÓPEZ

14:00 – 15:30

The Virtualization of Society II

Digital Photography As Virtual Society, Jonathan WOODROW
The Virtualization of Social Control: the Case of Electronic Tagging
Anna VITORES, Israel RODRÍGUEZ & Dani LÓPEZ
From Tristesse to Dsmiv: Ordering Up Depression
Sean VERNALL & Steven BROWN

16:00 – 17:30

ICTs & Accountability

Exploring Issues of Accountability in Design of ICT For Public Services
Sara ERIKSEN, Yvonne DITTRICH
Accountability in Action? - the Case of A Database Purchasing Decision
Daniel NEYLAND, Prof. Steve WOOLGAR
ReflexivityTM?: Constructing Accountability in Corporate Articulations of the Digital Divide
Kevin MCSORLEY
Should Information Technology Be Accountable?
Frédéric ISCHY, Gérald BERTHOUD, Daniela CERQUI, Olivier SIMIONI

09:00 – 10:30

Energy Politics

'Framing' of Global Climate Change: Policy Document Analysis of Relating Ministries and Agencies, Kazuhito OYAMADA
Responsible Despite Uncertainty - Climate Change, Political-Administrative Regulation and Coastal Protection At the German North Sea Coast, Andreas WIESNER-STEINER, Marion SAALFRANK, Hellmuth LANGE
Changed Energy Politics. A Changeover From Non-Renewable to Renewable Energy Sources
Karin PERMAN

11:00 – 12:30

Laboratories and Markets

A Polity of Laboratories and Markets: the Arduous Recommodification of Biotechnology and Conventional Foods, Javier LEZAUN
Framing Transformation: How A University Research Group Became A Biotechnology Star-Up Company, Juha TUUNAINEN
Co-Creation of Capabilities, Networks and Technologies: A Trajectory of Evolution of A High-Technology Firm, Reijo MIETTINEN, Janne LEHENKARI

14:00 – 15:30

Interests & Regulations

The Normative-Scientific Conflict of Financial Risk Regulation, Yuval MILLO
Political Interpretative Flexibility in Macroeconomics, Neil STEPHENS
Becoming More Alike Or Staying Different? Interest Intermediation in EU-Technology Policy-Finding Processes, Peter BIEGELBAUER

16:00 – 17:30

Genetics & Politics

Genetics and Insurance: Using Positioning Theory to Understand the Dynamics in the Configuration of Responsibilities. A Comparative Study Between the Netherlands and the UK
Femke MERKX
Protein Politics, Marika VIJVER
The Model of Responsibility: Social Accountability in the Age of the New Genetics, Claudia DOWNING

09:00 – 10:30

Philosophy: Engineering & Medicine
Contingency, Will and Technological Action: Toward
A Philosophy of Engineering
Steven L. GOLDMAN
Shifting Boundaries in Medical Knowledge and
Practice: Philosophical Explorations
James A. MARCUM

11:00 – 12:30

Ethics and Engineering Design Part I
Organisers: Ibo VAN DE POEL & Anke VAN GORP
Chair: Anke VAN GORP, DISCUSSANT: Peter LLOYD
Sustainability and Building Codes: Competing Ethics
of Green Builders and Code Officials
Kathryn HENDERSON
Technology, Terrorism and Moral Imagination,
Michael E. GORMAN, Matthew M. MEHALIK
Mediation and Morality: the Material Ethics of Design,
Peter-Paul VERBEEK

14:00 – 15:30

Ethics and Engineering Design Part II
Organisers: Ibo VAN DE POEL & Anke VAN GORP
Chair: Ibo VAN DE POEL, DISCUSSANT: Iba
Degrees of Responsibility in Engineering Design: Type
of Design and Design Hierarchy
Ibo VAN DE POEL, Anke VAN GORP
External Control Versus Internalised Responsibility in
the Design of Hazardous Installations
Mark COECKELBERGH, Jerry BUSBY

16:00 – 17:30

**Science and Governance in the European Union
Institutions: Innovations With the Precautionary
Principle**
Organiser: Jim DRATWA, Chair: Andrew STIRLING,
Session Discussant: Hideyuki HIRAKAWA
Safe and Sound With the Precautionary Principle: on
the Quest For Trust, Recalcitrance, and the
Constitution of Europe, Jim DRATWA
Political Innovation and Scientific Uncertainty,
Andrew BARRY

09:00 – 10:30

**Actors Or Factors I? Thinking About Allocating
Resources For Science, and Policy Effects**
Organiser: Chris CASWILL
The Principal-Agent Structure of Science Policy, David
H. GUSTON
Complex Modelling of Principal-Agent Relationships
in Research Funding Policies, Dietmar BRAUN
Principals, Agents and Contracts in European Science
Policy: Common Ground and Local Variety, Chris
CASWILL

11:00 – 12:30

**Actors Or Factors II? Thinking About Allocating
Resources For Science, and Policy Effects**
Organiser: Chris CASWILL, Session Discussants: Enno
AUFDERHEIDE, Manfred NIESSEN & H STRONKHORST
A Principal-Agent Analysis of Changes in the Ways
University Scientists Do Research, Norma MORRIS

Principals, Agents, Actors and Research Programmes,
Elizabeth SHOVE
Analysing Policy Roles and Relations: the Design and
Delivery of National Research Priorities, Heide
HACKMANN

14:00 – 15:30

Science, Technology & Accountability
The Boundaries of Accountability: A Technographic
Perspective, Steve WOOLGAR
Public Policy Representations of (Technology)
Foresight and the Scope For Building A More
Accountable S&T, Michael KEENAN

16:00 – 17:30

Science Dynamics: Case Studies
How to Shoulder the Social Responsibility: Japanese
Case
Hidetoshi KIHARA,
Title tbc, Anton SLONIMSKI
Dynamic Interactive Patterns: A Study in
Receptiveness to Advanced Foreign Technology in
Laggard Countries, Haran RIVLIN
A Shift of Accents in S&T Policy in Estonia, Helle
MARTINSON

09:00 – 10:30

Affective Encounters in Technoscience
Organiser: Adrian MACKENZIE
Designing Affective Interfaces - What Does Love Have
to Do With It? Heidi TIKKA
A Feeling For the System: Being-Affected By Codes
and Protocols, Adrian MACKENZIE
Replicants and Irreductions: Affective Encounters At
the Interface, Lucy SUCHMAN
Scientists As Policy Advisors. Scientific Advisory
Systems For Environmental Policy in Germany and the
US, Harald HEINRICHS

14:00 – 15:30

Science and Secrecy
Organiser/Chair Brian BALMER
Science, Secrecy and the Sixties, Jon AGAR
Moralizing Violence: Human Rights, Technology and
Context, Brian RAPPERT
Secret Science and Biological Warfare Research in the
United Kingdom, Brian BALMER

16:00 – 17:30

Social History of Technology
Perceptions of Technological Autonomy: Nuclear
Power and the British Electricity Supply Industry,
Mark WINSKEL
Accountability, Wheelchair Design and the British
State, Brian WOODS, Nick WATSON
Beyond Variation and Selection. the Social History of
Solar Water Heaters, Michael ORNETZEDER

SATURDAY

09:00 – 12:30

**Welcome to Halebridge: A Game to Interact With
Users**

Organiser: Willem HALFFMAN

14:00 – 15:30

**Roundtable: S&T Education I: Innovative
Teaching and New Forms of Communicating With
Students**

Organisers: Jessica MESMAN & Jane SUMMERTON
Session Discussant: Jessica MESMAN

16:00 – 17:30

**Roundtable: S&T Education II: Utilizing
'Technoscientists' and Professional Networks As
Resources in Teaching**

Organisers: Jessica MESMAN & Jane SUMMERTON
Session Discussant: Jane SUMMERTON

09:00 – 10:30

Innovation, Evaluation & Responsibility
Innovational Approach to the Solution of the Problem
Concerning Ecological and Economical Rehabilitation
of Radioactively Polluted Territories, Olga KOT
History As an R & D Tool: Incorporating STS in the
Technology Evaluation and Investment Process, Larrie
D. FERREIRO
Causes and Responsibility in Chemicals Risk
Assessment, Anne CHAPMAN

11:00 – 12:30

Environment & Social Responsibility
The End of the Environment, Michael GUGGENHEIM
Creating Science's 'New Social Contract', John
FORRESTER, Laura POTTS, Paul ROSEN

14:00 – 15:30

Environment, Technology & Policy
Cultural Patterns, Technologies, Environments. Three
Theses and an Example, José M. DE CÓZAR
State of the Environment Reports As Environmental
Policy Technology: Accountability and Boundary
Work,
Gabrielle KUIPER

09:00 – 10:30

Health: Participation & Consent
Uses of the Body and Informed Consent For
Participants in Predictive
Medicine Research, Pascal DUCOURNAU
Community Participation and Health: Transforming
Central Control, Alfred BANYA
Public 'Consent? What Counts As Participation in
Population Based DNA Collections? Sue WELDON

11:00 – 12:30

**Framing of Discourse on Reproductive and Genetic
Technologies I**
Organiser: Cornelis DEKKER
Healthy Expectations? Human Embryo in Public
Discourse on Science and Procreation
Marta KIREJCZYK

The Politics of Cloning: the Rhetorical Convergence of
Embryos and Stem Cells in Recent UK Parliamentary
Debates, Sarah PARRY
Policy Discourse, Policy Networks and the Governance
of Human Genetics in the UK
Mavis JONES, Brian SALTER

14:00 – 15:30

**Framing of Discourse on Reproductive and Genetic
Technologies 2**

Organiser: Cornelis DEKKER
The Hegemony of Individual Free Choice: the Dutch
Debate on New Reproductive Technologies, Cloning
and Genomics, T.E. SWIERSTRA
Is Medical Ethics Solving Problems Without
Understanding Them? Ambivalence About
Reproductive Genetics and the Role of Ethics in Public
Discourse, Cornelis DEKKER
Gene Talk and Straight Talk: the Multiple Framing of
Policy Discourses in the Case of Genetics and
Insurance in the UK, Nicola LINDSAY

09:00 – 10:30

Network Perspectives
Collaborative Research Workshops in Immunology: A
Case Study Using Network Analysis Software, Alberto
CAMBROSIO, Peter KEATING, Andrei MOGOUTOV, A
GUIDEL
Analysis of Knowledge Moving Forward Effects in the
Biotech R&D: A Network Perspective Based on Some
Evidence From UK, Sweden and Germany, Daniele
MASCIA, Luca GIUSTINIANO
New Clinical Collectives in the Field of Genetic
Testing For Breast Cancer: A Study of the French
Collaborative Network Using A Network Analysis
Software (Réseau-Lu), Pascale BOURRET, Claire
JULIAN-REYNIER

09:00 – 10:30

**Scientists As Experts: Communication With Policy
Makers, the Media and the Public**
Organisers: Hans Peter PETERS & Harald HEINRICHS
News Coverage on Biodiversity. The Framing of the
Debate on Biodiversity Loss in German and US-
American Print Media, Tillmann HORNSCHUH
Recovery in the Acid Rain Story: Scientist Strategies
on Science-Policy Boundaries, Göran SUNDQVIST
Scientists As Experts in the Media: Conflicts Between
Their Roles As Researcher and Communicator, Hans
Peter PETERS
Title tbc,
Harold HEINRICHS

09:00 – 10:30

Ecological Debates
The IPCC and the Kyoto Protocol: the Role of
Scientific Consensus, Reiner GRUNDMANN
Is There Room For User Participation in Ecological
Sanitation?, Birgitta RYDHAGEN
Sitting on the Scientific Fence - the Problems of
Precaution in the GM Food Debate, Lena ERIKSSON

11:00 – 12:30

Expertise & Accountability

Science As Expert Labour, Richard HULL
Suspect Technologies: Scrutinizing the Intersection of
Science, Technology, and Policy, Nancy D. CAMPBELL

09:00 – 10:30

Medical Technologies

The Standardisation Debate on Danish Electronic
Patient Records: Handling A Differend in Practice,
Casper Bruun JENSEN
The Plan and the Practice: How Anaesthetists Engage
With Uncertainty, Dawn GOODWIN
'But These Are Only Tools' - the Growth of
Information Technologies in Medical Emergency
Coordination, Aksel Hn TJORA

11:00 – 12:30

Knowledge & Organisation

Knowledge Organisation and Control: Scientometrics
Revisited, Yuri Jack Gomez MORALES
Innovation, Identity and Accountability: Technological
Change and Organisational Life, Paul ROSEN, David
SKINNER
The Role of an Industrial Research Director As A
Stakeholder: Networking Activities During the Early
History of the Philips Physics Laboratory, Kees
BOERSMA

14:00 – 15:30

Science & Community

Local and Global in Linux Community, Jussi
SILVONEN
Trust, Accountability, and Citizen Participation:
Implementing the Danish Consensus Conference on the
Internet, Patrick W. HAMLETT
Making Sense of E-Governance: Discourses of
Interactivity and E-Citizenship, Martin HAND

09:00 – 10:30

Governance and Policy

A Memory For the Future. Traceability As Technique
of Governance, Torny DIDIER
The European Parliament and the Euratom Treaty,
Gordon LAKE
Experimenting With Heroin, Trudy DEHUE

09:00 – 10:30

Uncertainty & Ethics

Uncertainty and Complexity As A Challenge to
Science, Ragnar FJELLAND
Lost in the Laboratory - Standing on the Shoulders of
Dwarfs, Vidar ENEBAKK
Doing It Ethically: How to Avoid Killing Your
Research Participants, Fiona O'NEILL

11:00 – 12:30

Uses of Models in Scientific Work

Chair: Reijo Miettinen, Session Discussant: Martina
Merz
Uses of Models in Scientific Work, Erika MATTILA
Modelling Biosensors, Endla LOHKIVI
A Practice-Oriented Approach to Models, Tarja
KNUUTTILA

14:00 – 15:30

Towards A Historical Sociology of Privacy and Secrecy

Organiser: Martin LENGWILER, Chairs: Martin
LENGWILER & Emmanuel DIDIER
Session Discussants: Emmanuel DIDIER, Dominique
LINHARDT & Martin LENGWILER
Making Sense of the Unknown: Secrecy Regulations
and the Development of Information Technologies in
Insurance Companies After 1945, Martin LENGWILER
Suspicion on State Suspicion. Techno-Political
Mediations of the Privacy/Security and
Secrecy/Publicity Antinomies, Dominique LINHARDT
The Finesse of Solicitors: Knowing to Speak and
Knowing to Be Silent, Emmanuel DIDIER

09:00 – 10:30

Innovation Networks

Social Learning in Complex Technical Change: A
Comparison of Three Chipcard Based Innovation
Projects, Anne-Marie OOSTVEEN, Peter VAN DEN
BESSELAAR, Iam HOOLJEN
Actor-Network Theory and Collaborative Innovation
Networks: A Critical Exploration of Issues, Adrian
MONAGHAN
Innovation Performance in Transition: Polish
Experiences in the 90s, Andrzej JASINSKI

11:00 – 12:30

Academic Science

Academic Responsibility Under Socio-Cultural
Uncertainty: A Case Study of IT in an Iranian
University, Hossein GODAZGAR
Deferring Uncertainties in the Virtual University:
About Ritualised Evaluation Practices and Pseudo-
Responsible Students, Andrea BUCHHOLZ, Christine
SCHWARZ
Junior Researchers, Project Work and Academic
Freedom: Changing Values, Motivation and Career
Paths, Johanna HAKALA
Value System of Academic Scientists and
Commercialization Potential of Scientific Knowledge,
Franc MALI

<http://www.york.ac.uk/org/satsu/easst2002>

Conference Announcements and Calls for Papers

CHEM@300, the conference on *Three Centuries
of Chemistry at Cambridge*, will be held at the
University of Cambridge, UK, on Friday, 6
December 2002, 9.30-19.30.

The Department of Chemistry, in conjunction
with the Society for the History of Alchemy and
Chemistry, the Historical Group of the Royal
Society of Chemistry, and the Whipple Museum
of the History of Science, is pleased to announce
a symposium marking the tercentenary of the
chair of chemistry at Cambridge. The speakers
include Jeremy Sanders, Head of Department of
Chemistry, University of Cambridge; Simon
Schaffer, Reader, Department of History and
Philosophy of Science, University of Cambridge;
Colin Russell, Emeritus Professor of History of
Science and Technology, Open University; Larry
Stewart, Head of Department of History,
University of Saskatchewan; Mel Usselman,
Department of Chemistry, University of Western
Ontario; William Brock, Visiting Professor,
Centre for History & Cultural Studies of Science,
University of Kent; John Shorter, Emeritus
Reader in Chemistry, University of Hull; Arnold
Thackray, President, Chemical Heritage
Foundation. James Baddiley, Emeritus Professor
of Chemical Microbiology, University of
Newcastle; Dan Brown, Emeritus Reader in the
Department of Chemistry, University of
Cambridge; and Robert Ramage, Emeritus
Professor of Organic Chemistry, University of
Edinburgh. Queries may be sent to chem-300@lists.cam.ac.uk.

The School of Architecture, CET and
Construction at **Southern Polytechnic State
University, USA** in conjunction with the
Hochschule Anhalt, Dessau, Germany are
pleased to host an international symposium
*entitled The Bauhaus Legacy: Myth, Reality and
Reevaluation*, Oct. 24-27 2002. The Bauhaus has
become synonymous with the very idea of
Modernity, possessing mythological status in the
modern consciousness. Yet this myth often
obscures the confrontational and fragmentary
nature of its reality. From its inception the
Bauhaus sought to address the complex social,
political and aesthetic issues of the day, in an

attempt to unite art and life in the face of
industrialization. The internal debates that ensued
were often contentious and contradictory
revealing the turbulent substructure of modernity.
Additional information, including submission
guidelines, can be found at
<http://architecture.spsu.edu/events/>
Paper Submissions are due Friday July 12, 2000.
Questions on the conference and call for papers
may be addressed to Tony Rizzuto, email:
trizzuto@spsu.edu.

There will be a one-day workshop on the
philosophy of Thomas Kuhn and its impact on
contemporary thought at the **University of East
Anglia** (Norwich UK) on 30th August 2002. The
event aims to mark the 40th anniversary of the
publication of Kuhn's *The Structure of Scientific
Revolutions*. In particular we intend to enable
leading Kuhn scholars to share newly developed
ideas and to explore Kuhn's legacy and his place
in the history of the philosophy of science. The
speakers will include: Aristides Baltas;
Alexander Bird; James Conant; Steve Fuller;
Stefano Gattei; Paul Hoyningen-Huene; Vasso
Kindi; Peter Lipton; Jean-Philippe Narboux;
Rupert Read; and Wes Sharrock. For further
information, please see the website:
http://homepages.ed.ac.uk/ajbird/Kuhn_workshop/further_information.html. This workshop is
organised by Rupert Read and Alexander Bird,
with the generous support of the British Society
for the Philosophy of Science, the Mind
Association, and the Analysis Trust.
Contact Rupert.Read@uea.ac.uk or
Alexander.Bird@ed.ac.uk.

*Provoking Essentialisms: Virtually,
Accountability and Reflexivity* is the title of the
International Summer School of the **Dutch
Graduate School**, WTMC, on 16-20 September
2002, with the anchor teacher being Professor
Steve Woolgar from Oxford University. Science
and Technology Studies (STS) have long sought
to overcome essentialist accounts of the way in
which science, technology and society function
and interact. Micro-studies, network approaches,

reflexivity and discourse analyses were introduced as new approaches to deal with a familiar question: how to overcome the idea that conceptions of the world mirror the true nature of that world? Doing so, STS scholars formulated new dualisms: social and technical worlds, false and true knowledge, human and non-human actors, social and material realities and so on. These dualisms have illustrated there are many ways to provoke and criticise essentialisms. What has not often been criticised within STS, however, is the symmetrical positions that underlie dualisms that each new approach has introduced. Professor Steve Woolgar, an outstanding STS scholar who has a long history within the field of STS while being at the same time a sympathetic critic, will be the anchor speaker of this Summer School. Together with him we will travel into the history of STS which - as it turns out - will be a journey not only into virtual societies, accountability regimes and reflexive turns on these, but also and most of all a provocation of essentialisms! By means of this journey we will get to the following question: where did STS bring us and where to go from here? The location is the Study and Conference Centre Soeterbeeck in Ravenstein (<http://www.kun.nl/soeterbeeck/>) in the Netherlands. The Summer School is part of the graduate training of the PhD students in the Netherlands. A limited number of places are available for other (foreign) PhD students. The fee is EURO 635 (excl. meals and hotel room), the reduced rate for EASST members is EURO 545. EASST has a tradition of making a few travel stipends available. Please inquire at the EASST secretariat at [easst@pscw.uva.nl](mailto: easst@pscw.uva.nl). For registration, please use the online registration form: <http://www.wmw.utwente.nl/wtmc>. For more information and registration: Marjatta Kemppainen, University of Twente, [u.m.kemppainen@wmw.utwente.nl](mailto: u.m.kemppainen@wmw.utwente.nl), phone +31-53-489 4847, fax +31-53-489 4775.

The Research Network in the Sociology of Science and Technology (SSTNET) of the European Sociological Association (ESA) is organising its next workshop in **Ljubljana, Slovenia** on 13-14 September 2002, where the theme is the epistemological and practical challenges that the commercialisation of publicly funded research and higher education present to institutions and societies. It is a continuation of the discussion started in the stream of sessions of

SSTNET on the 'Commodification of Knowledge' at the conference of the European Sociological Association in Helsinki (<http://www.mpi-fg-koeln.mpg.de/sstnet/activ.html#Visions-and-Divisions>). The aim of the workshop is to provide a forum for discussing the complex and multi-faceted aspects of commercialisation of research and higher/university education. It is our intention to work towards the publication of the contributions to the workshop. This is likely to require additional input by the paper-givers mainly associated with the modification and revision of their papers so that the originality and coherence of the publication are ensured. A large number of aspects of commercialisation of public research and higher education can be distinguished. During this workshop it is intended to place the emphasis on the following:

- 1) Work theorising the issues of commercialisation. Lately concepts attempting/aiming to provide the analytical framework for analysing (understanding and explaining) the process of commercialisation have gained popularity. Research has shown these to be wanting in analytical power.
- 2) Work (including national and sectoral case studies) presenting and analysing cases of successful/failed commercialisation and policy interventions aiming to influence the process.
- 3) Work presenting and discussing some of the social, socio-economic and policy/political implications of the commercialisation of publicly funded research and higher education.
- 4) Work looking into the future of commercialisation of publicly funded research and higher education. An interesting question here concerns the limits of commercialisation or 'how much is enough?'

The Organizers of the SSTNET workshop are Raymund Werle: Max Planck Institute for the Study of Societies, Paulstr. 3, 50676 Köln, Germany, Tel: +49 221 2767224; Fax: +49 221 2767452 E-mail: [werle@mpi-fg-koeln.mpg.de](mailto: werle@mpi-fg-koeln.mpg.de); Maria Nedeva: PREST (Policy Research in Engineering, Science and Technology) Victoria University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom, Tel: +44 161 275 5921, Fax: +44 161 273 1123 E-mail: [maria.nedeva@man.ac.uk](mailto: maria.nedeva@man.ac.uk); Franc Mali (also local organizer): University of Ljubljana, Faculty of Social Sciences, 1001 Ljubljana, P.O.BOX 2547, Slovenia Tel: +386-1-5805-306 Fax: + 386-1-5805-101 E-mail: [franc.mali@uni-lj.si](mailto: franc.mali@uni-lj.si); and Luisa Oliveira: DINÂMIA / ISCTE, Av. Forças Armadas, 1600 Lisboa, Portugal. Tel. + 351 21

7938638, Fax +351 21 7940042 E-mail: [luisa.oliveira@iscte.pt](mailto: luisa.oliveira@iscte.pt)
The workshop will take place in Ljubljana, Slovenia. University of Ljubljana, Faculty of Social Sciences Kardeljeva ploščad 5, 1000, Ljubljana, Slovenia. Local organiser is Dr. Franc Mali. SSTNET will charge no registration fees, but it cannot cover travel and accommodation expenses. The website of the local organizers is at: <http://guests.fdv.uni-lj.si/sstnet/>

The Departments of German Studies, American Studies, English Literature, Political Sciences, and Sociology at the **University of Erlangen/Nuremberg**, Germany, are inviting young scholars (graduates and postgraduates) to present papers at our conference, *postmodern de/constructions*, the 5th Interdisciplinary, International Graduate Conference at the University of Erlangen/Nuremberg on November 22 - 24, 2002. Keynote speaker is Gayatri Chakravorty Spivak (Columbia). Postmodernism started off by deconstructing Grand Narratives; has Postmodernism itself now turned into a Grand Narrative? Postmodern theories are an instrument of critical analysis, but today also its object. They can expose notions of reality and truth as fictional constructs, but at the same time they themselves can nurture the construction of "realities" with their own discursive rules and exclusions. Has the time come to deconstruct Postmodernism? For further information contact Kathrin Schadel at [info@gradnet.de](mailto: info@gradnet.de) The conference papers will be posted on our web page by October 15, 2002 in order to facilitate discussion and scholarly exchange. Closing date for paper abstracts: September 15, 2002 (other participants may register until shortly before the conference starts). Send papers in ONLY as RTF and ONLY to [2002@gradnet.de](mailto: 2002@gradnet.de). Selected papers will be published in the conference proceedings. The 1998, 1999 and 2000 conference proceedings can be ordered from Martin Nonhoff ([mnonhoff@phil.uni-erlangen.de](mailto: mnonhoff@phil.uni-erlangen.de)). The conference fee is 20 EUR. Please register on our online submission form (www.gradnet.de) Closing date for turning in the short paper (just for our web page, not for the conference proceedings): October 15, 2002. Conference organizers: Susanne Kollmann M.A. (English Literature, American and German Studies) Kathrin Schoedel M.A. (German Literature, English and Linguistics).

The 6th Nordic Conference on Environmental Social Sciences (NESS) will be held on June 12-14 2003 in **Turku /Åbo, Finland**. The theme is Scales, Limits and Borders: Problems in Political Ecology. A growing awareness of the importance and complexity of the interaction between ecological life support systems and socio-economic activities has prompted the development of "political ecology." Political ecology has been defined as "an approach that combines the concerns of ecology and political economy to represent an ever-changing dynamic tension between ecological and human change, and between diverse groups within society at scales from the local individual to the earth as a whole" (G. Peterson, 2000, *Ecological Economics* 35:3). According to one of its pioneers, the major areas of inquiry in political ecology are the contextual sources of environmental change, conflicts over access to resources, and the political ramifications of environmental change (R.L. Bryant, 1992 *Political Geography* 11). Scale is a central concept in ecology and its importance in the social sciences has been growing. We are forced to treat more issues as genuinely global, but at the same time the need to understand the local, national and regional levels must be fully recognised. The proper way to handle different scales in both ecological and human systems has become a crucial issue in the search for sustainable solutions to current problems. Scales are linked to limits and borders. Globalisation has extended activities over traditional borders in a seemingly limitless process of economic expansion. Yet simultaneously, it has reminded us of the limits of "Spaceship Earth". Despite globalisation, state borders are still of major importance in the world system. We want to organise a number of *working sessions* that use and critically elaborate the concepts of scale, limits and borders. These include: *Global ecological justice; Limits to growth today; Multilevel environmental governance; Global environmentalism, national policies; Political ecology in history; Johannesburg: a first anniversary*. Further information may be obtained from Ea Maria Blomqvist, environmental coordinator, Åbo Akademi University, Centre for Continuing Education, Biskopsgatan 10 A, FIN-20500 Turku/Åbo, Finland, tel: +358-(0)2-2154942, fax: 2154943, e-mail: [ea.blomqvist@abo.fi](mailto: ea.blomqvist@abo.fi), <http://www.abo.fi/6thNESS>