About the Authors

Arno Bammé

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Born in 1944; studied economics, education and sociology at the Free University of Berlin (DFG fellowship); several years in industry, research assistant at the Technical University Berlin, participated in establishing Ökotopia GmbH in Berlin Mehringhof, which provided vocational education to socially deprived young people and supported alternative cultivation methods of production cooperatives in Third World countries; founding member of the interdisciplinary Technology and Social Sciences Research Institute in Berlin (TESOF); research assistant at the University of Hamburg (DFG project); since 1985: Full Professor for Didactics in Further Education at the University of Klagenfurt and Head of the Department of Research on Science and Technology (TEWI) at the Faculty for Interdisciplinary Studies (Klagenfurt – Graz – Vienna) (IFF); since 1998: Director of the Institute for Advanced Studies on Science, Technology and Society in Graz; 1986 to 1992: Chairman of the Interuniversity Commission (IUK); 1996 to 2001: Deputy Head of Institute of IFF and Dean of Studies; 1988 to 2000: member of the international advisory committee of the journal 'Innovation'; 1992 to 1997: member of the commission for 'Integrated Technology Research' of the Hessian Ministry for Science and the Arts; 1997 to 2000: member of the scientific advisory committee for 'Technological Development Research' of the Institute for Natural Sciences Education in Kiel; since 2004: member of the editorial advisory board of the online journal 'Science, Technology & Innovation Studies'; numerous publications in different textual and publishing forms and translations from English and French; current focus of work includes science and technology studies, literature and sociology, didactics of the social sciences, didactics of continuing education in science.

Selected publications

Bammé, Arno (2009), Science and Technology Studies. Ein Überblick, Marburg: Metropolis.

Bammé, Arno (2008), Wissenschaft im Wandel. Bruno Latour als Symptom, Marburg: Metropolis.

Bammé, Arno (2008), *Die Neuordnung des Sozialen durch Technologie*, Marburg: Metropolis.

Bammé, Arno (2004), Science Wars. Von der akademischen zur postakademischen Wissenschaft, Frankfurt am Main / New York: Campus.

Bammé, Arno (2004), Gesellschaft (re-)interpretieren, München / Wien: Profil.

Nicoleta Chioncel

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Nicoleta Chioncel graduated in Education Science and Sociology and received her PhD in Education from the Babes-Bolyai University Cluj-Napoca, Romania. She started her academic career in 1995 at the University of Oradea, Romania, and participated in several European research projects at Radboud University, the Netherlands (2002–2004). She was also a Research Fellow of IAS-STS (2005–2006). From February 2008 to March 2010 she was a researcher at the IFZ, working in the coordinating team of the FP7 Project 'FAAN – Facilitating Alternative Agro-Food Networks: Stakeholders' Perspectives on Research Needs', funded by the European Commission. The FAAN project proposed a specific transdisciplinarity design, based on co-operation between academics and practitioners. Her main research interests focus on participatory methods and public engagement, social learning, sustainability, active citizenship and governance.

Selected publications

Karner, S., Chioncel, N., Goszczynski, W., and Stankiewicz, P. (2008), 'Cooperative research design on alternative agro-food networks', FAAN Project Report, 73 pages.

- Chioncel, N. (2007), 'Gender in science and engineering: Validating an institutional development model', in Arno Bammé, Günter Getzinger, and Bernhard Wieser (Eds.), Yearbook 2007 of the Institute for Advanced Studies on Science, Technology and Society, München / Wien: Profil, 15–35.
- Chioncel, N. (2006), 'Educational strategies for empowering women in science and technology', in György Fábri (Ed.), Workshop of Science Communication. Science, Society, Communication II, Budapest: Knowledge Society Foundation, 129–140.
- Jansen, T., Chioncel, N., and Dekkers, H. (2006), 'Education for social integration and cohesion: Learning active citizenship', *British Journal of Sociology of Education* 27 (2), 189–205.

Ágnes Fésüs

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Agnes Fesus has worked as a project coordinator at the Semmelweis Tender Services and Innovation Centre in Hungary since 2008, where she is responsible for European and Hungarian R&D projects and proposals in the field of health and life sciences. She is currently finishing her PhD at the Multidisciplinary PhD School of the Budapest University of Technology and Economics (BME). She received diplomas in Literature Studies (comparative and Hungarian) from Eötvös Loránd University and holds an MSc in Engineering Management Studies from BME.

She has worked as a lecturer at BME since 2005 and at Semmelweis University since 2008. In 2004 she was a member of the organising team of international conferences (co-organised by BME, ITAS / Forschungszentrum Karlsruhe and Florida Tech, 2005). She was technical editor of three international books (in coproduction with Florida Tech / USA, Sigma / Berlin and BME / Budapest).

In 2006 Ágnes Fésüs was facilitator for ECC 'Citizen Consultation' in Brussels. In 2007 she spent four months at the Seoul National University in South Korea with an ASEM-DUO Fellowship to carry out comparative research into expectations concerning the hydrogen industry. She was a Research Fellow (Ernst Mach Grant) at the IAS-STS from October 2007 to April 2008. She also received a scholarship for the University of Potsdam in 2008.

Selected publications

Fésüs, Ágnes and Hronszky, Imre (2009), 'Farewell to modernity in technological risk research, in J. Loudin and K. Schuch (Eds.), Innovation Cultures – Challenge and Learning Strategy, Prague: Filosofia, 97–118.

Fésüs, Ágnes and Hronszky, Imre (2008), 'Renewing and new types of innovation', TEORIE VEDY 30: (1), 31-49.

Project abstract

From risk to incertitude management in managing emerging radical innovations and disruptive industries, assessing some management tools

During her stay at IAS-STS (2007-2008) Ágnes Fésüs worked on the topic of incertitude in managing radical innovations and disruptive technologies. This is also the main topic of her PhD thesis in the framework of the History of Science, Technology and Engineering PhD programme (sub-programme: History of Innovation Policies) at BME. Radical innovations are central issues in the provision of policy and management support because some of these innovations may lead to disruptive industries. One of the basic dimensions in achieving realistic management and policy knowledge is to investigate how the recognition of the complex nature of the issues around us requires a turn toward understanding incertitude (A. Stirling).

Her research is aimed at assessing the relevant literature and carrying out further research to obtain a more adequate framework for management tasks. On the one hand she attempted to produce a systematic overview of some fields of knowledge that may prove useful in managing radical innovations and disruptive technologies. On the other hand she identified some contradictory or missing points for further research.

Sandra Karner

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Sandra Karner is researcher at the IFZ. She studied Biology with a focus on molecular genetics at the University of Graz. Sandra Karner was in charge of INFOgen, a public information service on modern biotechnology, from 2001 until 2008, since 2004 she is lecturer at Klagenfurt University and University of Graz. Her research focuses on participatory methods related to the involvement of the public in research, science governance, regulatory aspects and health risk assessment of biotechnological applications. Recently she has coordinated the FP7 Project 'FAAN – Facilitating Alternative Agro-Food Networks: Stakeholders' Perspectives on Research Needs', which implemented and evaluated a specific transdisciplinarity design, based on co-operative research engaging academics and practitioners.

Selected publications

- Karner, S. (2009), "ALMO": A bottom-up approach in agricultural innovation, in K. Millar, P. Hobson West, and B. Nerlic (Eds.), *Ethical Futures: Bioscience and Food Horizons*, The Netherlands: Wageningen Academic Publishers, 222–225.
- Berger W., Freitag D., Karner S., and Wieser B. (2009), *Genetic Testing. Dif*fusion – Framework of Application – Identity and Ethical Reflection, Klagenfurt: IFF.
- Spök, A. and Karner, S. (2008), 'Plant molecular farming opportunities and challenges', in A. J. Stein and E. Rodríguez-Cerezo (Eds.), *Technical Report Series*, Joint Research Centre Institute for Prospective Technological Studies, EUR 23383 EN, DOI 10.2791/30861, European Communities.
- Wieser B. and Karner S. (2008), 'Individualizing decisions: On the paradoxes of prenatal testing', in B. Wieser, S. Karner, and W. Berger (Eds.) (2006), *Prenatal Testing: Individual Decision or Distributed Action?*, Technik und Wissenschaftsforschung, Vol. 48, München / Wien: Profil, 27–52.

Manfred Klade

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Manfred Klade is Senior Researcher at the Ecological Product Policy Research Unit of the IFZ – Inter-University Research Centre for Technology, Work and Culture in Graz, Austria. He graduated in Organic Chemistry

(PhD) and in Environmental Engineering (MSc). After a two-year period as a research assistant at Graz University of Technology he managed environmental laboratories in several engineering offices in Styria. He has been staff member of the IFZ since 1999 and also works as a lecturer at Klagenfurt University. His work topics comprise the assessment of substance properties of occupational and environmental relevance (disinfectants, cleansers) and consumer products with novel components and features (nano-materials, nano-products). Further areas of research include the implementation of eco-efficient services (e.g. plant protection services) and sustainable lifestyles.

Research projects

- Benefit and Risk of Nano-Products: Nanotech products from a life cycle perspective (NanoRate); Period: 2009 2010; Clients: Austrian National Bank; Austrian Ministry for the Environment Unit V/2 Chemicals Policy; Function: Principal Investigator.
- Sustainable Trend-Setter LOHAS on the way to a sustainable society; Period: 2008 2009; Client: Austrian Federal Ministry of Transport, Innovation and Technology, Programme Factory of Tomorrow; Function: Researcher, Member of the Coordination Team.
- Sustainable Behaviour at Work and in Private Life; Period: 2008 2011; Client: Austrian Federal Ministry of Science and Research, Programme proVISION for Nature and Society; Function: Researcher, Member of the Coordination Team.
- Ecological, Occupational and Legal Aspects of Cleaning Agents with Micro-Organisms as Active Principle (MikroRein); Period: 2007 2009; Client: Agriculture and Forestry, Environment and Water-Management Unit V/2 Chemicals Policy; Function: Researcher, Member of the Project Team.
- Scientific attendance of the Vienna Disinfectant Database (WIDES); Period: Ongoing, Clients: EcoBuy Vienna (MA 22), Austrian Social Insurance for Occupational Risks (AUVA). Function: Researcher, Head of the Project Team.

Selected publications

Jaros, M. and Klade, M. (2007), 'Sanitation care with less risk for human and the environment – The Vienna WIDES-Database for disinfectants', *Int. J. Med. Microbiol.* 297 (1): 4–5.

Klade, Manfred and Vorbach, Stefan (2006), 'Innovative concepts towards sustainable plant protection', in *Environmental Management Accounting and Cleaner Production*, 9th Annual EMAN Conference, Graz University of Technology.

Anton Kramberger

E-mail: anton.kramberger@fdv.uni-lj.si

Anton Kramberger is Associate Professor at the Faculty of Social Sciences, University of Ljubljana. He finished his PhD in Sociology in 1999 (elaborating a distinctive corporatist societal logics of occupational labour markets within the European countries). He carries out research and holds courses on labour markets, stratification, occupations and professions, social change, cultural studies, and comparative methodology. His research is mostly interdisciplinary, with historical, socio-economic as well as technical and methodological insights. In his professional career he served as president of two national associations (Slovenian Statistical Society 1992–1996, Slovenian Sociological Association 2000–2004), and was editor-in-chief of the national sociological journal Druzboslovne razprave (2000-2005). He acts as an expert for the evaluation of public policies (R&D, education, labour markets, social protection) at the national and international level. From 2006–2011 he is heading a research group at the University of Ljubljana, a partner in the European RECWOWE Network of Excellence, which is concerned with options for a possible reconciliation between the sphere of (dualised) work and the sphere of the (deregulated) European welfare state.

Project abstract

During his stay as a Research Fellow at IAS-STS in Graz (from February to April 2008), Anton Kramberger focused on developmental options of the Slovenian society, given the segmented character of its labour market. In

particular, he studied the hypothesis that an earlier segmentation of the labour market turned into flexibilisation during the 1980s, into flexicurity during the 1990s, and into dualisation (even polarisation) during the last decade. The author found these conceptual debates and suggested empirical trajectories important for a better understanding of social change in Slovenia since 1990 (political changes, privatization of economic assets, sector restructuring, technology catch-up process, welfare state reforms etc.), which also brought about many labour market re-arrangements. The (aggregate) pattern of the Slovenian labour market reveals a picture of segmentation approaching the polarisation stage: a mixture of a rigid core and an expanding flexible periphery, populated increasingly by educated school-leavers. The key research questions were how to cope with fresh-knowledge circulation (needed for technology catch-up and service economy), family-friendly firm solutions (needed to lower demographic decline), and environmental (in)sensitivity (needed for everything on a long-term horizon). To answer these questions, Kramberger prepared several texts, one of which was presented at the annual IAS-STS conference in May 2008.

Ingmar Lippert

E-mail: lippert@ems-research.org

Ingmar Lippert is doing an STS-inspired PhD on agents of ecological modernisation supervised by the Chair for Sociology of Augsburg University (Germany), focussing on the construction of carbon emissions. He studied at Brandenburg University of Technology (Germany) and Bosporus University (Turkey), graduating in Environmental and Resource Management. At Lancaster University he received a degree in Environment, Culture and Society. To date he is collaborating with other social scientists in the independent Environment, Management and Society Research Group doing STS-informed research on realities of managed environments. He is also engaged with the emerging community of anarchist academics and their takes on science and technology.

Key publications

Lippert, I. (forthcoming), 'Sustaining waste – Sociological perspectives on recycling a hybrid object', in M. Schmidt et al. (Eds.), *Implementing Environmental and Resource Management*, Springer.

Lippert, I. (2007), "Wissen" für emanzipatorische Bildungspolitik', fzs: magazin (2): 41–43.

Project abstract

From October 2007 till July 2008 Ingmar Lippert was Research Fellow at the IAS-STS – and the first research fellow awarded a Manfred Heindler Grant –, investigating workers who are supposedly bringing about a 'greening' of their companies. He focused on their knowledge practices and how implicit and explicit norms are used as resources as well as limit and channel their agency. He aimed to contribute to STS and studies of (un)sustainability by investigating how corporate environmental management is practised as a hegemonic approach within so-called sustainable development. Taking IAS-STS as the base for getting into the field he studied agents of ecological modernisation of several multinational corporations, including Daimler and Siemens.

Erik Millstone

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Erik Millstone is a Professor of Science Policy at the University of Sussex, in England. His first degree was in Physics, followed by three in Philosophy. Since 1974 he has been researching into the causes, consequences and regulation of technological change in the food and chemical industries. Since 1988 he has been researching the role of scientific experts, evidence and advice in public policy-making. Much of his current research forms part of the STEPs (or Social and Technological Pathways to Sustainability) programme (see http://www.steps-centre.org/) and focuses on the drivers of technological change in agriculture for developing countries, and on the consequences of those technological changes for poor farmers.

- Millstone, Erik (2009), 'Science, risk and governance: Radical rhetorics and the realities of reform', Research Policy 38 (4): 624–636.
- Millstone, Erik (2008), The Atlas of Food: Who Eats What, Where and Why, University of California Press and Earthscan.
- Millstone, Erik (2007), 'Can food safety policy-making be both scientifically and democratically legitimated? If so, how?', Journal of Agricultural and Environmental Ethics 20: 483-508.
- Millstone, Erik (2005), BSE: Risk Science and Governance, Oxford University Press.

Amrita Mishra

E-mail: cattusfelix@gmail.com

Amrita Mishra is an anthropologist with a PhD in work production and research processes in Indian virology and molecular medicine laboratories. She is currently a Postdoctoral Research Fellow at the Technoscience and Regulation Research Unit, Department of Bioethics, Faculty of Medicine, Dalhousie University, Halifax, Canada. Her research project is called 'The Administration of a Quadrivalent HPV Vaccine for Minors: Challenges and Implications in the Canadian Context'. It is funded by the Canadian Institutes of Health Research (Grant: Vaccines of the 21st Century). The project is a study of attitudes, practices, and knowledge transfers related to immunization and screening against HPV and HPV-induced oncogenic effects.

Recent publications

- Mishra, Amrita (forthcoming), 'A systematic review of research on issues of informed consent and public attitudes around HPV vaccines.'
- Mishra, Amrita (2009), 'The place and space of research work: Studying control in a bioscience laboratory', in S. Bauer and A. Wahlberg (Eds.), Contested Categories - Studies of the Life Sciences in Society, Aldershot: Ashgate.

Project abstract

Amrita Mishra carried out her first post-PhD research under an ÖAD-funded Research Fellowship at IAS-STS (North South Dialogue Programme) from March 2008 to March 2009. This research emerged from her PhD fieldwork, when she collected data in a laboratory working on bio-molecular dynamics in cervical cancer. In Graz, she wrote on the shifting discourse and imaginaries in the field of cervical smear analysis and diagnosis. The methods used were grey literature analysis, using documents of the Bethesda Conferences to study the incremental standardisation of reports on cervical smears. Her work highlights aspects of the relationship between the evolving TBS diagnostic lexicon and issues of cervical risk management, treatment and healthcare resource allocation.

Andrea zur Nieden

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After studying Sociology, Political Science, and Political Economics, Andrea zur Nieden completed her PhD at the Department of Sociology at the Albert-Ludwig University in Freiburg im Breisgau, Germany, focussing on genetic testing for breast and ovarian cancer. Besides that, she worked as a journalist in a free local radio station where she was also responsible for public relations. Her sociological Master thesis concentrated on representations of biotechnological changes in the body and cyborgism in popular culture, especially in the TV show 'Star Trek'. Her research focus then shifted to 'real medicine' in her PhD thesis for which she was granted a scholarship by the DFG Postgraduate College 'Technology and Society', in Darmstadt, Germany.

Since December 2008 Andrea zur Nieden has been a Research Assistant at the Institute of the History of Medicine, Heinrich-Heine University, Düsseldorf.

Selected publications

Nieden, Andrea zur (forthcoming), Becoming Subject of the Genes. Ways of Subjectification in the Age of Genetification of Breast Cancer: A Qualitative Analysis, Dissertation, Freiburg im Breisgau.

Nieden, Andrea zur (2007), "If there is a risk inside of me, I am the first person who should know about it." Images of "genetic risks" as anticipation of the future', in R. Heil, A. Kaminsky, M. Stippak, A. Unger, and M. Ziegler: Tensions and Convergences. Technological and Aesthetic Transformations of Society, Bielefeld: Transcript.

Nieden, Andrea zur (2003), GeBorgte Identität. Star Trek als kulturindustrielle Selbstversicherung des technisierten Subjekts, Freiburg: ça ira.

Project abstract

During her stay as a Research Fellow at IAS-STS from March to September 2008, Andrea zur Nieden worked on a paper derived from her PhD thesis and the explorative study: Race / Ethnicity in the New Genetics. A Case Study about the German and Austrian Discourse about Breast Cancer Susceptibility Genes (BRCA) and the 'Ashkenazi Jewish' Population.

In the medical literature about the BRCA genes (which are held responsible for an inherited increased risk for breast and ovarian cancer) a higher risk in the 'Ashkenazi Jewish' population is regarded as commonplace that does not have to be further explained. Generally, there are two positions in contemporary genetics: some scientists say that race is an outdated category because most genetic differences are not to be found between geographic populations but inside of them, supporting the view that race is a social construction. The other position wants to deploy new forms of racial categories and promises great benefits by providing ethnically specified medication for sub-populations (one of the most debated examples was the development of BiDil, a drug to treat congestive heart failure only for the African-American population). On the one hand, these tendencies are supported by minority communities, e.g. in the US, who perceive themselves as being discriminated against by traditional 'white' medicine. On the other hand, there has been wide public concern about possible new stigmatisations by associating communities with specific genetic make-ups and diseases. Based on a critique of the notion of 'ethnicities' as discrete biosocial entities, Andrea zur Nieden focused her research on the representation and construction of 'Ashkenazi Jews' in scientific medical discourse and practice concerning BRCA: How is a

both culturally and biologically diverse group of people defined as 'Ashkenazi Jewish'? Andrea zur Nieden was particularly interested in the discourse in Germany and Austria in the light of their past. In the Nazi 'war on cancer' (Proctor 1999), 'Jews' and 'Cancer' were used as synonymous metaphors of degeneration.

Tatiana Safonova

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Tatiana Safonova, born in 1981 in Leningrad, USSR, defended her PhD at Saint Petersburg State University, Department for Sociology, in 2009. Dr. Safonova works at the Centre for Independent Social Research (Saint Petersburg) and is an associate member of the Siberian Studies Centre at the Max Planck Institute for Social Anthropology (Halle / Saale, Germany). Her research topics include problems of nature and culture conservation, indigenous people in post-Soviet Russia, anthropology of Siberia and ethno-methodological studies. She served as a visiting scholar at the Department for Anthropology of Aberdeen University (Scotland, 2007), Institute of Ethnology at the Hungarian Academy of Sciences (Hungary, 2007), Baltic and East European Graduate School 'Södertörns Högskola' (Sweden, 2006), Max Planck Institute of Social Anthropology (Germany, 2006) and Bielefeld University (Germany, 2005, 2004, 2003). Tatiana Safonova was a Research Fellow at IAS-STS from March to May 2008.

Tatiana Safonova has conducted collaborative fieldwork among Evenki in Eastern Buryatia and has published several articles about Evenki and Buryats.

Recent publications

Safonova, Tatiana and Sántha, István (2010), 'Different risks, different biographies: The roles of reversibility for Buryats and circularity for Evenki people', *Forum Qualitative Sozialforschung / Forum Qualitative Social Research*, special issue Biography, Risk and Uncertainty / Biographical Coping with Risk and Uncertainty 11 (1), Art. 1, http://nbn-resolving.de/urn:nbn:de:0114-fqs100111.

Safonova, Tatiana and Sántha, István (2007), 'Companionship among Evenki of Eastern Buryatia: The study of flexible and stable elements of culture', in *Working Papers of Max Planck Institute for Social Anthropology*, No. 99.

István Sántha

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István Sántha, born in 1968 in Szombathely, Hungary, defended his PhD at ELTE Budapest University, Department of Inner Asian Studies, in 2004. Dr. Sántha is a researcher at the Institute of Ethnology, Department of Social Anthropology, Hungarian Academy of Sciences.

István Sántha has conducted collaborative fieldwork among Evenki in Eastern Buryatia and has published several articles about Evenki and Buryats.

Recent publications

Safonova, Tatiana and Sántha, István (2010), 'Different risks, different biographies: The roles of reversibility for Buryats and circularity for Evenki people', Forum Qualitative Sozialforschung / Forum Qualitative Social Research, special issue Biography, Risk and Uncertainty / Biographical Coping with Risk and Uncertainty 11 (1), Art. 1, http://nbn-resolving.de/urn:nbn:de:0114-fqs100111.

Safonova, Tatiana and Sántha, István (2007), 'Companionship among Evenki of Eastern Buryatia: The study of flexible and stable elements of culture', in *Working Papers of Max Planck Institute for Social Anthropology*, No. 99.

Verónica Sanz

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Veronica Sanz is a PhD candidate at the Department of Logic and Philosophy of Science at the University Complutense of Madrid (Spain), where she will defend her dissertation *Contextual Values in Science and Technology: The case of Computer Technologies* in 2010. She graduated in Philosophy at

the University of Valladolid (1999) and received her Master degree in Philosophy of Science from the University Complutense in 2002.

During 2003–2004 she received a scholarship from the University of California to spend two semesters at UC Berkeley. From 2005 to 2007 she was an assistant researcher at the Department of Science, Technology and Society of the National Council of Scientific Research (CSIC) in Madrid, Spain. During that time she participated in five research projects, presented papers at 24 national and international conferences and workshops, and published many articles in journals and books.

After her Research Fellowship at IAS-STS in 2008, she has worked as a visiting graduate student at the *European Centre for Soft Computing* in Mieres (Asturias) since January 2009. Her main interests are philosophy of technology and science and technology studies, with a special focus on information and communication technologies and artificial intelligence.

Selected publications

- Sanz, Verónica (in press), 'Dichotomic theories don't work (in social sciences): The case of the intersex', in Rudolf Seising and Verónica Sanz (Eds.), Soft Computing in Humanities and Social Sciences, Berlin: Springer.
- Sanz, Verónica (2009), 'Soft computing confronting philosophical and sociological critiques to classical AI', *Proceedings of the International Fuzzy Systems Association (IFSA-EUSFLAT) World Congress*, Lisbon, July, 2009, 1502–1507.
- Sanz, Verónica (2008), 'Women and computer engineering: The computer science school at the Technical University of Madrid' (in Spanish), *Arbor: Ciencia Pensamiento y Cultura (Revista General del CSIC)* CLXXXIV (733), Madrid, 905–991.
- Sanz, Verónica (2007), 'The conflict between constructivism and feminist studies of technology in the use / consume phases' (in Spanish), Clepsydra: Revista de estudios de género y teoría feminista 5: 129–146.
- Sanz, Verónica (2006), 'Information technologies from gender perspective: Approaches and proposals from feminism' (in Spanish), *Isegoría (Revista de Filosofía Moral y Política)* 34, January-June 2006: 193–208.

Project abstract

A gender approach to the paradigm shift in Artificial Intelligence: The case of Soft Computing

Over the past decades, new approaches within Artificial Intelligence (AI) have produced what we consider a 'paradigm shift' with respect to previous traditions. Along with Social Robotics, Multi-Agent Systems and Affective Computing, the field of Soft Computing involves new Computer Science and AI techniques (and many applied and engineering areas) to study, analyze and model very complex phenomena, which could not be solved with the more precise scientific tools of the past. This involves a re-definition of the traditional understanding of AI.

Some previous research in Gender and ICT has dealt with the relation between gender and Artificial Intelligence from a feminist point of view, such as the broad work of Alison Adam (1996 and 1998). She accurately applies the insights of feminist epistemology to the main traditions in AI such as Symbolic AI and Expert Systems, and also to more recent approaches such as Artificial Life and Situated Robotics. Following this approach, the main objective of this research is to apply the feminist perspective to the new approach of Soft Computing, comparing it with some developments in the field of Robotics including social and emotional aspects.

In her work she tries to address the implications that the conception of 'intelligence' in Soft Computing has for epistemology in general, and for feminist epistemology in particular, since it includes some of the characteristics that feminists traditionally have identified as devalued by traditional male epistemology. The questions addressed are: Can this paradigm shift in AI be interpreted in some way as a 'gendered shift'? Does this imply that women are the majority in these new branches of research? How can we analyse gender structure and ideology within these new approaches of AI? And finally, what are (or can be) the effects of this paradigm shift in the actual relation between women and computing?

Kadri Simm

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Kadri Simm defended her PhD in philosophy at the University of Tartu, Estonia, in 2005. Her thesis focused on the issue of benefit-sharing in global human genomic research. She has an MA from the Central European University in Gender Studies, and an MA in History from the University of Tartu. Her research interests span from social justice issues in moral and political philosophy to bioethics and the ethical and social aspects of new medical technologies. She has worked as a researcher in a number of national and international research projects focusing on the ethical, legal and social aspects of human genomic databases and medical research in general. She was a Marie Curie Fellow at the University of York, Science and Technology Studies Unit (SATSU), during fall 2004 and her studies and research have also taken her to the University of Konstanz, University of Oslo and University of Helsinki. Since 2002 Kadri has regularly lectured in bioethics, medical ethics, moral and political philosophy.

Kadri Simm was a Research Fellow (Ernst Mach Grant) at IAS-STS from January to June 2007.

Project abstract

Genetics and public health – dissecting the politics and the science behind, around, and beyond population genetic databases

The major aim of Kadri Simm's post-doctoral research project was to build on the mostly philosophical and bioethical approach of her PhD thesis (titled 'Benefit-Sharing: An Inquiry into Justification'), and develop some of the themes towards a more interdisciplinary analysis. Foremost, she planned to engage the debates of political and moral philosophy / bioethics with the theoretical insights and empirical tools of science and technology studies, as well as with the critical approaches of sociology of health and illness and medical anthropology. Her focus has been on new developments in medical technologies, especially as regards the large-scale applications of genetics and the ideological implications that prepare ground, parallel and follow from these undertakings. She aimed to

develop an empirical and theoretical analysis of the actors and processes that condition, negotiate and steer the coming-into-existence and development of certain science-derived practices as beneficial and legitimate.

Aaro Tupasela

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Aaro Tupasela received a three year post-doctoral position from the Academy of Finland for 2010–2012 and works as a researcher in the Department of Social Sciences at the University of Helsinki. His research group is a member of the Helsinki Institute of Science and Technology Studies (HIST). Aaro Tupasela also chairs the European Sociological Association's (ESA) Sociology of Science and Technology Network (SSTNET), serves as the Finnish representative on the Nordic Committee on Bioethics, and is Associate Editor of the journal *Science Studies*. He received his DSocSci in Sociology from the University of Helsinki. He also studied at the University of Cape Town and the University of York, where he served time as a Marie Curie Research Fellow in 2003, and will be travelling to UC Berkeley in 2011 as a Fulbright Scholar. Aaro Tupasela was a Research Fellow at IAS-STS from January to June 2008.

Recent publications

- Tupasela, A. (Ed.) (2010), *Consumer Medicine*, Copenhagen: TemaNord. Nordic Council of Ministers.
- Tupasela, A. (2010), 'Introduction consumer medicine', in A. Tupasela (Ed.), *Consumer Medicine*, Copenhagen: TemaNord. Nordic Council of Ministers.
- Tupasela, A., Sihvo S., Snell, K., Jallinoja, P., Aro, A. R., and Hemminki, E. (2010), 'Attitudes towards the biomedical use of tissue sample collections, consent and biobanks among Finns', *Scandinavian Journal of Public Health* 38: 46–52.
- Tournay, V. and Tupasela, A. (2009), 'Guest editorial: Making a diffuse group consistent and substantial: Toward a sociology of social texture', *Science Studies* 22 (2): 2–6.

- Tupasela, A. (2009), 'Foreword', in K. Prpic, L. Oliveira, and S. Hemlin (Eds.), Women in Science and Technology, Zagreb: Institute of Social Research and ESA/SSTNET.
- Tupasela, A. (2008), Consent Practices and Biomedical Knowledge Production in Tissue Economies, Academic Dissertation, University of Helsinki, Department of Sociology.

Project abstract

Re-thinking public participation in biomedical research

During his stay at Graz Aaro Tupasela worked on questions relating to the public perception of the biomedical use of tissue sample collections and biobanks. This work was part of a two-year research project (2006– 2008) funded by the Finnish Funding Agency for Technology and Innovation (Tekes) that looked at the perceptions of Finns towards the ways in which samples of tissue (e.g. blood) and records on health and lifestyle are being used and will be used in the future. The research also sought to examine the role that patient organizations play in biomedical research. The project collected data including a random population survey of 2400 Finns, five focus group interviews with patient groups around Finland, a mini-survey of research patients who participated in a population study on diabetes conducted by the Finnish National Public Health Institute, as well as numerous interviews with experts involved in the field. Together these different types of data were used to triangulate and explore perceptions towards biobanks and the biomedical use of human tissue samples.

Aaro Tupasela's theoretical interests focus on the development of medical modernization, particularly in Finland. In his work he is interested more broadly in the relationship between experts, both medical and policy experts, and the public in general. It is at this junction that the empirical material on public perceptions of biobanks comes in. Besides being used to develop his own theoretical interests, the results are also being used in the drafting of a new biobanking law in Finland. This also provides the research project with a good opportunity to study the way expert-lay interaction operates within a specific context.

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Christine Wächter is Associate Professor of Continuing Education on a tenured position at the Department of Research on Technology and Science of the Faculty for Interdisciplinary Studies at Klagenfurt University; Director of IFZ – Inter-University Research Centre for Technology, Work and Culture in Graz and Scientific Director of the Centre of Women Studies and Gender Research at Klagenfurt University. Her main fields of research and teaching are gender and technology, feminist perspectives on sustainable technology design, quantitative and qualitative measures to improve the status of women in science and engineering.

Selected publications

Wächter, Christine (2010), "No one ever expected me to become dean." On careers of women engineers in academic technology research', in Godfroy-Genin, Anne-Sophie (Ed.), Women in Engineering and Technology Research, The PROMETEA Conference Proceedings, Reihe: Prometea, Gender issues in engineering and technology research settings, Vol.1, Zürich: Lit Verlag, 41–62.

Wächter, Christine (2009), 'Heiße Kartoffeln und Kalte Duschen. Ein kritischer Kommentar zur Forschungs- und Förderungspolitik im Themenfeld "Frauen und Technik", in Anita Thaler and Christine Wächter (Eds.), Geschlechtergerechtigkeit in Technischen Hochschulen – Theoretische Implikationen und Erfahrungen aus Deutschland, Österreich und Schweiz, Munich / Vienna: Profil, 17–28.

Wächter, Christine (2009), 'Challenging cultures of engineering – How words, concepts, and images (de)construct engineering as a male domain', in European Commission (Ed.), Women in Science and Technology. Creating Sustainable Careers, Brussels, 69–81. Download: http://ec.europa.eu/research/science-society/document_library/pdf_06/wist2_sustainable-careers-report_en.pdf

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Torsten Wöllmann was Research Fellow at IAS-STS from October 2007 to August 2008. He is currently research associate at the Gender Studies Unit at Justus-Liebig-University of Gießen, where he is working on developing concepts of gender sensitive education of mathematics teachers. He is now finishing his dissertation thesis on the discipline building of andrology and on andrological constructions of sexed and gendered bodies to submit at Dortmund University of Technology, Germany. He has studied social sciences, history, biology and education at Ruhr-University of Bochum, and has worked in research and teaching of gender studies at Essen University, Dortmund University and Karl-Franzens-University Graz. His research interests are history and sociology of sex, gender and bodies, studies on men and masculinities, science, technology and medicine studies, social theory and gender and education.

Selected publications

- Wöllmann, Torsten (2008), 'Medizinisches Wissen und Geschlechterwissen: Die Formierung der Andrologie als Neuerfindung des Männerkörpers', in Angelika Wetterer (Ed.), Geschlechterwissen und soziale Praxis. Theoretische Zugänge empirische Erträge, Königstein: Ulrike Helmer, 144–163.
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Project abstract

Standardizing sperm: On the regulation of medical expert knowledge and biotechnological classifications

In focussing on sociological analysis of regulation of medical expert knowledge and of biotechnological classifications, this project examines how human ejaculate gets meaning by medical standardization and classification. In the centre of the analysis there are current debates in medicine on the quality and standardization of 'semen analysis', the laboratory diagnosis of the human ejaculate, which is an important element of reproductive medicine:

- What classifications and standards determine local practices of the medical test of the ejaculate? What knowledge is seen as relevant for the practice of analysing ejaculate and who decides that this knowledge counts as relevant?
- Which criteria and norms are influencing discussions about this technology? What is made visible and what is made invisible?

The regulation of expert knowledge about ejaculate and sperm is connected to changing medical definitions of the male body concerning what counts as fertile, healthy or functional and what counts as infertile, ill or dysfunctional. This is related to 'classification struggles' (Pierre Bourdieu) for legitimate medical knowledge about ejaculate that are contextually embedded within a strengthened medical attention on infertility of men. At the same time results of spermatological studies have also given impulses to popular discourses, e.g. on decay of sperm quality during the last decades. The institutionalization of semen analysis and the related struggles about the power of definition refer to the participation of medicine in the construction of reproduction and sexuality, body, sex and gender. The practice of semen analysis is also an element of the biotechnological production of new concepts of e.g. kinship, family, fatherhood and masculinity.