

SCIENCE AND ITS PUBLICS: VIEWS FROM STS¹

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The field of science and technology studies (STS) as it has evolved over the past two decades seeks to provide insights into the social, cultural, and political construction of scientific knowledge, technical artifacts, and large technological systems. At the same time, because of the centrality of knowledge and knowledge-based products in contemporary societies, STS also yields conceptual tools and methods that open up new ways of understanding the very fabric of modernity. The aim of this workshop series was to discuss some of the implications of STS for the social and cultural analysis of the present and to place STS research in conversation with related work from traditional disciplines such as anthropology, history, law, and sociology. The series focused on four exemplary fields in which scientific and technological practice have become particularly closely intertwined with other forms of social action: biomedicine, environment, markets, and public policy.

The series opened with a session on *Biomedicine and the Social Production of the Body*. Speakers examined the relationship between biomedical knowledge and technology, on the one hand, and the body in contemporary culture, on the other. The presentations focused on three medical innovations or debates and explored their implications for the cultural shaping of the body. Regula Burri (Zurich) used the example of Magnetic Resonance Imaging (MRI) to trace the disciplining effects of the social and technical practices of image-making on the patient's body, producing what she called a "sociotechnical anatomy". Jakob Tanner (Zurich) traced the emergence of food-borne illnesses as a new biomedical entity. As he showed, throughout this process of emergence, new political anxieties and media images, as well as more complex forms of gathering and analyzing statistical data, were inextricably interwoven to produce different cultural representations of the problem.

¹ The workshop was organized by Sheila Jasanoff and Jens Lachmund with cooperation from the Wissenschaftszentrum Berlin and the Max Planck Institute for the History of Science. The sessions were held on January 21, March 11, May 6, and July 1, 2002 at the Wissenschaftskolleg zu Berlin.

Sheila Jasanoff (Cambridge, USA) analyzed the representation of auto-immune diseases in women during the recent American debate on breast implants, shedding light on the interaction between medical and judicial practice. As she argued, statistical representations used in litigation or pre-trial hearings have fostered a dematerialized vision of the afflicted body, marginalizing the more subjective dimensions of individual suffering.

The second session, on *Nature and the Environment*, examined the role of science in shaping the natural environment as well as our political and cultural perceptions of it. Brian Wynne (Lancaster) gave a review of sociological debates on risk and discussed the implications of an STS view of expert knowledge for political decision-making. He spoke, in particular, about the ways in which expert “framings” of environmental issues affect people’s opportunities to participate. Jens Lachmund (Maastricht) analyzed the production of policy-related knowledge in urban ecology. Both papers emphasized the role of social contingencies such as conventions, relations of trust, and diverse professional practices in the negotiations of policy-relevant definitions of risks and environmental problems. In the case of highly politicized risks, these contingencies often tend to undermine the authority of expert claims. The legitimacy of political decisions then demands alternative modes of governance, generally aiming at more participation by the public. The session ended with a critical appraisal by Klaus Eder (Berlin) of the institutional prerequisites for an effective – that is, legitimacy-producing – consensus. Whereas direct participation might work well in small-scale, homogeneous communities, Eder was skeptical about the efficacy of participation on larger scales, such as nation-states or supra-national forms of governance.

The third session, on *Commodities and Market Relations*, traced some of the processes through which scientific knowledge and technology have become factors shaping the content and context of economic activities. Alexandru Preda (Constance) studied the historical trajectory of the telegraphic ticker in the 19th century to show how a new form of communication and representation helped to create more intensive and spatially extended financial market relations. Marylin Strathern (Cambridge, UK) looked at social technologies for producing measures of people’s preferences in a knowledge economy. In particular, she used the example of a Canadian Commission on public attitudes toward new reproductive technologies to show how the process framed public opinion in selective ways; a display of the extreme heterogeneity of attitudes allowed the Commission to arrive, in the end, at a decision that had little to do with the “overflow” of data the Commission had gathered.

The series ended with a session on *Science and Public Policy* focusing on the role of expertise in contemporary policymaking and the extent to which STS research can contribute

to understanding this role. Again, participation and the possible democratization of science were central issues in the debate. Michel Callon (Paris) analyzed the politics of the muscular dystrophy patient organization in France to illustrate the possibility of democratic representation in science and technology. He showed how effectively a powerful and well-organized group of patients can influence the practice and content of biomedical research, so as to create both new political forms and new cognitive objects. Wiebe Bijker reported on his experience with an experimental procedure for nature development in the Netherlands that aimed at a more efficient involvement of the laypublic in decision-making. The experiment was organized by STS scholars, who set up the procedure as an open learning process reflecting the underlying view of scientific and technical matters as highly negotiable. Whereas Bijker's example suggested that views from STS might help in developing new forms of participation, Richard Rottenburg adopted a more skeptical stance toward the practical relevance of STS. He criticized STS for ignoring many of the problems that concern people most urgently in the periphery of our "entangled modernity". Only if STS develops other methods, less focused on Western science and technology, Rottenburg argued, would the field be able to help in actively working on the major problems of the contemporary world.

To conclude, the workshop series showed that STS provides new insights into many problems and processes that were hitherto considered "merely technical". The workshop also showed the diversity among STS approaches and the different perspectives they offer on the range of problems amenable to STS analysis. As the papers indicated, much of what is relevant for understanding our contemporary society and culture is inextricably linked to matters of science and technology. This does not mean merely that STS as a field has become more relevant for understanding the key issues of our period. At the same time, as the workshop participants eloquently demonstrated, STS scholarship can be brought into a potentially productive, if sometimes uneasy, relationship with other fields of scholarship in the humanities and social sciences. The fact that several of Berlin's preeminent research institutes collaborated in the workshop program only emphasized this final point.

Participants

Wiebe Bijker, University of Maastricht

Regula Burri, Technical University, Berlin

Michel Callon, Ecole des Mines, Paris

Klaus Eder, Humboldt University, Berlin

Sheila Jasanoff, Harvard University and Wissenschaftskolleg zu Berlin

Jens Lachmund, Max Planck Institute for the History of Science

and University of Maastricht

Alexandru Preda, University of Constance

Richard Rottenburg, University of Halle

Marilyn Strathern, University of Cambridge

Jakob Tanner, University of Zurich and Wissenschaftskolleg zu Berlin

Brian Wynne, University of Lancaster