



EUROPÄISCHE AKADEMIE

zur Erforschung von Folgen wissenschaftlich-technischer Entwicklungen
Bad Neuenahr-Ahrweiler GmbH

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FOREWORD

This is the seventh Research Report issued by the Europäische Akademie covering the research period from 2009 to 2010. Based on the experience gained in about 30 interdisciplinary projects that have been carried out (including those which are currently running) the instrument of the interdisciplinary project group is still regarded as a successful mode of operation. This report documents the interdisciplinary and international orientation that is central to the research activities undertaken by the Europäische Akademie. Our scientific work is rendered fully transparent and accessible to the scientific communities and the public, above all by the yearly spring and autumn conferences, numerous expert meetings as well as the four institutionalised ways of publication (book series “Ethics of Science and Technology Assessment”, Springer Verlag, with 37 volumes, the series “Graue Reihe” with 50 volumes, the scientific journal “Poiesis & Praxis”, the seventh volume of which will be completed in early 2011, and the Newsletter, latest issue No 103).

The results that are shown here could only be achieved because of the time and energy many scientists were prepared to contribute to their project or study group. The Council of the Europäische Akademie meanwhile comprises 147 scientists. Together with permanent scientific staff, they form the “intellectual capital” of the academy.

The Sponsors’ Club (Förderer der Europäischen Akademie Bad Neuenahr-Ahrweiler e.V.) runs most of the Europäische Akademie’s regional activities as well as the Working Group “Medical Ethics” and the art exhibitions. The Ahrtal Talks which are jointly run by the Sponsors’ Club and the city of Bad Neuenahr-Ahrweiler are helping to further strengthen the academy’s firm position in the region.

Moreover, the Europäische Akademie offers the “Advanced Master’s Degree Course in Medical Ethics” in cooperation with the Johannes Gutenberg-Universität Mainz. The study programme integrates the results of interdisciplinary research of the academy.

Our grateful thanks are due to our partners, the Federal State of Rhineland-Palatinate (Land Rheinland-Pfalz) and the German Aerospace Centre (Deutsches Zentrum für Luft- und Raumfahrt e.V.) for their continued support.

Over the past two years, the Europäische Akademie was able to very successfully raise further third-party funds on the free third-party funding market. A particular focus was placed on the EU project “Development of novel nanotechnology based diagnostic systems for Rheumatoid Arthritis and Osteoarthritis”, since, besides the financing of a corresponding academy project, it also entails the overall project

management. This means that the Europäische Akademie is the main contact for 15 project partners from seven EU countries and is responsible for administering and distributing to its project partners the 8.9 million euros of EU grants.

During the period under report two further projects were funded by the Federal Ministry of Education and Research (BMBF). Furthermore, the academy is supported by a variety of funding bodies such as the Stiftung Rheinland-Pfalz für Innovation, the VGB Essen and the VolkswagenStiftung.

This report once more demonstrates that the Europäische Akademie has fulfilled its task to perform interdisciplinary research on questions of current interest to society. There is no lack of themes: their number grows faster than it is possible to run projects. Furthermore, the incredible pace of progress in many areas of science means that issues that have been dealt with previously should be reconsidered. The dialogue between science and society is more important than ever and it is now virtually undisputed that scientists, among other actors, play an important role. The work of the Europäische Akademie enables the disciplines of science to fulfil their task to provide society with scientific advice.

Bad Neuenahr-Ahrweiler, December 2010

Carl Friedrich Gethmann

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I SCIENTIFIC CONCEPT

1 Mission and Aims

The Europäische Akademie zur Erforschung von Folgen wissenschaftlich-technischer Entwicklungen Bad Neuenahr-Ahrweiler GmbH is devoted to the scientific investigation and assessment of consequences of scientific and technological developments for the individual and social life of human beings and their natural environment. The main focus is to examine foreseeable medium and long-term processes which are influenced especially by natural and engineering sciences and by the medical disciplines. The academy bases its work on the assumption that the sciences have the task, beyond providing specialised scientific information, of also making orientational knowledge available. Therefore, an interdisciplinary approach is required, bringing together the results from natural sciences, engineering sciences and medical disciplines with thematically relevant studies in philosophy, jurisprudence, economics and social sciences. In addition, the foreseeable results of research and development are to be related transdisciplinarily to the expected societal needs and positions. The Europäische Akademie implements its tasks by taking up and developing further approaches to technology assessment, the ethics of technology and medical ethics. The academy seeks to assist in finding a rational way for society to deal with the consequences of scientific and technological developments. This aim is mainly achieved by developing and recommending options upon which to act, with respect to long-term societal acceptance. The rational resolution of conflicts in the area of science and technology is an important prerequisite for long-term, reliable science and technology policy. The work of the academy is mainly conducted by temporary interdisciplinary project teams. Members of the project groups are especially qualified scientists from universities and from non-university research institutions in Europe and abroad, and in special cases representatives of other social fields such as business. The project groups work together mainly for two and a half years in an independent manner. Transdisciplinary issues, involving several project groups, are dealt with in study groups by the staff of the academy and invited scientists.

2 Structure

The Europäische Akademie was constituted on 11th March 1996 as a ‘gemeinnützige Gesellschaft mit beschränkter Haftung’, i.e. a non-profit corporation with limited liability. Its partners are the Federal State of Rhineland-Palatinate (Bundesland Rheinland-Pfalz) and the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt e.V., DLR). Managing director of the company as well as director of the academy is Professor Dr. phil. Dr. phil. h.c. Carl Friedrich Gethmann who is a full Professor Applied Philosophy at the Universität Duisburg-Essen. Since its foundation the academy is substantially funded by its partners, the Bundesland Rheinland-Pfalz and the DLR. In addition, the academy successfully started fundraising for its project work. Third party money comes from a variety of private and public funding bodies. The Partners’ Assembly has formed a Managing Committee two representatives of the partners belong to. It also nominated a Scientific Advisory Board which supports the academy in elaborating scientific goals and projects as well as in evaluating research results.

The members of the different working groups form the Council of the academy which is a forum for scientific exchange on subjects concerning the activities of the Europäische Akademie. The number of staff members has been successively increased. In the period under report, three doctoral candidates were employed at the academy (cf. section III, 6.2). At present, there are eleven scientific and seven non-scientific staff members, including the management, working at the academy. In the period under review, the following projects were completed: “Potentials and Risks of Psychopharmaceutical Enhancement”, “The Research-Guiding Function of Metaphors from the Information Sciences and their Relevance to the Transformation of the Philosophy of Man” and “The Restoration and Enhancement of Human Capacities by Neuronal Implants” (cf. section II, 1 and 3). The Newsletter (Akademie-Brief), as the regular news organ of the academy, was published in its 103rd issue by the end of 2010 (cf. section III, 3.3). In the meantime, of the publication “Graue Reihe” – intended for the documentation of materials on topical subjects from the scientific activities of the academy – the 50th volume has now been published (cf. section III, 3.2). In the book series “Ethics of Science and Technology Assessment” (Wissenschaftsethik und Technikfolgenbeurteilung) – the publication organ for the project reports and other monographs concerning the work of the academy – 37 volumes have been published so far (cf. section III,

3.1). The periodical “Poiesis & Praxis”, an international discussion forum for Ethics of Science and Technology Assessment (the seventh volume will be completed in early 2011), rounds off the spectrum of publication organs (cf. section III, 3.4). The internet homepage of the academy offers comprehensive information on the great variety of the academy’s topics, projects and conferences. All issues of the Newsletter and the Graue Reihe can be downloaded (see www.ea-aw.de, German, or www.ea-aw.org, English).

3 Results and Scientific Integration

From the beginning, the Europäische Akademie aimed at working on projects dealing with social problems generated by the whole spectrum of the sciences and not just a subset – be this the medical or the technical sciences. Based on this broader approach the academy has realised a number of projects that dealt with problems stemming from areas as diverse as sustainable development, energy supply, pharming and research in the modern neuro- and life-sciences. In the coming years, too, this attempt to develop a common method for the study of scientific and technological advance will be carried on. In addition, the work on the methodological foundations used in its work has been continued as it can be seen from the publication list of the in-house and external publications of the staff members of the academy. English is the working language in many of the projects run by the academy. Due to the development of scientific co-operation on the European level the international integration of the academy considerably improved – as it is reflected in the composition of the Scientific Council with members from several European countries. Furthermore, the academy is a member of several European networks and associations, thus, its abilities for supranational cooperation have been further improved. This internationalisation of the academy is expected to continue in the years to come.

4 Scientific Strategy

In the coming years, it will be a matter of continuing to pursue the chosen path, to consolidate the competence attained in the work already accomplished by the project groups and to open up new fields of competence. The core competence fields of the Europäische Akademie

1. in the methodology field are:

- To establish more precisely the concept of Technology Assessment, both from the theoretical and the practical point of view, including the conceptional debate on other modes of approach, in particular that of participatory Technology Assessment.
- To conduct ethical reflections on the problems in the technical and medical spheres as well as the provision of the necessary methodological means. Analyses and reconstructions on the principles of interdisciplinary working methods.

2. in the subject field, the future (and in part already present) topic areas of the Europäische Akademie are:

- Circumspective ways of working in the fields of environment, climate and technology;
- The social challenge of the modern biosciences;
- New developments in the field of medicine and their consequences for society;
- Rational organisation of the information society.

5 Evaluation of the Europäische Akademie

In May 2009, the second evaluation of the Europäische Akademie in collaboration with the Center for Quality Assurance and Development (ZQ) was conducted. The ZQ selected nine expert reviewers who were assigned with the evaluation process:

- Assistant Professor Dr. Bruno Arich-Gerz (Literature), TU Darmstadt,
- Professor Dr.-Ing. Georg Duda (Medicine), Charité Berlin,
- Professor Dr. Alfred Endres (Economics), Fernuniversität Hagen,
- Professor Dr. Dr. Brigitte Falkenburg (Philosophy), TU Dortmund,
- Dipl.-Ing. Michael Ganß, Managing Director, GKSS Research Centre Geesthacht,
- Professor Dr. Dr. Eric Hilgendorf (Law), University of Würzburg,
- Professor (em.) Dr.-Ing. Michael Jischa (Engineering), TU Clausthal,
- Professor Dr. Dr. h.c. mult. Paul Müller (Science), University of Trier,
- Götz Scholz, Chancellor, University of Mainz.

Besides the scientific evaluation, business procedures were also assessed. The academy received excellent evaluation results (excerpt from the evaluation report):

“Summary

The group of reviewers evaluates the Europäische Akademie’s achievements to date as very favourable. The academy has reached its goal of establishing itself as a research centre for technology assessment in an excellent fashion and has achieved a remarkable degree of national and international visibility at comparatively low costs. Therefore, the group of reviewers sees no need for fundamental changes regarding the overall structure, make-up or working methods of the academy. However, the group has agreed on making a few recommendations. These mostly refer to

- further improving the academy’s visibility within the research landscape,
- cultivating the academy’s self-understanding as a research institution,
- publishing research results in international science journals,
- intensifying the collaboration with university institutes of Rhineland-Palatinate,
- increasing the involvement of the young researchers in the third-party fundraising,
- subsequently restructuring posts in favour of the research associates,
- strengthening the role of the chief financial executive.”

II RESEARCH RESULTS

1 Project Groups

1.1 Long-term Planning. The Relevance of Social and Cognitive Resources for Sustainable Economic Activities (Duration: 9/10–2/13)

Sustainable acting requires the actor's competence to make long-term plans that balance the proximate (now-for-now) preferences with those targeted at a more distant future (now-for-then). To meet their now-for-then preferences actors have to sustain and ensure the future availability of the resources necessary to keep their options to act open for adequately long planning periods.

A one-sided focus on the so-called "natural resources" would be inadequate, as sustainable acting also has to assure the long-term provision of cognitive and social resources. This includes planning competences as well as the competence to cope with uncertainty and risk rationally, to retain the ability of efficient decision making even under complex conditions, to use creative problem-solving heuristics etc. Furthermore, there is a need for competences in solving social dilemmas and conflicts as well as competences which allow the forming and sustaining of fruitful and stable conditions for cooperation and competition. In this respect, the stabilising function of governmental and non-governmental institutions and the organized reconciliation of interests between interacting partners play a crucial role.

Using the results of action-, decision-, risk- and game-theory as well as insights from empirical economics, the project aims at developing a consistent methodological basis for the requirements of long-term planning allowing improved sustainability of individual and collective action.

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Funding

German Federal Ministry of Education and Research (BMBF)

1.2 Development of Novel Nanotechnology Based Diagnostic Systems for Rheumatoid Arthritis and Osteoarthritis (NanoDiaRA) (Duration: 2/10–1/14)

Rheumatoid arthritis and osteoarthritis are widely spread diseases causing severe morbidity and mortality. However, up to now there are neither sufficient diagnostic methods to detect the disease at an early stage nor satisfactory procedures to assess the success of alternative treatment strategies. In order to promote research in this field, the European Commission supports the interdisciplinary consortium “Development of Novel Nanotechnology Based Diagnosed Systems for Rheumatoid Arthritis and Osteoarthritis (NanoDiaRA)”. The main objective of this project is to develop novel diagnostic methods for the simple and early detection of rheumatoid arthritis and osteoarthritis. To achieve this aim, modified super paramagnetic nanoparticles are to be used.

This project is subsidized by the European Union, and its consortium consists of 15 European partners from university and non-university institutions. During the next four years a budget of about nine million Euros will be provided.

The co-ordinator of the NanoDiaRA project is the Europäische Akademie – supported by MatSearch Consulting Hofmann (Switzerland). Furthermore, the Europäische Akademie is leading a work package on ethical aspects of using nanotechnology in medicine.

The following international partners are involved:

- AnaMar AB (Sweden)
- Arrayon Biotechnology (Switzerland)
- Centre Suisse d’Electronique et de Microtechnique SA, Microfluidics & Microhandling (Switzerland)
- Charité Universitätsmedizin Berlin, Rheumatology Clinic (Germany)
- Ecole Polytechnique Fédérale de Lausanne, Institute of Materials (Switzerland)
- MatSearch Consulting Hofmann (Switzerland)
- Merck Chimie – Estapor Microspheres Division (France)
- Merck Serono, Strategic Innovation & Research & Portfolio Management (Switzerland)
- Paracelsus Medizinische Privatuniversität Salzburg, Institute of Anatomy &
- Musculoskeletal Research (Austria)

- University of Fribourg, Department of Chemistry (Switzerland)
- University of Geneva, Cell Physiology and Metabolism (Switzerland)
- University of Lund, Department Experimental Medical Science (Sweden)
- University of Nimwegen, Rheumatology (Netherlands)
- University of Tartu, Internal Medicine Faculty of Medicine (Estonia)

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Funding

Seventh Framework Programme (FP7) of the European Commission

Further information

www.nanodiara.eu

1.2.1 Nanoparticles for Medical Purposes. Technical, Medical and Ethical Aspects (Duration: 5/10–9/12)

Background and Tasks

Though nanoparticles are endowed with enormous potential for medical innovation and economic revenue this technology bears also potential risks that may cause considerable social, ethical and legal problems. Questions related to research involving humans and animals, risks towards the environment, and possible moral boundaries of introducing nanotechnology to our life-world need in depth discussion parallel to the basic research going on in the field of nanoparticles. Though public concern about these issues cannot be overlooked the scientific study of these risks is still in its infancy. Currently specific regulations governing development, production and application of nanotechnology on humans do not exist and scientific community, research institutions and drug industry have to adjust with regulations for chemical and/or pharmaceutical production. In order to support responsible further development in the field of nanomedicine, the consortium will address the ethical aspects including insights from technological approaches and current medical practice.

Work Programme

The Interdisciplinary Project Group Social, Ethical, and Legal Implications (ELSI) is part of the EU-funded NanoDiaRA consortium and started working shortly after the research and developing activities of the consortium had commenced running in parallel for 30 months. Goal of the work package is to draft an interdisciplinary memorandum on the social, ethical and legal aspects of applying nanotechnology for medical purposes. The project group members will prepare a report on "the opportunities and risks of nanoparticles in diagnosis and therapy" based on their knowledge and expertise. This aim includes developing (ethical) acceptable and socially accepted recommendations for a long-term reliable science and technology-policy for medical research and application of nanotechnology. The report is addressed to the relevant decision-making governmental departments, industry and academia. Special attention will be paid to the ethical concerns of consumers and the question of balanced legal regulation of research and application of nanotechnology. The consortium pays special attention to the possible impact of

nanoparticles on humans and their environment both in the research phase as well as in the different in-vitro and pre-clinical applications. Special focus lies on the patient's right to be informed of possible side effects facing the fact that nano-materials pose novel and so far unpredictable risks.

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Seventh Framework Programme (FP7) of the European Commission

1.3 Energy Storages and Virtual Power Plants for the Integration of Renewable Energies into the Power Supply. Potentials, Innovation Barriers and Implementation Strategies (Duration: 1/09–12/11)

Background and Tasks

One of the central pillars in a modern society is a secured, environmental friendly and economic efficient energy supply. However, with the scientific findings about interdependencies between economic activities and environmental change, particularly the danger of unacceptable damages which could potentially be caused by anthropogenically induced climate change, it became clear that the structure of energy supply systems have to be adjusted. One of the undoubted main paths to re-structure the energy supply is to extend the share renewable energy used for power productions extensively. The main efforts in this area currently focus on further developing and implementing energy conversion technologies. However, it becomes already clear by now that challenges arise also and not to a less extend in the area of the power distribution system including options for the storage of energy, because power production from wind and solar radiation is strongly fluctuating.

The study analyses strategies for balancing out electricity demand and supply which can be installed in future energy systems and their implication for current energy policy. First, the need for the extension of capacities in the distribution system to cope with high shares of wind and solar based power production in the system is analysed. Based on the results potentials of several already existing or foreseeable options like demand side management, batteries in electric vehicles and at small stationary facilities, large central electricity storages, smart grids and network expansions are investigated. Beside technical, also environmental, regulative, economic and political aspects are considered. Finally, recommendations for current energy policy are drawn from the appraisal of the analysis. Beside researchers and students from the respective scientific fields, the addressees of the study are particularly actors in the energy policy area.

Working Programme

Pre-Phase, January 2009–November 2009

In the pre-phase of the project, the project group has been build up, the main focus of the project has been fixed and the working programme has been elabo-

rated. In this context a first workshop with external experts has been organised in December 2009 in order to get further input for the working programme. The workshop was the basis for collaborations in order to set up a model for estimating the demand for storage of electrical energy in the project. Participants of the first workshop were: Dipl.-Wirt.-Ing. Frieder Borggrefe, Universität zu Köln, Dr. rer. nat. Lueder von Bremen, Universität Oldenburg, Dr. Clemens Hoffmann, Siemens AG, Dr. Cornelius Pieper, The Boston Consulting Group, and Detlef F. Sprinz, Ph.D., Potsdam-Institut für Klimafolgenforschung. Furthermore, first seeding papers have been written and discussed.

First Main Phase, December 2009–December 2010

In the first main phase of the project the work programme was finally fixed and a first structure of the publication has been established. Beside the conception and the development of the model, more seeding papers have been produced and been further worked out to compile a first draft of the publication. This draft will be evaluated by external experts in the second workshop planned for January, 13th 2011. Additionally, the spring conference on secure electricity supply and renewable energies in March 2010 was used to discuss essential aspects of the project like climate protection targets, potential contributions of renewable energies to compliance with long-term climate and environmental targets, grid integration of renewable energies as well as incentives and framework conditions for viable future energy systems with further external experts from science and industry and the public.

Second Main Phase, January 2011–December 2011

Within the second main phase of the project, the comments of the reviewers will be considered, the study text will be further integrated and the integrated parts of the study as well as the recommendations will be composed by the group. Afterwards, the study will be reviewed by the Europäische Akademie's Scientific Advisory Board before it will be finalised and published as a book.

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Funding

German Aerospace Center (DLR)

1.4 Clinical Research in Vulnerable Populations (Duration 12/08–6/11)

Background

Clinical research in vulnerable populations – such as minors, elderly, the mentally ill, intensive care patients and pregnant women – is an increasingly urgent problem. For example, a large number of pharmaceuticals which are given to children and adolescents is used “off label” or “off licence”, i.e. either the pharmaceuticals have, due to lacking research data, no license for paediatric use or they have at least no license for the specific medical condition that they are used for. In such cases physicians cannot base their treatment decisions on scientific data, but have to fall back on subjective experience. The state of clinical research in other vulnerable populations is also far from satisfying. Here too, pharmaceuticals are partly not licensed, whereas in other cases more effective pharmaceuticals have not been developed yet (e.g. dementia). Exposing patients to medication unsuitable and risky for them bears, however, grave moral and legal problems:

- 1) The moral acceptability of clinical research in vulnerable populations: Though there is a broad consensus on the basic moral principles of guiding research on human beings in general, several concepts of crucial importance for the moral evaluation of clinical research in vulnerable populations are unclear: the conceptual clarification and practical implementation of amongst others ‘proxy consent’, ‘minimal risk’, ‘acceptable risk-benefit ratio’, and ‘therapeutic versus non-therapeutic research’ are contested issues. Moreover, there are still no instruments available that would allow, for example, an easy standardised case-to-case evaluation of the capacity to consent in vulnerable populations. In effect it remains an urgent task to fill the gap between the theoretic understanding of the fundamental moral principles guiding research in vulnerable populations, and the practical implementation of these principles in everyday clinical practice.
- 2) The economic feasibility of research in vulnerable populations: In the last decades clinical research, especially the development of new pharmaceuticals, has been almost exclusively in the hands of private for-profit companies. Despite the now common criticism of “big pharma” one should not forget that this model has been beneficial for both companies and society for a long time. There are indications, however, that the structure of the pharmaceutical industry is changing.

One reason for that may be that the classical business model of the pharmaceutical industry based on the development of so-called blockbusters, i.e. drugs for large patient collectives, has limitations in view of the needs of smaller patient groups such as minors and mentally ill – not to speak of all the age-, gender-, and ethnicity-specific variations in therapeutic needs increasingly discovered. Unfortunately, recent European policy action aiming to improve clinical research for minors – such as the regulation (EC) No 1901/2006 on medicinal products for paediatric use – mainly focuses on stimulating the for-profit pharmaceutical industry to invest more capacities into research for vulnerable populations. Though the incentives offered, e.g. patent extensions, may be fruitful, further efforts should be taken to develop alternative non-profit research schemes – efforts already undertaken in the United States for some years.

- 3) Clinical research outside the western world: A main concern of researchers both from universities and industry remains to find sufficient numbers of patients as test persons. Often legal guardians in the western world dislike the idea that their wards take part in clinical research. For these and other reasons, it comes not to a surprise that there is a tendency to perform the clinical research, which is needed for licensing of new products in the West, outside the western world – e.g., it is well-known that many studies conducted on minors are conducted in countries such as Romania, Ukraine, and India. The worry to be addressed thus is that the current trial requirements for market authorisation of pharmaceuticals imposed by the regulators will give rise to a morally questionable “research colonialism”.

Task

The project aims at developing recommendations for the improvement of clinical research and consequently an improvement of the therapeutic situation of vulnerable populations. The project is a collaboration between the Europäische Akademie and the Berlin-Brandenburgische Akademie der Wissenschaften (BBAW).

Project Members

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Publications

- F. Thiele, J. M. Fegert, G. Stock (eds) Clinical research in minors and the mentally ill. Volume 46 of the "Graue Reihe", Europäische Akademie Bad Neuenahr-Ahrweiler, 11/2008
- F. Thiele "Clinical Research on Minors", Newsletter 4/2008

Funding

Berlin-Brandenburgische Akademie der Wissenschaften (partly),
Stiftung Rheinland-Pfalz für Innovation (partly)

1.5 Radioactive Waste. Technical and Normative Aspects of its Disposal (Duration 10/08–10/10)

Background and Tasks

In the public and political debate on nuclear power it is constantly mentioned that the question of final repository has not yet been solved. Regardless of what would follow from this for further decisions on the operation of nuclear power plants, there is a need for strategies on how to cope with radioactive waste that results from the hitherto power production and other activities. Society is very sensitive for the discussion on possible solutions and there is on-going resistance against almost any measures on radioactive waste.

Any solution to the problem of long-term radioactive waste management therefore has to comprise a technical as well as a social dimension. It must not only be technically achievable, but also publicly acceptable. Therefore, it is not enough to demonstrate scientifically, that there are technical solutions that ensure safe and secure containment of long-lived highly radioactive waste for a very long period of time and that undue burdens on future generations could be avoided. There is, instead, a need to gain a robust public confidence in the societal process and trust in the acting organizations and persons as well.

On the basis of (1) a survey on the potential radioactive waste management strategies and the requirements of long-term protection against radiation risks, and on the basis of (2) reflections on the needs and options for any such strategy from the ethical, juridical and sociological point of view on the other side, the project group worked on rational criteria for the evaluation of the options and on interdisciplinarily justifiable recommendations on how to proceed. The focus hereby lies on Germany, but the conditions and approaches in other countries of relevance are examined as well.

Current state of the project

The project group with experts from disposal research, safety technology and safety analysis, radiobiology and radiation protection, practical philosophy, jurisprudence and sociology started its work in autumn 2008 with a precision of its working programme. Although it was decided to give a short survey on all potential radioactive waste management strategies, the group concentrated on the discussed strategies to dispose the high-level radioactive waste in deep geological repositories. Due to the experts these are also the most promising and the most elaborated strategies. The

examination of the challenges and requirements of these strategies marked the outline for the topics of radiation risks and their development alongside a time-scale. Since deep geological repositories are in the focus of societal disputes worldwide, the sociological part of the study outlines the conditions of confidence and factual acceptance with reference to concrete experiences in these debates. In accordance with it the group decided to examine the relevant international conventions and recommendations as well as the established legislation on radioactive waste in countries that work on such strategies in a comparative study. The ethical inquiry should be focussed on long-term responsibility as well as on the criteria of rational acceptability of decisions on radioactive waste.

Step 1: Exploration and consolidation

Within three meetings the project group developed preliminary overviews on the several parts of the projected study which were presented to external experts at the first feedback meeting in April 2009. In a workshop-like atmosphere the group members discussed their purposes and hypotheses and consulted the experts in unclear or controversial points. The results have been integrated in an extended and commented outline of the projected study.

External experts in the first feedback meeting at the Berlin-Brandenburgische Akademie der Wissenschaften on 23 and 24 April 2009 were:

- Dr. rer. nat. Klaus-Jürgen Brammer (Gesellschaft für Nuklear-Service mbH, Germany),
- Dr. phil. Axel Gosseries (University of Louvain, Belgium),
- Dr. Bernd Lorenz (Gesellschaft für Nuklear-Service mbH, Germany),
- Professor Dr. rer. nat. Rolf Michel (Leibniz University Hannover, Germany),
- Dr. Hans G. Riotte (OECD NEA Nuclear Energy Agency, France),
- Dr. phil. Detlef Sprinz (PIK Potsdam Institute for Climate Impact Research, Germany),
- Dr. Annie Sugier (IRSN, Institut de Radioprotection et de Sûreté Nucléaire, France),
- Dr. rer. nat. Michael Weis (VGB Powertech, Germany).

Step 2: Working out the main results

On the basis of the first explorative discussions and an extended outline of the study seed texts for all chapters were prepared by the authors and discussed by the group. In spring 2010, following the sixth meeting of the group, the drafts were

composed to a first reference text of the study and sent to external experts who were invited to review them and to present their comments at the second feedback meeting.

External experts in the second feedback meeting at the Europäische Akademie Bad Neuenahr-Ahrweiler on 18 and 19 March 2010 were:

- Dr. rer. nat. Klaus-Jürgen Brammer (GNS Gesellschaft für Nuklear-Service mbH),
- Professor Dr. rer. nat. Michael Decker (Karlsruher Institut für Technologie/ITAS Karlsruhe),
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Step 3: Finalising the project

On the basis of the critical discussion and suggestions received in the second feedback meeting, the authors decided on the structure and priorities of the study and worked on the texts to make their thesis consistent and to dovetail them. Reviewing the discussion on the second feedback meeting the group decided that a comparison of additional time-scales which show the presumable progress in varying scenarios of the implementation of deep geological disposal in Gorleben, as well as a decision tree which outlines the options at the successive stages of decision-making.

On the basis of these decisions the group finally focussed on the normative conclusions and recommendations that are to be drawn from its integrated interdisciplinary study. The project will conclude with a final editorial process and the presentation of the study in summer 2011.

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Funding

VGB Powertech (Essen)

1.6 Deep Brain Stimulation in Psychiatry. Guidance for Responsible Research and Application (Duration 10/08–9/11)

Background and Tasks

Deep Brain Stimulation (DBS) refers to the delivery of electrical current to subcortical brain regions by means of permanently implanted electrodes connected to a neurostimulator. High-frequency stimulation has become the treatment of first choice for tremor associated with Parkinson's disease and other neurological disorders. Since several years now DBS is being tested in psychiatric disorders as well, because the high number of treatment refractory psychiatric patients creates a desperate need for new therapeutic options. It is assumed, for instance, that at least 10% of all patients suffering from major depression are not responding to conventional therapeutic approaches. Different regions in the brain are currently studied as possible targets for DBS in resistant major depression. Early attempts at exploring the potential of DBS for treating psychiatric disorders were made in the 1990s in patients with severe and treatment-resistant obsessive-compulsive disorder (OCD). To date, the efficacy of DBS for OCD has been studied in two trials including double-blinded crossover phases, and several case reports. Further neuropsychiatric conditions presently considered for treatment with DBS include addictive disorders like alcohol dependency, anxiety disorders, and Tourette-syndrome. These recent attempts at using DBS for the treatment of psychiatric disorders have been burdened by the somewhat precarious legacy of psychosurgery. In their early days, neurosurgical interventions for psychiatric disorders were destructive and crude interventions, indiscriminately applied, often undertaken with the aim to better control difficult patients, neither guided by sound hypotheses nor accompanied by scientific assessment of its wanted and unwanted effects. Since then the situation has changed considerably due to the refinement of neurosurgical methods, the application of results from research on the neurocircuitry of different psychiatric disorders, and the advancement of methodological as well as ethical research standards in psychiatry. With particular respect to DBS the procedure's adjustability and complete reversibility are worth mentioning. By adjusting the frequency, polarity, amplitude and pulse-width of the stimulating electrical current a patient's changing symptoms and disease progression can be taken into account. As regards reversibility, the stimulating current can be turned off at any time. Moreover, if required, the electrodes and the neurostimulator can

be removed. In spite of promising results in the aforementioned treatment trials, DBS in psychiatry is currently viewed with great scepticism. This is not likely to change unless the fundamental concerns raised by the far-reaching possibilities of influencing the human mind by means of electrical brain stimulation are properly addressed. The Europäische Akademie has contributed to a clearer understanding of these concerns with its completed research project “Intervening in the Psyche. Novel Possibilities as Social Challenges”. Given the increasing interest in psychiatric applications of DBS it is important and worthwhile to dedicate a follow-up project to this subject. In view of the promising, yet uncertain therapeutic potential of DBS for psychiatry the main aim of the proposed project is to safeguard the interests of patients suffering from severe psychiatric disorders. On the one hand, it is in their interest that an auspicious treatment option is not left unexplored just because it is prompting vague fears of “mind control” or because it can be seen as the continuation of earlier and much cruder psychosurgical procedures. On the other hand, this particularly vulnerable group of patients certainly has to be protected from overambitious researchers and practitioners who may disregard ethical or methodological standards in their work. Whether and in which ways recognized research and practice standards should be modified in order to account for the peculiarities of DBS will be the central research question of the envisaged project group. More specifically, these are some of the salient issues with respect to which the project group shall seek to offer guidance:

- Investigational protocol: Are there any specific methodological and/or ethical requirements that should be met by clinical research protocols investigating the therapeutic value of DBS in psychiatric disorders?
- Research subject and patient selection: What general considerations should govern the selection of research subjects in psychiatric treatment studies using DBS? Who is to decide on a patient’s inclusion in or exclusion from a trial? It is increasingly common that multidisciplinary healthcare committees review the eligibility of patients to treatment with DBS. What should be the composition of such committees and which criteria should they apply in their judgments?
- Informed consent: Only those patients are taken into consideration as candidates for DBS whose ability to provide valid consent may be diminished already because of their severe treatment-refractory forms of psychiatric disorder. Moreover, there is the problem of how to adequately inform patients of possible personality changes which are hard to grasp and even harder to predict.

- **Autonomy:** By which provisions can undue manipulation of remote controlled stimulators be ruled out? Under what conditions and to what extent should patients be enabled to control the stimulation device themselves?
- **Detecting side-effects:** The neurosurgical implantation of the stimulation electrodes for DBS is associated with severe risks occurring rarely, such as bleeding, infection, or hemiparesis. Which neuropsychological test procedures should regularly be applied before and after neurosurgery for DBS? Subtle changes in a patient's behavior indicative of personality changes and other psychic side-effects may only become obvious in the long term. Is it possible to increase the likelihood of detecting such side-effects without at the same time increasing the costs for the follow-up assessment in unacceptable ways? With regard to possible applications of DBS it has been decided to focus on therapy, leaving aside imaginable enhancement uses which would raise a distinct set of ethical and social issues. Moreover, other electrical stimulation techniques with possible applications in psychiatry, like Vagus Nerve Stimulation or Transcranial Magnetic Stimulation, will not be considered. This limited research agenda shall help to achieve results highly relevant for the actual clinical practice. However, since all techniques of neuromodulation raise similar concerns, it deserves mention that the project's results will be easily transferable to them.

Working Programme

The project group is composed of leading international experts from the relevant clinical disciplines neurosurgery, psychiatry, neurology and neuropsychology as well as experts in medical law and ethics. Altogether nine meetings are supposed to take place over a period of three years. This working period can be subdivided in three stages, each with a duration of approximately one year:

Stage 1: During the first three meetings each member of the project group should have the opportunity to share his or her experience and knowledge regarding the use of DBS in psychiatry with the rest of the group. Every speaker will be requested to identify the issues considered to be most critical for the project's progress.

Stage 2: Based on the proceedings of stage 1, particularly important and/or disputed issues will be selected for thorough discussion. Furthermore, during this stage the group may decide to invite external speakers who can provide additional expertise on specific topics.

Stage 3: The final stage is dedicated to preparing the draft of the project's tar-

get publication. Based on their special expertise, individual project members will compose parts of the paper which will be integrated into a coherent draft by the group's chairman and the project co-ordinator. The research community in the field of DBS in psychiatry can best be addressed by a guideline paper in a medical journal with high impact. This concise publication should be complemented by one or more lengthier papers elaborating on the rationale behind the guidelines. In order to create additional publicity, it is planned that all or most members of the project group jointly present the results of their research collaboration on a major international conference. The format of this conference should be such that it is also attended by public health officials, government regulators and other pertinent decision-makers.

By the end of 2010, after seven meetings, the project is in its final stage. In 2009, the Volkswagen-Foundation generously granted an extension of its funding for the project so as to make an additional expert workshop possible. The goal of this conference scheduled to take place in January 2011 is to provide an opportunity for the project members to discuss the project's provisional results with other experts of international renown.

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Funding

VolkswagenStiftung, Hannover

1.7 The Research Guiding Function of Metaphors from the Information Sciences and their Relevance to the Transformation of the Philosophy of Man

(Duration: 9/06–12/09)
(completed)

Background and Tasks

This project looks into the significance of research-guiding metaphors for the constitution of new concepts of man as well as alterations to pre-existing ones. In a first step the work focuses on the relevance of informational metaphors in information sciences, in biology, and philosophical anthropology. Informational metaphors are often central for scientific and research practices in knowledge-based societies, they dominate interdisciplinary controversies mediating the reception of results in natural science research by humanities and cultural sciences – evident, for example, in the debates about the human genome project. Thus, informational metaphors have to be reconstructed in the way they are used in computer science and genetics (e.g. the term “information”) in terms of linguistic criticism by reflecting upon the presuppositions introduced to natural sciences through such metaphors; furthermore, the reductionistic philosophy of man generated by lifescience research is critically examined. Thus, analyzing the validity conditions for an adequate philosophy of man by making manifest the research guiding function of informational metaphors and their eventual role for the transformation of the concept of man, the latter might be evaluated with respect to the aims of science. The Europäische Akademie pursues the particular viewpoint that such metaphors can generally be perceived as a technique; thus, they can also be reconstructed through an analysis of technology and philosophical statements about the effects of technology on humans. Therefore, there is reason for technology-guided transformations of the concepts of man, whose consequences must be evaluated in order to draw a more precise picture of knowledge-based societies and the role of man as an actor within them.

Working Programme

The project is carried out by three research groups and is co-ordinated by the Europäische Akademie GmbH. The research groups are working independently on the one hand and integrate their intermediary results on the other hand together with the Europäische Akademie GmbH in regular meetings.

The three different parts of the project are:

1. The influence of information techniques on the transformation of concepts of man
2. Semantic of the term “gene” as an informational metaphor
3. Anthropology of development and evolution

In February 2007 and 2008 two greater meeting involving invited experts from different areas (informatics, biology, and philosophy) took place to discuss working results and to provide new ideas on pursuing the project. In January 2008 some first papers had been published in the journal “Poesis & Praxis. International Journal of Ethics of Science and Technology Assessment” (volume 5, Number 3–4): they comprise topics like a discussion of the term “information” as a metaphorical construction in the field of informatics and genetics and on the function the usage of metaphors might have considering them as a technique for certain purposes. The regular Spring Conference of the Europäische Akademie in March 2009 is designed to the project’s subject matter on the interdependence of technique and the concept of man. The final results of the project are expected to be published in the middle of 2009.

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Federal Ministry of Education and Research (BMBF): Humanities in the societal dialogue

Proceedings

M. Bölker, M. Gutmann, W. Hesse (eds) *Information und Menschenbild* (volume 37 of the series “Ethics of Science and Technology Assessment”, ed. C. F. Gethmann). Springer, Berlin 2010

1.8 Potentials and Risks of Psychopharmaceutical Enhancement

(Duration: 7/06–10/09)

(completed)

Background

The project delivered an in depth analysis of a topic which had already been touched upon in the project “Intervening in the Psyche: Novel Possibilities as Social Challenges” (Springer 2007, Volume 29, series “Ethics of Science and Technology Assessment”). In this earlier project, various new methods of intervening in the brain were explored and, among other legal and ethical issues, questions related to the possibility of such interventions being used for non-therapeutic purposes were addressed. It turned out that particularly difficult normative issues are raised by the emerging social trend towards utilizing medical means for the enhancement of emotional well-being and cognitive performance beyond what is considered “normal” or “natural” in healthy individuals. At present, the clearest indication of this development is given by the well-established fact that a growing number of people, not suffering from cognitive impairment or emotional disturbance in any clinical sense, are consuming psychoactive drugs to achieve mood or cognitive enhancement. Hence, this follow-up project focused on the complex challenges posed by enhancement applications of psychopharmaceutical substances. The current way of using the term “enhancement” to denote medical measures aimed neither at treating nor at preventing diseases originated in the 1980s when the new molecular biological DNA techniques, and their diagnostic use in reproductive medicine, led to the possibility of enhancing one’s offspring by selection. Looking back today, many expectations of genetic enhancement proved to be premature, if not even preposterous. Within a few decades, the same may turn out to be true for certain of today’s fantasies of transcending human limitations by neuro-bionic implants and other advanced technical devices. However, many pharmaceutical means to enhance various human features are readily available nowadays. Therefore the actual trend towards consuming psychopharmaceutical drugs for non-therapeutic purposes is the most useful reference point for an analysis of the normative problems associated with enhancement issues. Two psychopharmaceutical drugs in particular assumed an almost emblematic role in the public debates on mood and cognitive enhancement respectively:

- i) During the 1990s the antidepressant Prozac® gained fame as a lifestyle drug promising everyone who consumes it to feel “better than well”. Patients treating their depression with Prozac® (or some other selective serotonin reuptake inhibitor) reported to feel “more authentic” or to feel “like themselves” for the first time in their lives, thereby inspiring many people not suffering from any mood disorder to give it a try.
- ii) As regards cognitive enhancement, the psychostimulant Ritalin® is being frequently prescribed for children and adolescents with attention deficit hyperactivity disorder. Since, apparently, it also benefits healthy individuals by generally increasing attentive capacities, Ritalin® (and other drugs containing methylphenidate) has become more and more popular with people of all ages. For instance, according to several studies the illicit use of Ritalin® is quite common among U.S. college students in order to gain a competitive edge in exams.

Psychopharmaceutical enhancement or else pharmaceutical neuroenhancement is certainly not an utterly new phenomenon. On the contrary, seeking improvement of mental features by consuming suitable substances seems to be an anthropological given. Examples range from the mild cognitive boost achievable by a cup of coffee to states of ecstatic euphoria induced by potent natural or “designer” drugs. Thus, an adequate assessment of the potentials and risks of psychopharmaceutical enhancement needs to be based on a clear understanding of what is genuinely new about this development. Furthermore, it is necessary to distinguish between risks for the individual human being making use of pharmaceutical means for enhancement purposes and risks for society arising from the widespread application of such means. Concerns about the possible influence of psychopharmaceutical enhancement on the individual consumer are mostly expressed by using three key concepts: personal identity, autonomy and authenticity. Concerns regarding personal identity are rooted in the intuition that the regular usage of potent psychopharmaceutical substances to enhance mood or cognition could change a person so thoroughly that he or she would no longer be “the same he/she used to be before”. Autonomy could be at stake either when an enhancement drug has a deleterious effect on its consumers’ will power or when forms of social pressure are exerted on the individual to take “smart drugs” in order to keep up in competitive settings. Finally, the consumer statements quoted above concerning the experience of taking Prozac® portray it as a kind of “authenticity generating” drug. However, some critics of

psychopharmaceutical enhancement decidedly deny that any change of personality caused by a pill could ever add to a person's authenticity. They would rather argue that it holds the potential for alienating people from their "true" selves. As regards the social level, a prominent concern is that the increasing usage of pharmaceutical means for neuroenhancement purposes may undermine distributive justice. If such drugs were so costly that only wealthy people who anyway are in a privileged position could benefit from their mind-enhancing effects, then this might actually fuel social inequality. In stark contrast, those taking a permissive attitude towards enhancement drugs point out that these drugs might as well alleviate the hardships of the "genetic lottery" which endows people most unequally with cognitive assets. Further social concerns relate to cases in which neuroenhancement is not autonomously sought for, but rather heteronomously imposed on, as for instance by parents on their children or by the state on detainees awaiting parole.

Project Structure and Key Findings

The project was divided into four intimately linked subprojects represented by four cooperating institutions. A medical subproject analysed the available evidence on the possibilities and risks of pharmaceutical neuroenhancement. For those psychopharmaceutical drugs rumoured to have enhancing properties systematic reviews have been prepared in order to assess the effects and side effects of these substances when used by healthy people. The general picture emerging from this meta-analysis is that the evidence for neuroenhancement effects of currently available drugs for neuropsychiatric disorders is scarce. Expectations regarding the effectiveness of psychostimulants such as methylphenidate or antidepressants such as fluoxetine (Prozac®) by far exceed their actual effects as demonstrated in randomised controlled trials. The other three subprojects were dedicated to normative and conceptual issues related to pharmaceutical neuroenhancement. The enhancement debate is fraught with concepts like authenticity and autonomy whose ambiguity may get in the way of consensus building on ethical and legal issues. Hence, several work packages aimed to develop a terminological framework for the description of consequences possibly arising from enhancement measures on the individual and social level.

Nowadays, the lack of evidence for the effectiveness and safety of potential neuroenhancement drugs should be sufficient reason for healthy and sane people to abstain from using these drugs. If, however, potent and suitably safe neuroenhancement

drugs became available, their general rejection would not seem justified because the occurrence of many feared negative consequences seems uncertain, whereas the many benefits of enhanced wellbeing and cognitive performance are undeniable. Hence, instead of imposing a premature prohibition of neuroenhancement drugs legislature should closely monitor the evolving ways of their usage and react with moderate regulatory measures if undesirable social consequences were to emerge. Especially if the availability of potent but costly neuroenhancement drugs were to result in a substantial exacerbation of existing inequalities between different social groups in terms of their opportunities for life and work, then state intervention would be mandatory. There should be an extended public debate on the possibilities of pharmaceutical neuroenhancement because the evident readiness of many people to obtain controlled drugs of questionable efficacy in dubious ways and their acceptance of adverse effects when using these pills sheds a problematic light on our society's performance orientation.

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Funding

Federal Ministry of Education and Research (BMBF): Research on ethical, legal, and social aspects in biomedicine

Main Publication

In deliberate divergence from the publication standard of the Europäische Akademie the project group published its memorandum on the potentials and risks of pharmaceutical neuroenhancement in a popular journal, namely the German scientific magazine *Gehirn&Geist*. This decision has been taken in view of the extensive and yet (for the most part) qualitatively poor media reporting on the subject of “brain doping”. By pointing out the lack of conclusiveness of many prevalent objections to using neuropsychiatric drugs for enhancement purposes the project members intended to stimulate the public debate on this subject of increasing importance.

T. Galert, C. Bublitz, I. Heuser, R. Merkel, D. Repantis, B. Schöne-Seifert, D. Talbot, “Das optimierte Gehirn. Ein Memorandum zu Chancen und Risiken des Neuroenhancements”, *Gehirn&Geist* 11/2009

Further Publications

J. C. Bublitz, R. Merkel: “Autonomy and authenticity of enhanced personality traits”, in: *Bioethics* 23/6 (2009), 360–374.

J. C. Bublitz: “Doping-Kontrollen im Staatsexamen? Über leistungssteigernde Substanzen und Chancengleichheit in Prüfungen”, in: *Zeitschrift für das Juristische Studium* 3/2010, 306–317.

T. Galert: “‘Das optimierte Gehirn’ – Potenziale und Risiken des pharmazeutischen Enhancements psychischer Eigenschaften”, in: *Technikfolgenabschätzung – Theorie und Praxis* 19/1 (2010), 67–70.

T. Galert, J. C. Bublitz, I. Heuser, R. Merkel, D. Repantis, B. Schöne-Seifert, D. Talbot: “Das optimierte Gehirn. Ein Memorandum zu Chancen und Risiken des Neuroenhancements”, in: *Gehirn&Geist* 11/2009: 40–48.

I. Heuser: “Psychopharmaka zur Leistungsverbesserung”, in: *Deutscher Ethikrat* (eds.), *Der steuerbare Mensch? Über Einblicke und Eingriffe in unser Gehirn, Vorträge der Jahrestagung des Deutschen Ethikrates 2009*, Berlin 2009, 49–55.

R. Merkel: “Mind Doping? Eingriffe ins Gehirn zur Verbesserung des Menschen:

Normative Grundlagen und Grenzen”, in: N. Knoepffler, J. Savulescu (eds.), *Der neue Mensch? Enhancement und Genetik*, Alber, Freiburg 2009, 177–212.

R. Merkel: “Neuartige Eingriffe ins Gehirn – Verbesserung der mentalen *conditio humana* und strafrechtliche Grenzen”, in: *Zeitschrift für die gesamte Strafrechtswissenschaft* 121 (2009), 919–953.

D. Repantis, P. Schlattmann, O. Laisney, I. Heuser: “Antidepressants for neuroenhancement in healthy individuals: A systematic review”, in: *Poiesis & Praxis* 6/3–4 (2009), 139–174.

D. Repantis, O. Laisney, I. Heuser: “Acetylcholinesterase inhibitors and memantine for neuroenhancement in healthy individuals: A systematic review”, in: *Pharmacological Research* 61/6 (2010), 473–481.

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D. Repantis: “Die Wirkung von Psychopharmaka bei Gesunden“, in: A. Wienke, W. H. Eberbach, H.-J. Kramer, K. Janke (eds.), *Die Verbesserung des Menschen: Tatsächliche und rechtliche Aspekte der wunscherfüllenden Medizin*, Springer, Heidelberg/New York 2009, 63–68.

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2 Master Programme

2.1 Post Graduate Master Study Programme in Medical Ethics

Advanced Master's Degree Course in Medical Ethics

The Europäische Akademie GmbH and the Johannes Gutenberg-Universität in Mainz offer an advanced Master's course in Medical Ethics. This course is unique in Germany and is addressed towards those working in health-related areas. It can be completed on an extra occupational basis and single modules from the course are accepted as further training courses required for doctors. The Master's degree has been accredited since 2006.

About the course:

The Europäische Akademie first offered the Advanced Master's Degree Course in Medical Ethics in the spring semester of 2005 together with the FernUniversität Hagen and the Johannes-Gutenberg Universität in Mainz. Since 2008 it accounts for the fact that medical ethics has taken on greater significance in medical care, medical research and health care policy in recent years. Medical advances lead to morally problematic options which require ethical reflection. Doctors and other medical staff are required to be capable of ethical reflection as a secondary skill in their professional life. Duration of the full course is four semesters, and its contents (eight modules made up of six to eight classes) are sent out in written form and must be completed in self-study. The well-proven concept of distance learning allows medical staff to acquire extra occupational competence in the field of medical ethics and an accredited degree (M.A. "Medizinethik").

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3 Studies

3.1 The Restoration and Enhancement of Human Capacities by Neuronal Implants (Duration: 4/06–9/09)

Background and Aims of the Study

The nervous system is one of the most important physiological systems of the human body and nearly every organ is under neural influence. Disturbances of the nervous system can therefore have far-reaching consequences. In the 1960s it was still almost inconceivable to intervene in this complex system with the aim of restoring failing functions. Since then, enormous scientific and technological progress has led to the development of electronic devices which can be surgically implanted in sensory organs or even in the brain. For instance, as of today, approximately 100,000 people worldwide have received cochlear implants. These can help deaf people (re)gain comprehension of spoken language by directly stimulating auditory nerves inside the cochlea with electrical impulses. Ongoing research in neuroprosthetics is aiming at the development of retinal implants. Apart from sensory implants, the possibilities of motor prosthetics are currently being investigated. Based on this success story it is now being discussed whether such techniques can also be used not only for restoring impaired capabilities but also for enhancing the capacities of healthy humans. The background study is based on a state of the art report on the spectrum of neuroprosthetic devices and applications and examine the ethical, legal and social implications of these developments – inter alia addressing questions on the moral evaluation of enhancement techniques; the assessment of the potential for abuse, safety and liability issues; and problems of distributive justice such as access to and fair allocation of these novel techniques. The study forms one of the working packages of the integrated research project on nanotechnology applications in medicine “Nanotechnology and Health. Technological options, risk evaluation and precautionary strategies (NanoHealth)” under the auspices of the Helmholtz Association (Helmholtz-Gemeinschaft Deutscher Forschungszentren/HGF). Within this project, neural implants have been singled out as one of the risk discourses relevant to the question of how the public perceives the benefits and risks related to the so-called converging technologies (CT) and their expected impacts. At present, public opinion on

neuroprosthetic progress varies between critical or even alarmist concerns about the future of humanity on the one hand and science fictional visions or transhumanist expectations on the other hand. The background study therefore places special emphasis on an in-depth analysis of the ethical, societal und legal questions arising from presently available and foreseeable future neural implants.

Working Progress

In April 2006 the cooperation partners held their initial meeting of the Nano-Health project. Since, the partners of the working packages related to neural implants have worked towards a state of the art-report on current neuroprosthetic devices which was published in 2008 at the Forschungszentrum Karlsruhe (FZK: Wissenschaftliche Berichte, FZKA 7387). The publication of the background study is scheduled for the beginning of 2011.

Cooperation Partners

Forschungszentrum Karlsruhe (FZK) and its subdivisions Institute for Technology Assessment and Systems Analysis (ITAS), Institute of Toxicology and Genetics (ITG), and Institute for Applied Computer Science (IAI), as well as EMPA Technology and Society Lab Sankt Gallen.

Responsible: Katja Stoppenbrink, LL.M., M.A.

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4 Study Groups

4.1 Interdisciplinary Research and Transdisciplinary Claims of Validity (Duration 3/10–9/12)

Recent societal challenges often need for rational scientific decision support, which relies on appropriate interdisciplinary efforts. At first, these efforts should reflect the state-of-the-art of the empirical and methodological knowledge from all relevant disciplines. Secondly, their outcome should be also trans-disciplinary acceptable – beyond any disciplinary perspective.

The above mentioned working group aims at reflection of the specific needs for scientific advice as well as of the potential of the scientific system to satisfy these demands. In this context it will be analyzed, which preconditions might influence the quality and efficiency of scientific advice. More concrete, the concept of organizing corresponding thematic and time-limited interdisciplinary projects is to be critically reviewed, especially with regard to its theoretical foundations and its practical utility. This review should be accompanied by comparative analysis of other, namely value-oriented or participatory concepts of technology assessment.

After 15 years of experience, this task will also enable the Europäische Akademie to investigate if and how far its methodological concept of “rational technology assessment” fulfilled the expectations of the academy’s founders, members and addressees.

Working Progress

Beginning with the initial meeting in March 2010, the working group held three regular progress meetings, so far. Members of the study group participated also at the academy’s autumn conference 2010 (“interdisciplinary research between social expectations and scientific validity”), held on 7–8 October 2010 at the Academy of Sciences and Literature, Mainz. The results of the conference contributed to the further study progress.

Study Group

Professor Dr. phil. Martin Carrier, Dipl.-Phys.

Universität Bielefeld

Professor Dr. phil. Dr. phil. h.c. Carl Friedrich Gethmann

Europäische Akademie Bad Neuenahr-Ahrweiler

Dr. phil. Gerd Hanekamp, Dipl.-Chem.

Telekom-Stiftung Bonn

Professor Dr. phil. Matthias Kaiser, M.A.

Oslo University

Dr. phil. Georg Kamp, M.A.

Europäische Akademie Bad Neuenahr-Ahrweiler

Dr. rer. nat. Stephan Lingner, Dipl.-Geol.

Europäische Akademie Bad Neuenahr-Ahrweiler

Professor Dr. phil. Michael Quante

Universität Münster

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4.2 Ethical Evaluation on the Protection of Crucial Bridges and Tunnels of Road Traffic (SKRIBT) (Duration: 11/08–02/11)

Background and Task

Road bridges and tunnels connect people, enable broad mobility and allow exchange of goods and services. Nevertheless, construction and operation of these infrastructures are highly critical with respect to security questions. These questions may arise from risks from natural disasters and human factors, which might be mitigated by planning, installation and operation of appropriate monitoring and safety systems. However, these measures could irritate road users and service personnel because they will enable e.g., identification and control of vehicles and their drivers and thus a broad collection, analysis and storage of sensible, personal movement data. Respective concern about excessive “data mining” and on endangered individual privacy gives reason to the above mentioned evaluation in an early stage of development. The study aims at the development of acceptable and ethically sound safety measures (including also non-technical means), which address central normative questions of data protection.

Working Progress

The study group contributes to the joint research project “Protection of crucial bridges and tunnels of road traffic (SKRIBT)” by an ethical evaluation of the ongoing research. The joint project is funded by the Federal Ministry of Education and Research (BMBF). On 14 November 2008 the study group held an initial meeting with the “Bundesanstalt für Straßenwesen (BASt)”, which is prime contractor of the umbrella project.

Within the period under report the study group discussed and evaluated the ongoing research process with the consortium’s partners of the project. They completed two evaluation reports in June 2009 and February 2010 while focusing on relevant risk analyses, protective measures, and on practical projects for technical demonstration of certain precautionary measures for improvement of tunnel safety. The evaluation reports are exclusively made available to the customer of the study.

Study Group

Jan A. Bollinger, Dipl.-Betriebswirt (FH) (until 8/2010)

Europäische Akademie, Bad Neuenahr-Ahrweiler

Professor Dr. phil. Dr. phil.h.c. Carl Friedrich Gethmann

Europäische Akademie, Bad Neuenahr-Ahrweiler

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4.3 Practical Philosophy

The Europäische Akademie is concerned with the scientific study of consequences of mid- and long-term processes that are especially influenced by natural- and engineering sciences and the medical disciplines. Its aim is to assist in preparing political decisions with contributions from the scientific point of view. The project groups set up for this purpose argumentatively identify and recommend those options that would be chosen rational acting individuals and collectives. Argumentations like this depend on some normative premises: e.g. the supposed standards of rationality, the adequacy criteria for the reconstructive shaping of decisions scenarios and, last but not least, general principles for action that would be chosen (according to one or another set of standards) by rational actors. Such standards, criteria and principles have always been a subject to philosophy, especially in such disciplines as the theory of argumentation (logic), the philosophy of science and ethics. The study group “Practical Philosophy” will critically discuss these traditions as well as relevant contemporary philosophical debates and incorporate its results into the work of the Europäische Akademie.

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III SCIENTIFIC COMMUNICATION AND COOPERATION

1 Academy Conferences

1.1 Spring Conference 2009: Transformation of the Philosophy of Man in the Age of Information Sciences

26.–27.3.2009, SETA-Hotel, Bad Neuenahr-Ahrweiler

On 26 and 27 March a conference was held in Bad Neuenahr-Ahrweiler on the “Transformation of the Philosophy of Man in the Age of Information Sciences”. It was hosted by the Europäische Akademie and the Philipps-Universität Marburg and addressed the joint project “The Research-Guiding Function of Metaphors from the Information Sciences and their Relevance to the Transformation of the Philosophy of Man”, sponsored by the German Federal Ministry of Education and Research (BMBF).

Metaphors which find their way into computer science and life sciences research are not to be ignored in today’s “knowledge society” and are ever increasing. Terms such as “information”, “gene”, “programme”, or “code” are not only prevalent in the research within various natural and social sciences as well as in cultural studies, but also affect the constitution and transformation of the philosophy of man in scholarship and society. The resulting anthropological assumptions of consequences from this research must be critically analysed and the terms of their validity closely examined in order to achieve an adequate understanding of man. This concerns the actual and potential use of the term “information” as well as a methodologically and philosophically verified reconstruction of the use of metaphors and models in those fields of research which work with an implicit understanding of man.

The speakers at the spring conference were experts from the fields of computer science, biology, and philosophy. They grappled with the meaning of metaphorical expressions, particularly those which are used in the latest bio-genetic research in the context of the philosophy of man.

The first section “Scientific Metaphors and the Philosophy of Man” addressed the use of the term information in biology. It was demonstrated that talking about the semantically charged term “information” only makes sense if the observer is capable of interpreting it. The second section discussed implicit assumptions in various philosophies of man in the context of technology and knowledge using the example of robotics and “ambient computing”. In today’s social environment with its increasing number of interfaces between man and computers (e.g. in “Facebook”

or “Second Life”) questions regarding the use of these extended possibilities arise. At the end of the conference, perspectives regarding the use of metaphors for an informed understanding of man were presented; their role regarding a critique as well as the assumptions which are made in current life sciences research were particularly emphasised.

In the course of the conference, Professor Dr. Dr. h.c. Carl Friedrich Gethmann, director of the Europäische Akademie, was also presented with the commemorative publication “Erkennen und Handeln” (ed. by G. Kamp and F. Thiele, Fink Verlag) containing contributions written by many of his scholarly companions in honour of his 65th birthday.

Speakers:

- Professor Dr. rer. nat. Jürgen Bereiter-Hahn, Johann Wolfgang Goethe-Universität Frankfurt;
- Professor Dr. rer. nat. Hans-Jörg Rheinberger, Max-Planck-Institut für Wissenschaftsgeschichte, Berlin;
- Priv.-Doz. Dr. rer. nat. Michael Decker, Institut für Technikfolgenabschätzung und Systemanalyse, Karlsruhe;
- Professor Dr. rer. nat. Sarah Spiekermann, Humboldt-Universität zu Berlin;
- Professor Dr. rer. nat. Armin Grunwald, Universität Karlsruhe;
- Professor Dr. phil. Matthias Jung, Ruhr-Universität Bochum;
- Professor Dr. phil. Geert Keil, Rheinisch-Westfälische Technische Hochschule Aachen.

Proceedings

M. Bölker, M. Gutmann, W. Hesse (eds) *Information und Menschenbild*. Vol. 37 *Ethics of Science and Technology Assessment*, Berlin 2010

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1.2 Autumn Conference 2009: Concepts of Animal Welfare: Interdisciplinary Perspectives

8.–9.10.2009, SETA-Hotel, Bad Neuenahr-Ahrweiler

Animal welfare science is concerned with the welfare of animals – but what exactly does that mean? To discuss how philosophical analysis may support the further development of animal welfare science, scientists representing animal welfare science, ethics, law, and philosophy of science came together at the invitation of the Europäische Akademie in Bad Neuenahr-Ahrweiler on 8 and 9 October 2009.

Professor Donald M. Broom (Cambridge University), who became the first professor of animal welfare worldwide in 1986, presented a historical analysis of this field: He explained how animal welfare research had not been considered scientific in the 1980s and 1990s and that – in the meantime – it had become reasonably accepted.

As Dr. Ian Robertson (Ministry of Agriculture and Forestry, New Zealand) and Professor Tjard de Cock Buning (VU Amsterdam University) pointed out, results of animal welfare research are often consulted to guide processes of development in legislation concerning animal protection. However, de Cock Buning concluded from a comparative investigation of four European countries that other moral concepts, particularly that of integrity, also play an important role in animal protection. Dr. Kirsten Schmidt (University of Bochum) analysed how such different ethical concepts are related to the concept of animal welfare. Dr. Christine Leeb (University of Natural Resources and Applied Life Sciences Vienna) used organic farming and its realisation to illustrate practical dilemmas: pigs kept in “natural” conditions are not necessarily the happiest ones.

Professor Lennart Nordenfelt (Linköping University) argued against inclusion of naturalness in a definition of animal welfare. In this respect he agreed with Broom whose biological coping theory of animal welfare he, however, rejected. Instead, he put forward a theory of welfare based on happiness. While, thus, the precise meaning of animal welfare was discussed, the conference’s participants seemed largely to agree that the natural behaviour of animals – as formed by evolution and breeding – is an important basis for animals’ needs in terms of nutrition, movement, social interaction, environment, etc., but that subjective feelings and health were also aspects that played roles in an animal’s welfare.

Professor Colin Allen (Indiana University) questioned the usefulness of a precise

definition of animal welfare. He suggested to identify morally relevant aspects of animals species-specifically – an endeavour at the interface of science and humanities. Professor Hanno Würbel (University of Gießen) illustrated how this can be done, and summarized the field's methodological challenges as concerning what to investigate in which animals with which methods.

The podium discussion at the end of the conference confirmed that there are different concepts of animal welfare, but also that these are sufficiently well described and sufficiently similar in their consequences to allow the communication between biology and philosophy which is needed in the scientific investigation of morally relevant states of animals.

Proceedings of the conference, which was partially funded by the German Research Foundation, are in preparation.

Speakers:

- Professor Colin Allen, Ph.D. (Indiana University, USA);
- Professor Donald M. Broom, Ph.D., Sc.D., Hon.D.Sc. (Cambridge University, UK);
- Professor Tjard de Cock Buning, Ph.D, M.Sc., M.Phil. (VU Amsterdam University, The Netherlands);
- Dr. med. vet. Christine Leeb CertWEL (University of Natural Resources and Applied Life Sciences, Vienna, Austria);
- Professor Lennart Nordenfelt, Ph.D. (Linköping University, Sweden);
- Dr. Ian Robertson, LL.B., B.V.Sc., M.R.C.V.S. (Leeds University, UK; Ministry of Agriculture and Forestry, New Zealand);
- Dr. phil. Kirsten Schmidt (University of Bochum, Germany);
- Professor Dr. sc. nat. Hanno Würbel (University of Gießen, Germany).

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1.3 Spring Conference 2010: Secure Electricity Supply and Renewable Energies. Supply Security with Meeting Long-Term Targets for CO₂ Emission Reduction?

24.–26.3.2010, Wissenschaftszentrum Bonn

The proportion of renewables in our energy supply is steadily growing, due in part to fixed feed-in tariffs meant to promote climate protection. These tariffs are aimed at reaching political targets regarding the proportion of renewables in the overall energy supply. For technical reasons, power inputs and outputs must be balanced at all times, in order to avoid network failures and ensure the required quality standard of the generated electricity. Since the amount of fed-in electricity of most currently viable technologies depends upon wind speeds or solar radiations in a given location at a given time, the use of renewables comes with a certain number of imponderables which need to be discussed and clarified.

Therefore, the Europäische Akademie held its Spring Conference on the topic of “Secure electricity supply and renewable energies. Supply security with meeting long-term targets for CO₂ emission reduction?” at the Bonn Wissenschaftszentrum (Science Centre) from 24–26 March 2010. The conference was opened with a public evening lecture by Professor Dr. Kornelis Blok (Utrecht University) on the status quo of scientific and political discussions regarding scenarios of the future and climate protection targets and the claimed contributions of the global supply of energy.

During the first main section of the conference, Dr.-Ing. Joachim Nitsch (German Aerospace Centre DLR, Stuttgart) presented, amongst others, the German Federal Environment Ministry’s “reference scenarios”. They demonstrate how Germany could reach its targets by 2050 with an extensive use of renewables. The scenarios make evident how those goals can be reached based on set presuppositions, e.g. for technology development. Adj. Professor Dr. Dietmar Lindenberger (University of Cologne) presented the results of grid studies by the German Energy Agency (dena). He discussed ways of integrating wind power stations into the German electricity supply by the year 2015 or respectively 2020/2025 and emphasised the necessity of a European perspective for the efficient expansion of the use of renewable energies.

The conference also focused on the technical means of balancing out electricity in- and output by enhancing electrical grids and introducing electricity storages. First, Professor Dr.-Ing. Christian Rehtanz (Technical University of Dortmund)

presented the challenges and opportunities of integrating renewables into electrical power supply grids: Grid bottlenecks and the current lack of flexibility within power distribution networks could be solved, for instance, by means of co-ordinated load-flow regulations, DC transmission lines and end customer participation. Furthermore, Professor Dr. Dirk-Uwe Sauer (RWTH Aachen University) presented an overview of the options and fields of application for storing electrical energy, and developed a technology scenario using primarily hydrogen and pumped storages for creating a balance over a span of several days; for shorter time periods, systems such as batteries of electric vehicles, thermal storage systems and Smart Grid Management may be conceivable. The section was concluded by Professor Dr. Dr.-Ing. Hans Müller-Steinhagen (German Aerospace Centre DLR, Stuttgart/University of Stuttgart) who explained the Desertec concept, an industry initiative for secure and environmentally-friendly power supply and its integration into a power union of EU and Mediterranean countries (MENA). To ensure a consistent power feed, solar thermal power plants, for instance, are combined with efficient heat storages and DC transmission lines.

The third section of the conference looked into the legal and economic framework conditions for integrating renewable energies. Professor Dr. Thomas Ziesemer (University of Maastricht) first discussed the economic framework conditions of market economies and proposed to fundamentally rework them. Professor Dr. Jens-Peter Schneider (University of Osnabrück) dealt with current legal regulations and options for setting the course for sustainable energy systems against the backdrop of current German and European legal frameworks, e.g. the responsibility question for the construction of storage facilities and conflicts of use regarding storage media such as gas caverns. Industry representatives (EWE, citiworks, E.ON, RWE) concluded this section with comments on the subject. They discussed approaches to the integration of renewable energies and raised unresolved questions.

It became evident that, although concepts and technologies for integrating renewable energies do exist, they require further expansion and development. Due to the long-term nature of the development and implementation of individual technical measures along with the possibly necessary structural adaptations of markets and the regulation of electrical power grids, supporting concepts and measures for such an integration must be developed further and implemented along with the promotion of power generation from renewable energy sources.

All contributions are available from the Europäische Akademie website:
www.ea-aw.org

Speakers:

- Professor Dr. Kornelis Blok (Utrecht University);
- Andreas Brabeck (RWE AG, Essen);
- Vera Brenzel (E.ON, Düsseldorf);
- Jörg-Werner Haug (citiworks AG, Munich);
- Dr. Wolfram Krause (EWE AG, Oldenburg);
- Adj. Professor Dr. rer. pol. Dietmar Lindenberger (University of Cologne);
- Professor Dr. Dr.-Ing. Hans Müller-Steinhagen (German Aerospace Centre, Stuttgart/University of Stuttgart);
- Dr.-Ing. Joachim Nitsch (German Aerospace Centre, Stuttgart);
- Professor Dr.-Ing. Christian Rehtanz (Technical University of Dortmund);
- Professor Dr. rer. nat. Dirk-Uwe Sauer (RWTH Aachen University);
- Professor Dr. jur. Jens-Peter Schneider (University of Osnabrück);
- Professor Dr. rer. pol. Thomas Ziesemer (University of Maastricht).

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1.4 Autumn Conference 2010: Interdisciplinary Research between Social Expectations and Scientific Validity

7.–8.10.2010, Academy of Sciences and Literature, Mainz

Interdisciplinarity has become a matter of course and seems to have become a promising working approach in modern research. For instance, interdisciplinary research in Global Change is of high public interest. Nevertheless, its outcome is often strongly disputed and therefore has to be justified. Expectations and justification of interdisciplinary research is mainly based on: (1) complex problems of modern societies, (2) vast public funding schemes for certain interdisciplinary research programmes, and (3) controversial debates about the validity of recommendations made to decision makers. Against this background, the Europäische Akademie Bad Neuenahr-Ahrweiler GmbH organized its autumn conference “Interdisciplinary research between societal expectation and scientific validity” held on 7 and 8 October 2010 at the Academy of Sciences and Literature in Mainz.

The conference started with a session on the disciplinary state of science. Speakers were Professor Eberhard Knobloch (Berlin) and Professor Carl Friedrich Gethmann (Bad Neuenahr-Ahrweiler) who reflected the system of science from historical and philosophical perspectives, respectively. The second session then focused on modern societal problems as grounds for interdisciplinary research. Speakers were Professor Jan C. Schmidt (Darmstadt), Professor Armin Grunwald (Karlsruhe) and Professor Bernward Gesang (Mannheim). The theme of the final session was justification of scientific-based advice and recommendation. This field was explored within three talks, given by Professor Klaus Mainzer (Munich), Professor Matthias Kaiser (Oslo) and Dr. Georg Kamp (Bad Neuenahr-Ahrweiler).

Preliminary it was agreed that interdisciplinarity has a specific potential and competence in the solution of complex, uncertain and ambivalent questions with societal relevance. However, that does not mean that interdisciplinarity would be prudent or necessary in every case. Therefore, one should also refrain from using interdisciplinarity as a “buzz word”, in order to prevent a dilution of its meaning. Instead, the term always has to be specified with regard to the objectives of interdisciplinarity.

All contributions are available from the Europäische Akademie website:
www.ea-aw.org

Speakers:

- Professor Dr. phil. Bernward Gesang (Universität Mannheim);
- Professor Dr. phil. Dr. phil. h.c. Carl Friedrich Gethmann (Europäische Akademie, Bad Neuenahr-Ahrweiler);
- Professor Dr. rer. nat. Armin Grunwald (Karlsruher Institut für Technologie);
- Dr. phil. Georg Kamp (Europäische Akademie, Bad Neuenahr-Ahrweiler);
- Professor Dr. phil. Matthias Kaiser (The National Committee for Research Ethics in Science and Technology in Norway, Oslo, and Universität Bergen);
- Professor Dr. phil. Eberhard Knobloch (TU Berlin);
- Professor Dr. phil. Klaus Mainzer (Carl von Linde-Akademie/TU München);
- Professor Dr. rer. nat. Jan C. Schmidt (Hochschule Darmstadt).

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2 Expert Meetings

The Europäische Akademie organises – partly in co-operation with other institutes – expert meetings which serve to explore further research topics or to deepen the discussion on overlapping interdisciplinary topic fields. These meetings, held by small circles of experts, complement the conferences run by the academy, covering three main areas, namely ethics of medicine, environment, and engineering technology and address scientists, political authorities as well as the public, potentially affected by the consequences of science and technology.

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2.1 The Future of Spaces. Societal Questions on the Way to “Ambient Intelligence”

On 19 and 20 November 2009 an expert talk took place at the Europäische Akademie GmbH discussing societal questions on the way to “ambient intelligence” (AI). The persons who took part were experts from urban geography, computer research, economy, jurisprudence and philosophy dealing with various AI facets. Stefan Höffken (TU Kaiserslautern) presented his concept for the “emotional mapping” of spaces. In this connection Christian Bodenstein (Universität Freiburg) discussed the potentials of “position-aware markets”. Dr. Frank Pallas (TU Berlin; Karlsruher Institut für Technologie) described the development of appropriate software as a principally undirected process. Respective feasibilities and limits of technology assessment were defined by Professor Dr. Karsten Weber (Universität Opole/PL; TU Berlin) after a discussion of information ethical and anthropological principles by Dr. Jessica Heesen (Universität Freiburg) and by Dr. Stephan Lingner (Europäische Akademie). Finally, Professor Dr. Bernd Lutterbeck pleaded for an allmende concept of regulating pervasive computing in public areas. The results of this expert talk were published in volume 50 of the “Graue Reihe”: S. Lingner, B. Lutterbeck, F. Pallas (eds) *Die Zukunft der Räume. Gesellschaftliche Fragen auf dem Weg zur “Ambient Intelligence”*, 9/2010

2.2 Ethical Questions of Public Health Policy II

The second expert meeting on “Ethical Questions of Public Health Policy” was held on 19/20 March 2009 at the Europäische Akademie. Again it involved several experts from the fields of medicine, jurisprudence, sociology and philosophy and focused on socio-political and ethical questions with regard to public health, especially those related to the problem of justice.

Dr. P. Schröder-Bäck (University of Maastricht) spoke about the basic requirements of ethics in the field of public health, while Professor G. Marckmann (Universität Tübingen) tried to outline a more specific methodical framework for evaluating measures taken in this respect.

Dr. O. Rauprich (Ruhr-Universität Bochum), on the other hand, proved several basic theories of justice with regard to their usefulness of solving conflicts of policy in public health.

Finally, Professor V. H. Schmidt (University of Singapore) proposed some new ideas on restructuring the health care system taking into account that resources are becoming more and more narrow.

3 Publications

3.1 Book Series “Ethics of Science and Technology Assessment” (Wissenschaftsethik und Technikfolgenbeurteilung), issued by Carl Friedrich Gethmann

The “Ethics of Science and Technology Assessment” series, edited by the Europäische Akademie’s director, puts out the final reports of the various interdisciplinary project groups as well as further studies from the academy’s work, e.g. conference issues. The book series is published by the Springer-Verlag.

Volume 34: M. Engelhard, K. Hagen, M. Boysen (eds) Genetic Engineering in Livestock. New Applications and Interdisciplinary Perspectives. Berlin 2009

Volume 35: E. Rehbinder, M. Engelhard, K. Hagen, R. B. Jorgensen, R. Pardo Avellaneda, A. Schnieke, F. Thiele, Pharming. Promises and risks of biopharmaceuticals derived from genetically modified plants and animals. Berlin 2009

Volume 36: B. Droste-Franke, H. Berg, A. Kötter, J. Krüger, K. Mause, J.-C. Pielow, I. Romey, T. Ziesemer, Brennstoffzellen und Virtuelle Kraftwerke. Energie-, umwelt- und technologiepolitische Aspekte einer effizienten Hausenergieversorgung. Berlin 2009

Volume 37: M. Bölker, M. Gutmann, W. Hesse (eds) Information und Menschenbild. Berlin 2010

3.2 “Graue Reihe”

The “Graue Reihe” is produced and published by the Europäische Akademie GmbH and is a platform for shorter texts and anthologies by members of project groups, staff members or external scientists. It includes text material on current topics in Technology Assessment and Ethics of Science scientists at the Europäische Akademie GmbH and from outside continuously work on. Unlike the book series “Ethics of Science and Technology Assessment” (Springer Verlag) the Graue Reihe publishes texts on ideas and reflections which sometimes are smaller products of the long-term research projects of the academy. All volumes can be ordered free of charge or downloaded from the academy’s website (www.ea-aw.org/publications/graue-reihe).

No 48: L. Martignon, W. Sander, *Der Weg zu einer Nachhaltigkeitskultur in der Schule. Zwei empirische Studien*, 3/2009

No 49: S. Lingner, W. Rathgeber (eds) *Globale Fernerkundungssysteme und Sicherheit. Beiträge durch neue Sicherheitsdienstleistungen?* 6/2009

No 50: S. Lingner, B. Lutterbeck, F. Pallas (eds) *Die Zukunft der Räume. Gesellschaftliche Fragen auf dem Weg zur “Ambient Intelligence”*, 9/2010

3.3 Newsletter

The Newsletter (Akademie-Brief) gives an overview of the Europäische Akademie's activities and its current and future projects. It is published mostly in English and appears free of charge eight to ten times per year. It can also be downloaded from the academy's website (www.ea-aw.org/publications/newsletter).

Each issue includes one focus article in which scientists write about a topic from one of the project groups or other issues relevant to the Europäische Akademie, news about the academy's working groups and latest publications and recent lectures by members of the Europäische Akademie. It also presents reports on the Europäische Akademie's Spring and Autumn Conferences. Additionally, every issue presents a portrait of a person relevant to the academy's work.

No 86: Do we need a “Nano Act”? How (not) to regulate nanotechnology, Katja Stoppenbrink

No 87: Untersteht alle Forschung dem Prinzip des Fallibilismus, nur die Klimaforschung nicht?, Carl Friedrich Gethmann

No 88: Human Enhancement – What Does “Enhancement” Mean Here?, Armin Grunwald

No 89: Arguments from Instrumentalization, Georg Kamp

No 90: The quest for a concept: is animal welfare science growing up?, Kristin Hagen

No 91: The next pandemic please: Swine flu f(or)ever, Michael Bölker

No 92: Human exploration of space, Moon and beyond. Aiming for the stars or a matter of culture?, Stephan Lingner

No 93: Beyond providing information. TA as a contribution to societal and political opinion forming, Frans W. A. Brom

No 94: Synthetic biology gets ethical, Margret Engelhard

No 95: Web 2.0 and Academia, Michael Nentwich

No 96: The function of “dignity” in bioethics, Felix Thiele

No 97: “I’m sick of the word greed”, Friedhelm Hengsbach

No 98: The disciplinary organisation and the interdisciplinary praxis of the sciences, Georg Kamp

No 99: Thoughts on climate research and policy, Hans von Storch/Nico Stehr

No 100: Wissenschaft und Medien: ein prekäres Verhältnis, Carl Friedrich Gethmann

No 101: Electric mobility: Is environment protection dear-bought by a new “material resource trap”?, Ruth Klüser/Bert Droste-Franke

No 102: Outlining ethical issues in medical application of nanotechnologies, Dorothee Dörr/Felix Thiele

No 103: A helping artificial hand? Interdisciplinary problem setting of service robotics in caretaking, Michael Decker

3.4 Journal “Poiesis & Praxis. International Journal of Ethics of Science and Technology Assessment”

The Europäische Akademie, together with the publishing house Springer, Berlin, are the editors of an international and interdisciplinary English-language journal on the ethics of science and technology assessment. The Journal was first published in December 2001 and is called “Poiesis & Praxis. International Journal of Ethics of Science and Technology Assessment”. The Europäische Akademie’s director as editor-in-chief of the journal holds full responsibility, and is supported by an advisory committee consisting of international and interdisciplinary experts relevant to the respective theme of each issue. Dr. rer. nat. Stephan Lingner has been the journal’s managing editor since volume four. Each volume consists of four issues of about 80 pages. Besides the “Original Papers” and book reviews, the journal offers a section called “Forum” consisting of shorter contributions as well as review articles on various publications. Additionally, some issues have a “Focus” section with contributions on a current key subject.

Overview of Articles

For an overview of articles go to:

www.springerlink.com/content/109376/

Selected topics from recent issues:

- The impact of current developments in the neurosciences on the concept of psychiatric diseases (Vol. 6, No. 1–4, 2009)
- Technoscience and technology assessment (Vol. 7, 2, 2010)

Imprint

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- Klaus Kornwachs, Brandenburgische Technische Universität Cottbus, Germany (Ethics of Science and Technology Assessment)
- Helga Kuhse, Monash University Clayton (Victoria), Australia (Bioethics and Medical Ethics)

- Bernd Lutterbeck, Technische Universität Berlin, Germany (Information Technology and Society)
- Peter Marburger, Universität Trier, Germany (Environmental and Technical Law)
- Jürgen Mittelstraß, Universität Konstanz, Germany (Philosophy and History of Science, Ethics)
- Edgar Morscher, Universität Salzburg, Austria (Ethics and Applied Philosophy)
- Herbert Paschen, Office of Technology Assessment at the German Parliament Berlin, Germany (Technology Assessment)
- Alain Pompidou, Cochin Port Royal Paris, France (Life Sciences and Bioethics)
- Jens G. Reich, Max-Delbrück-Center für Molekulare Medizin Berlin, Germany (Life Sciences and Bioethics)
- Warren T. Reich, Georgetown University, Washington D.C., USA (Bioethics and the History of Ideas)
- Josef Reiter, Johannes Gutenberg-Universität Mainz, Germany (Ethics)
- Erich Schweighofer, Universität Wien, Austria (Information Technology and International Law)
- Kristin Shrader-Frechette, University of Notre Dame (Indiana), USA (Environmental Ethics, Probabilistic Risk Assessment and Science Policy)
- Hans-Ludwig Schreiber, Universität Göttingen, Germany (BioLaw and Medical Law)
- Ruud Smits, Centre for Science and Innovationmanagement Utrecht, The Netherlands (Science Policy and Innovation Management)
- Gunther Tichy, Austrian Academy of Sciences Wien, Austria (Economics and Technology Assessment)
- Benedetto Vitiello, National Institute of Mental Health, Bethesda, M.D., USA (Psychopharmacology and Treatment Research)

Further Information and Online Ordering at www.springer.com

3.5 External Publications

Dorothee Dörr

“Quality of life judgements in geriatric intensive care”, in: *Journal für Anästhesie und Intensivbehandlung* 17(3)2010, Pabst Science Publishers, 37

Bert Droste-Franke

Together with H. Berg, A. Kötter, J. Krüger, K. Mause, J.-C. Pielow, I. Romey, T. Ziese-mer, “Brennstoffzellen und Virtuelle Kraftwerke. Energie-, umwelt- und technologiepolitische Aspekte einer effizienten Hausenergieversorgung”, Vol. 36 of the series “Ethics of Science and Technology Assessment”, ed. C. F. Gethmann, Berlin: Springer 2009

“Fuel Cell Heating Plants – Contributing to Future Viability of Energy Systems”, 10th IAEE Europe Conference: “Energy, Policies and Technologies for Sustainable Economies”, 7–10 September 2009, Online proceedings: <http://www.aee.at/2009-IAEE/details.php>

Margret Engelhard

“Neues Leben? Möglichkeiten und Herausforderungen der synthetischen Biologie”, in: *Die Politische Meinung*, 488 (6/2010), 31–35

Margret Engelhard/Kristin Hagen/Felix Thiele

R. Pardo, M. Engelhard, K. Hagen, R. B. Jørgensen, E. Rehbinder, A. Schnieke, M. Szmulewicz, F. Thiele, “The role of means and goals in technology acceptance. A differentiated landscape of public perceptions of pharming”, *EMBO reports*, Vol 10(10) 2009, 1069–75, Epub 2009 Sep 18

Thorsten Galert

“Wie mag Neuro-Enhancement Personen verändern?”, in: B. Schöne-Seifert, D. Talbot, U. Opolka, J. S. Ach (eds.) *Neuro-Enhancement. Ethik vor neuen Herausforderungen*, Paderborn: Mentis 2008, 159–187

Th. Galert, C. Bublitz, I. Heuser, R. Merkel, D. Repantis, B. Schöne-Seifert, D. Talbot, Das optimierte Gehirn. Ein Memorandum zu Chancen und Risiken des Neuroenhancements. *Gehirn&Geist* 11/2009, Spektrum der Wissenschaft Verlagsgesellschaft, 40–48

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Thorsten Galert. 2010. [Review] K. Lieb: “Hirndoping”, Mannheim: Artemis & Winkler 2010, in: *Gehirn&Geist* 7/8, 2010, 80–81

Thorsten Galert. 2010. [Review] H. Fink, R. Rosenzweig (eds.): “Künstliche Sinne, gedoptes Gehirn. Neurotechnik und Neuroethik”, Paderborn: Mentis 2010, in: *Gehirn&Geist* 11/2010, 79

Carl Friedrich Gethmann

“Wunscherfüllende Medizin?“, in: D. Grönemeyer, Dietrich, Th. Kobusch, H. Schott (eds.) *Gesundheit im Spiegel der Disziplinen, Epochen, Kulturen*, Tübingen: Niemeyer 2008, 333–343

“Das Ethos des Heilens und die Effizienz des Gesundheitssystems”, in: Th. Junginger/K.J. Lackner (eds.), *Medizin und Gewissen*, Mainz 2008, 117–134

“Professionelle Ethik und Bürgermoral. Zur Debatte um die ‚Bio-Politik‘“, in: Jan-Christoph Heilinger, Colin G. King, Héctor Wittwer (eds.), *Individualität und Selbstbestimmung* (Festschrift für Volker Gerhardt), Akademie-Verlag, Berlin 2009, 225–241

Interview “Philosophieren in der Krise”, in: *Spektrum der Wissenschaft* (August 2009), 72–76

“Wissenschaftliches Wissen und Politik”, in: *Die Politische Meinung* 55 (2010) 50–54

“Die Wissenschaft darf ihren Wahrheitsanspruch nicht aufgeben’. Wolfert von Rahden stellt Fragen zu Wissenschaft und Kunst”, in: *Gegenworte* 23 (2010) 1, 29–33

“Wissenschaft und Medien: ein prekäres Verhältnis”, Newsletter of the Europäische Akademie GmbH No 100, 8/2010

[Reprint] “Wunscherfüllende Medizin: Kontingenzbewältigung oder Kontingenzbeseitigung?”, in: Martin Momburg and Dietmar Schulte (eds.), *Das Verhältnis von Arzt und Patient. Wie menschlich ist die Medizin?* Paderborn: Fink, 2010, 233–245

“Die Aktualität des Methodischen Denkens”, in: Carl Friedrich Gethmann and Jürgen Mittelstraß (eds.), *Paul Lorenzen zu Ehren*, Konstanz: Universitätsverlag 2010, 11–33

“Menschsein Menschbleiben. Zur Grammatik askriptiver Äußerungsmodi”, in: Jörn Rüsen (ed.), *Perspektiven der Humanität. Menschsein im Diskurs der Disziplinen*, Bielefeld: transcript Verlag 2010, 41–58

“Die Sprache der Wissenschaft”, in: Berlin-Brandenburgische Akademie der Wissenschaften (ed.), *Wie viel Sprache(n) braucht die Wissenschaft? Wissenschaftliche Sitzung der Versammlung der Akademiemitglieder am 2.7.2010*, Berlin 2010, 44–50

Carl Friedrich Gethmann/Stephan Lingner

“‘Ambient Intelligence’ zwischen Entlastung, Selbstbestimmung und Vertrautheit. Ethische und anthropologische Aspekte”, in: Stephan Lingner, Bernd Lutterbeck, Frank Pallas (eds.), *Die Zukunft der Räume. Gesellschaftliche Fragen auf dem Weg zur ‘Ambient Intelligence’*, Graue Reihe of the Europäische Akademie Bad Neuenahr-Ahrweiler, vol. 50, 2010, 23–30

Ulrike Henckel

Together with Thomas Engel: “Menschenbilder in Philosophie und Technik”, in: Michael Bölker, Mathias Gutmann, Wolfgang Hesse (eds.), *Menschenbilder und Metaphern im Informationszeitalter*, Berlin: Springer 2010, 237–261

Georg Kamp

“‘Handlung = Körperbewegung plus x’. Kritik einer handlungstheoretischen Präsupposition”, in: Georg Kamp und Felix Thiele (eds.) *Erkennen und Handeln. Festschrift für Carl Friedrich Gethmann zum 65. Geburtstag*, Fink: München 2009, 63–73

“Radioaktive Abfälle – Technische und normative Aspekte ihrer Entsorgung”, in: *Technikfolgenabschätzung – Theorie und Praxis (TATuP)*, Focus “Converging Technologies”, 18 (2), 9/2010, Institut für Technikfolgenabschätzung und Systemanalyse (ITAS), 74–77

Georg Kamp/Felix Thiele

(Eds.) *Erkennen und Handeln, Festschrift für Carl Friedrich Gethmann zum 65. Geburtstag*, Fink: München 2009, 63–73

Ruth Klüser

“Current changes for efficient electricity grids”, in: *Poiesis & Praxis*, Volume 6(3), Springer 2009, 265–271

“Degussa”, in: David H. Guston (ed), *Encyclopedia of Nanoscience and Society*, Thousand Oaks, CA: SAGE Publications, 2010, 141–142

“Federal Agency for Occupational Health (Germany)”, in: David H. Guston (ed) *Encyclopedia of Nanoscience and Society*, Thousand Oaks, CA: SAGE Publications, 2010, 233–234

Stephan Lingner

Together with Wolfgang Rathgeber (eds.) *Globale Fernerkundungssysteme und Sicherheit. Beiträge durch neue Sicherheitsdienstleistungen?*, Graue Reihe No 49, Europäische Akademie Bad Neuenahr-Ahrweiler, 6/2009

“Klimawandel – eine unbequeme Wahrheit? Die Perspektive der Technikfolgenbeurteilung”, in: Georg Kamp und Felix Thiele (eds.) *Erkennen und Handeln*.

Festschrift für Carl Friedrich Gethmann zum 65. Geburtstag, Fink: München 2009, 481–496

Book Review: “Ortwin Renn, Pia-Johanna Schweizer, Marion Dreyer, Andreas Klinke: Risiko. Über den gesellschaftlichen Umgang mit Unsicherheit”, in: *Poiesis & Praxis*, Volume 6(3/4), Springer 2009, 273–276

“Asbestos”, in: David H. Guston (ed) *Encyclopedia of Nanoscience and Society*, Thousand Oaks, CA: SAGE Publications, 2010, 31–32

“Climate Change”, in: David H. Guston (ed) *Encyclopedia of Nanoscience and Society*, Thousand Oaks, CA: SAGE Publications, 2010, 92–96

“Rationale Technikfolgenbeurteilung. Ein deliberativer TA-Ansatz im Kontext von Technology Governance”, in: G. Aichholzer et al. (eds) *Technology Governance. Der Beitrag der Technikfolgenabschätzung*. Edition Sigma Berlin 2010

Katharina Mader/Georg Kamp

“Die Ethisierung der Technik und ihre Bedeutung für die Technikfolgenabschätzung. 10. Österreichische TA-Konferenz, 31.Mai–1. Juni 2010“, in: *Technikfolgenabschätzung – Theorie und Praxis*, 19 (2), 7/2010, 101–104

Felix Thiele

“Zum Verhältnis von theoretischer und angewandter Ethik”, in: Georg Kamp und Felix Thiele (eds.) *Erkennen und Handeln. Festschrift für Carl Friedrich Gethmann zum 65. Geburtstag*, Fink: München 2009, 329–345

[Review] R. Merkel: “Willensfreiheit und rechtliche Schuld”, *Ethical Theory and Moral Practice*, 12/2009, 575–576

Together with R. Pardo Avellaneda, M. Engelhard, K. Hagen, R. B. Jørgensen, E. Reh binder, A. Schnieke “The role of means and goals in technology acceptance. A differentiated landscape of public perceptions of pharming”, *EMBO reports* Vol 10, no 10, 2009, 1069–1075

“Krankheit”, in: Mittelstraß (ed.) Enzyklopädie Philosophie und Wissenschaftstheorie, 2. ed., Vol. 4, 2010, 382

“Aktive und passive Sterbehilfe. Medizinische, rechtswissenschaftliche und philosophische Aspekte”, Fink, München, 2. überarbeitete und erweiterte Auflage 2010

4 Lectures

Dorothee Dörr

17/9/2010

“Lebensqualität in der Intensivmedizin?”

Poster-Presentation, 12th Capital City Conference of the German Society of Anesthesiology and Intensive Care Medicine, ICC Berlin

24/9/2010

“Quality of life judgements in geriatric intensiv care”

International Conference “Ethics for an Ageing World”, University of Greifswald, Maritim Usedom

2/12/2010

“Ethische Aspekte der Lebensqualitätsbewertung in der Intensivmedizin”

Poster presentation, 10th Congress of the “Deutsche Interdisziplinäre Vereinigung für Intensivmedizin und Notfallmedizin”, Congresscenter Hamburg

Bert Droste-Franke

23/10/2009

“Interdisziplinäre Aspekte von Netzdienstleistungen durch Mikro-KWK und andere dezentrale Stromerzeuger”

Workshop “Dezentrale Netzstützung”, Energie-Forschungszentrum Niedersachsen, Goslar

9/6/2010

“Energy related projects at the Europäische Akademie GmbH”

Kick-off Meeting, IEA ECES, Annex 26, Fraunhofer UMSICHT, Oberhausen

25/6/2010

“Welche Energietechnologien sind langfristig nutzbar?”

Bonn Science Night 2010

30/10/2010

“Energiespeicher für die Integration erneuerbarer Energien in die Stromversorgung”

Forum at the Ahrtalschau 2010, Bad Neuenahr-Ahrweiler

22/11/2010

“Zusammenfassung und Schlussfolgerungen zu den vorgestellten Studien zum Speicherbedarf”

5th International Renewable Energy Storage Conference (IRES 2010), Berlin

25/11/2010

“Systemanalytische Elemente in der Projektgruppe der Europäischen Akademie zur Untersuchung von Ausgleichsstrategien für die Integration erneuerbarer Energien in die Stromversorgung”

Systemic Reflection of Innovation – Technology Assessment in Shaping Technology, 4th Conference of the “Network Technology Assessment” (NTA4), Berlin

Margret Engelhard

27/5/2010

“Synthetische Biologie? Chancen und Risiken einer neuen Technologie”

Ringvorlesung Ledomo des Fachbereichs Agrarwissenschaften, Universität Kassel

25/6/2010

“Synthetische Biologie: Leben aus dem Reagenzglas?”

Bonn Science Night 2010

18/9/2010

“Ethical challenges of synthetic biology”

Congress of the European Society for Agriculture and Food Ethics, Bilbao, Spain

28/9/2010

“Die synthetische Biologie geht weit über die klassische Gentechnik hinaus”

Tagung “Was ist Leben im Zeitalter seiner technischen Machbarkeit?”, Philipps-Universität Marburg

Thorsten Galert

21/1/2009

“Durch Pillen zu mehr Scharf- und Frohsinn? Ethische Probleme des Neuroenhancements”, Interdisziplinäres Diskussionsforum Fachschaft I/1, RWTH Aachen

3/6/2009

“Ethische Probleme des pharmazeutischen Neuroenhancements”
Wissenschaftliches Kolloquium der Klinik und Hochschulambulanz für Psychiatrie und Psychotherapie, Charité – Campus Benjamin Franklin, Universitätsmedizin Berlin

26/9/2009

“Pharmaceutical neuroenhancement and the ideal of authenticity”
Konferenz “Brain Matters: New Directions in Neuroethics”, Halifax/Kanada

2/12/2009

“Hirndoping für alle? Auf dem Weg zur grenzenlosen Leistungsgesellschaft”
Vorlesungsreihe am Haus der Wissenschaft, “Tatsachen? Forschung unter der Lupe”, Helmholtz-Zentrum für Infektionsforschung, Braunschweig

19/1/2010

“Das Gehirn mit Pillen optimieren? Ethische Probleme des Neuro-Enhancements”
FDP-Bürgerforum Otterndorf

5/5/2010

“Gehirndoping – Das optimierte Gehirn”
Vorwärtsdenker – Zukunft hat Gesichter, Radisson Blu Media Harbour Hotel, Düsseldorf

6/5/2010

“Das künstliche Genie? Muss ich bald mein Gehirn dopen, um in der Gesellschaft zu bestehen?”
Junior Science Café, Gutenberg-Gymnasium, Bergheim

8/5/2010

“Das Gehirn mit Pillen optimieren? Die Debatte zum pharmazeutischen Neuro-Enhancement”, Studienförderwerk der Stiftung der Deutschen Wirtschaft, Brain Products GmbH, Knowledge Media Research Center (Institut für Wissensmedien), Tübingen

4/6/2010

“Psychostimulanzien für die Leistungsgesellschaft – Ethische Probleme des Neuro-Enhancements”
Pharmacon, Bundesapothekerkammer, Meran, Italien

16/6/2010

“Die Bedeutung des Authentizitätsbegriffs für die Ethik des Neuroenhancements”
Advanced seminar for degree candidates (Oberseminar, Universitätsprofessor Dr. Dr. h.c. Carl Friedrich Gethmann), Universität Duisburg-Essen

16/7/2010

“Neuroenhancement als Eingriff in die Persönlichkeit”
Expert Workshop “Hirndoping und Neuroenhancement – Möglichkeiten und Grenzen”, Faculty of Law, University of Augsburg

24/8/2010

“Zwischen Therapie und Optimierung des Gehirns. Potenziale und Risiken der pharmazeutischen Steigerung”
Summer Academy, Europäisches Zentrum für Universitäre Studien der Senioren, Bad Meinberg

28/8/2010

“Pharmazeutisches Neuro-Enhancement – soziale, ethische und philosophische Aspekte”
8th Hansesymposium “Zukunft der Psychiatrie. Psychiatrie der Zukunft”, Rosstock-Warnemünde

22/10/2010

“Doping fürs Gehirn – Neuro-Enhancement als neue ethische Herausforderung”
5th Ambulance Day, AstraZeneca, Frankfurt

9/11/2010

“Neuro-Enhancement als Herausforderung der Selbstbestimmung”
DHS-Expert conference, Essen

22/11/2010

“Potentiale und Risiken des pharmazeutischen Enhancements psychischer Eigenschaften”, Statusseminar of the German Ministry of Education and Research on “Bioethik”, Berlin

26/11/2010

“Neuroenhancement – Ethische Implikationen”
DGPPN-Kongress 2010 (German Association of Psychiatry and Psychotherapy), Berlin

Carl Friedrich Gethmann

15/1/2009

“Der Mensch handelt mittels seines Gehirns (und nicht dieses in ihm). Sprachpragmatische Überlegungen zu einigen Amphibolien in der gegenwärtigen Diskussion”
ETHOS. Mariazeller Dialog 2009 “Gehirnforschung und Ethik”, Mariazell, Austria

9/2/2009

“Was definiert Europa? Eurozentrismus und abendländisches Vernunftprojekt”
Reflex. Stiftung Philosophie zur Zeit, Hannover

2/4/2009

“Die Rolle der Bioethik in der interdisziplinären Forschung”
Conference “Integrative Bioethik”, Ruhr-Universität Bochum

24/4/2009

“Ethical Problems of the Disposition of Radioactive Waste”
Interdisciplinary project group “Radioactive Waste. Technical and Normative Aspects of its Disposal”, Berlin

29/4/2009

“The Human Genome as a Fact and a Task”

Ethics programme, Universität Oslo

11/5/2009

“Der ‘Geist’ der Geisteswissenschaften”

Symposium in honour of Professor Dr. Dr. Alfons Labisch: “Vom Nutzen der Wissenschaft für das Leben: Lebens-Wissenschaften”, Heinrich-Heine-Universität Düsseldorf

15/5/2009

“Die Verfasstheit der Deutschen Universität”

Sächsische Akademie der Wissenschaften, Akademieforum „Bologna-Prozess in der Krise”, Leipzig

18/6/2009

“Freiheit oder Handlungsurheberschaft. Überlegungen zu einer Problemsubstitution”

Conference “Freiheit und Bildung. Schellings Freiheitsschrift 1809–2009”, Pädagogische Hochschule Weingarten

4/7/2009

“Wissenschaftliche Gesellschaftsberatung, interdisziplinäre Forschung und die Rolle der Philosophie”

Symposium “Philosophie und politisches Handeln”, Universität Bamberg

3/9/2009

“Qualitätssicherung in der transdisziplinären Forschung”

Workshop “Transdiss-Projekt Netzwerk Technikfolgenabschätzung”, Bad Neuenahr-Ahrweiler

21/9/2009

“Die Aktualität des Methodischen Denkens”

Ceremonial lecture on the occasion of the foundation of the Paul-Lorenzen-Stiftung, Universität Konstanz

24/9/2009

“Lebensweltliche Grundlagen einer Ethik technischen Handelns”

Opening lecture at the German-Hungarian Conference “Lebenswelt und Technik. Ein deutschungarischer Dialog zur Philosophie der Technik”, University of Debrecen/Ungarn

15/10/2009

“Substantialistischer vs. prozeduralistischer Würdebegriff”

Conference “Neue Methoden der Medizin und ihre ethischen Implikationen”, Zentrum für Interdisziplinäre Forschung (ZIF), Bielefeld

30/10/2009

“Bewusstsein als Sprache”

Public conference “Die Herausforderung der Neurowissenschaften – Ein interdisziplinärer Dialog”, Nordrhein-Westfälische Akademie der Wissenschaften und Künste, Düsseldorf

24/11/2009

“Wissen und Macht – und die akademische Bildung”

Fachschaft “Lehramt” (student council), Universität Mainz

4/12/2009

“Gibt es ein moralisches Recht auf Mobilität und wo sind seine Grenzen?”

Symposium “Zehn Jahre Forschungsverbund Leiser Verkehr”, BBAW Berlin

28/1/2010

“Klimaforschung und Klimapolitik”

Conference “Energie – Klima – Marktwirtschaft”, Fachhochschule Düsseldorf

27/1/2010

“Handeln als Wirkung von Ursachen und als Mittel zum Zweck. Zum Rationalitätsverständnis der praktischen Wissenschaften”

Colloquium “Methoden konstruktionsorientierter Forschung”, Universität Duisburg-Essen, Essen

9/2/2010

“Ethische Grundlagen der Regeln guter Praxis”

Forum for Ph.D. students, Universität Duisburg-Essen, Duisburg

29/3/2010

“Wissenschaftlicher Umgang mit Nichtwissen aus ethischer Sicht”

Deutsche Akademie der Technikwissenschaften (acatech) und Berlin-Brandenburgische Akademie der Wissenschaften, Berlin

31/5/2010

“Leben: Die Tragweite der Biologie”

Philosophie kontrovers, Universität zu Köln

10/6/2010

“Die Aktualität der Phänomenologie. Überlegungen zur De-Naturalisierung und De-Mentalisierung der transzendentalen Subjektivität”

Antrittsvorlesung zur Honorarprofessur an der Universität zu Köln

11/6/2010

“Das menschliche Genom als Vorgabe und Aufgabe”

Konferenz “Jenseits des Menschen”, Zentrum für interdisziplinäre Forschung, Universität Bielefeld

21/6/2010

“Die ethischen Präsuppositionen der Technikfolgenabschätzung. Ein Revanchefoul”

Colloquium on the occasion of the 50th Geburtstags of Universitätsprofessor Dr. rer. nat. Armin Grunwald (Karlsruhe Institute of Technology, KIT)

22/6/2010

“Gibt es ein Recht auf Mobilität?”

PRO Flughafen e.V., Frankfurt am Main

2/7/2010

“Die Sprache der Wissenschaft”

Assembly of the Berlin-Brandenburgische Akademie der Wissenschaften, Berlin

12/8/2010

“Vom Feuerstein zum Antimaterie-Reaktor? – Energienutzung im Wandel der Zeit”
Wissenschaft im Dialog, Duisburg

10/9/2010

“Partizipation in der interdisziplinären Forschung?”
Project group “Interdisciplinary research and transdisciplinary claims of validity”,
Europäische Akademie GmbH, Bad Neuenahr-Ahrweiler

21/9/2010

“Die Krise des Wissenschaftsethos und die Regeln guter wissenschaftlicher Praxis”
ProFor (Promovierendenforum), Universität Duisburg-Essen, Duisburg

22/9/2010

“90 Jahre VGB – Praktische Vernunft in einer technischen Kultur”
Lecture at the opening of the VGB-congress “Kraftwerke 2010”, Essen

29/9/2010

“Ist Vorsorge immer besser als Nachsorge? Ethische Überlegungen”
Lecture at the opening of the 7th conference “Deutsche Vereinte Gesellschaft für
Klinische Chemie und Laboratoriumsmedizin” (DGKL), Mannheim

5/10/2010

“Ethische Fragen der Langzeitverantwortung im Zusammenhang mit der
Entsorgung radioaktiver Abfälle”
Foundation Brandenburger Tor, Berlin

7/10/2010

“Was sind und zu welchem Ende braucht man wissenschaftliche Disziplinen, und
warum muss man ihre Grenzen überschreiten und in welche Richtungen sollte
man das unter welchen Bedingungen tun?”
Autumn Conference of the Europäische Akademie GmbH, 10/2010, Academy of
Sciences and Literature, Mainz

19/10/2010

“Geprüfte Sicherheit. Von den Möglichkeiten und Grenzen der Reproduktionstechnologien”

Interview, Radio Bremen

25/10/2010

“Gastfreundschaft als Topos eines universellen Ethos”

Ceremonial lecture: 100 years Privat-Hotel Aurora, Bad Neuenahr-Ahrweiler

25/11/2010

“Die Erkundung des Weltraums als Kulturaufgabe”

Symposium “Planetenforschung und bemannte Raumfahrt unter philosophischen und kulturellen Aspekten”, Spree-Athen e.V., Berlin

Ulrike Henckel

24/6/2010

“Darf man Selbstmord verbieten?”

Bonn Science Night 2010

Georg Kamp

8/10/2010

“Vom Ende her gedacht. Beratung als Produkt interdisziplinärer Forschung”

Autumn Conference of the Europäische Akademie GmbH, 10/2010, Academy of Sciences and Literature, Mainz

3/11/2010

“Langfristige Planung. Die Bedeutung kognitiver und sozialer Ressourcen für nachhaltiges Wirtschaften”

Project presentation at the kick-off meeting “Wirtschaftswissenschaften für Nachhaltigkeit”, Berlin

Ruth Klüser

25/11/2010

“Neue Strukturen im Energiebereich – neue Herausforderungen für elektrische Hochspannungsnetze”

Systemic Reflection of Innovation – Technology Assessment in Shaping Technology, 4th Conference of the “Network Technology Assessment” (NTA4), Berlin

Stephan Lingner

7/5/2009

“Internationale Herausforderungen an Logistikunternehmen – (auch) eine Frage des Klimawandels? ”

International week at the RheinAhrCampus Remagen, 4–8 May 2009

12/11/2009

“Space technology as an identity-shaping tool? The societal view”

Conference “European Identity through Space”, 12.11.–13.11.2009, European Space Policy Institute, Wien

19/11/2009

“Ethische und anthropologische Aspekte von Ambient Intelligence”

Workshop „Die Zukunft der Räume. Gesellschaftliche Fragen auf dem Weg zur ‚Ambient Intelligence‘”, 19–20 November 2009, Europäische Akademie, Bad Neuenahr-Ahrweiler

12/1/2010

“Bemannte Raumfahrt – zu abgehoben, zu teuer?”

Museum für Naturkunde, Humboldt-Universität zu Berlin

12/5/2010

“Was hat der Mensch im All zu suchen? Rechtfertigungsprobleme bemannter Raumfahrt”

Institute of Planetology, Universität Münster

7/10/2010

“Einführung: Interdisziplinäre Forschung zwischen gesellschaftlicher Erwartung

und wissenschaftlichem Geltungsanspruch”, Autumn Conference 2010 of the Europäische Akademie, 7–8 October 2010, Akademie der Wissenschaften und der Literatur, Mainz

10/12/2010

“Elektromobil in die Zukunft? Chancen und Probleme”

Workshop zum Tag der Energie und Menschenrechte, Gutenberg-Gymnasium Bergheim

Katja Stoppenbrink

3/4/2009

“Das Gewissen im Recht. Die Gewissensfreiheit als rechtliche Strategie zur Lösung moralischer Konflikte mit dem Recht?”

16th annual conference “Junges Forum Rechtsphilosophie”: “Konflikte im Recht – das Recht der Konflikte”, 3–4 April 2009, Göttingen

8/6/2009

“Wann Ethik? Überlegungen zu Zeitpunkt und Möglichkeit ethischer Reflexion im Zeitalter antizipatorischer TA”

9th Austrian TA-Conference “TA ‘09 – Wann TA? Technikfolgenabschätzung im Zeitalter der Technowissenschaften”, Wien

Felix Thiele

1/10/2009

“Ethics and Scientific Policy Consulting”

“Philosophy of Science in Use”, European Science Foundation Conference, 28/9–2/10/2009, Linköping, Schweden

15/10/2009

“Introductory Comments on Human Dignity in Bioethics”

Opening conference of the research group “Challenges to the Image of Humanity and Human Dignity by New Developments in Medical Technology” (Thiele is coordinator of the group), 15–17 October 2009, ZiF, Bielefeld

8/12/2009

“Clinical Research in Vulnerable Populations. Moral Considerations”

Project group of the academy “Clinical Research in Vulnerable Populations”, 7–8 December 2009, Berlin-Brandenburgische Akademie der Wissenschaften, Berlin

12/1/2010

“The Function of Dignity in Bioethics Discourse”, ZiF, Bielefeld

3/6/2010

“Güterabwägung bei Tierversuchen”

Workshop (Eidgenössische Technische Hochschule and University of Zurich), 2–3 June 2010, Zurich

12/6/2010

“Gene, Glaube, gute Sitten. Wie sollen die Grenzen elterlicher Einflussnahme gezogen werden?” Workshop by the research group “Challenges to the Image of Humanity and Human Dignity by New Developments in Medical Technology”, Centre for Interdisciplinary Research (ZiF), University of Bielefeld, 12/6–13/6/2010

17/6/2010

“Menschenwürde und Medizin”

9. Dreiländertagung DGEM, AKE & GESKES, “Ernährung 2010. Mitten in der Medizin”, 17/6–19/6/2010, Leipzig

7/9/2010

“Nanotechnology for medicine. Ethical considerations”

1st Summer School, Project group “NanoDiaRA”, 6/9–10/9/2010, Lausanne

16/9/2010

“Animal ethics: science and the public”

“Large animal models for biomedicine”, 2nd international workshop, Fundación BBVA, Madrid

5 Teaching Activities

Carl Friedrich Gethmann

Universität Duisburg-Essen, Institut für Philosophie

SS 2009

V Einführung in die Wissenschaftstheorie der Geisteswissenschaften

OS Askriptivismus (mit B. Gräfrath)

WS 2009/2010

V Einführung in die Angewandte Ethik: Technikethik

OS Planungstheorie

SS 2010

V Aktuelle Fragen der Medizinethik

OS Leben

WS2010/2011

V Einführung in die Angewandte Ethik: Technikethik

OS Phänomenologie

Post Graduate Master Study Programme in Medical Ethics

23.1.–24.1.2009

Medizin und Menschenbild, Modul II, Bad Neuenahr-Ahrweiler

24.4.–25.4.2009

Menschliche Grenzerfahrungen und Strukturprobleme des Gesundheitssystems, Modul IV, Bad Neuenahr-Ahrweiler

8.5.–9.5.2009

Ethische und wissenschaftstheoretische Grundlagen der modernen Medizin, Modul I, Bad Neuenahr-Ahrweiler

12.6.–13.6.2009

Medizin und Menschenbild, Modul II, Bad Neuenahr-Ahrweiler

17.7.–18.7.2009

Transplantationsmedizin, Modul VII, Mainz

16.10.–17.10.2009

Ethische und wissenschaftstheoretische Grundlagen der modernen Medizin,
Modul I, Bad Neuenahr-Ahrweiler

6.11.–7.11.2009

Medizin und Menschenbild, Modul II, Bad Neuenahr

5.2.–6.2.2010

Transplantationsmedizin, Modul VII, Mainz

23.4.–24.4.2010

Ethische und wissenschaftstheoretische Grundlagen der modernen Medizin,
Modul I, Bad Neuenahr-Ahrweiler

7.5.–8.5.2010

Medizin und “Menschenbild”, Modul II, Bad Neuenahr-Ahrweiler

11.6.–12.6.2010

Menschliche Grenzerfahrungen und Strukturprobleme des Gesundheitssystems,
Modul IV, Bad Neuenahr-Ahrweiler

Georg Kamp

Universität Duisburg Essen, Institut für Philosophie

WS 2008/2009

Vertiefungskurs Hermeneutik

SS 2009

S Vertiefungskurs: Ethik

WS 2009/2010

S Klassische Texte der Handlungstheorie

S Vertiefungskurs Ethik: Langzeitverantwortung

SS 2010

S Rationalität – normativ und deskriptiv

Felix Thiele

Universität Duisburg-Essen, Institut für Philosophie

WS 2008/2009

S Klassiker des Liberalismus

SS 2009

VS Einführung in die angewandte Ethik. Gerechtigkeit im Gesundheitswesen

S Forschung am Menschen

Post Graduate Master Study Programme in Medical Ethics

(Membership Scientific Advisory Board and Steering Committee)

23.1.–24.1.2009

Medizin und Menschenbild, Modul II, Bad Neuenahr-Ahrweiler

24.4.–25.4.2009

Menschliche Grenzerfahrungen und Strukturprobleme des Gesundheitssystems,
Modul IV, Bad Neuenahr-Ahrweiler

8.5.–9.5.2009

Ethische und wissenschaftstheoretische Grundlagen der modernen Medizin,
Modul I, Bad Neuenahr-Ahrweiler

12.6.–13.6.2009

Medizin und Menschenbild, Modul II, Bad Neuenahr-Ahrweiler

6.11.–7.11.2009

Medizin und Menschenbild, Modul II, Bad Neuenahr-Ahrweiler

15.1.–16.1.2010

Menschliche Grenzerfahrungen und Strukturprobleme des Gesundheitssystems,
Modul IV, Bad Neuenahr-Ahrweiler

23.1.–24.1.2010

Medizin und “Menschenbild”, Modul II, Bad Neuenahr-Ahrweiler

23.4.–24.4.2010

Ethische und wissenschaftstheoretische Grundlagen der modernen Medizin,
Modul I, Bad Neuenahr-Ahrweiler

7.5.–8.5.2010

Medizin und “Menschenbild”, Modul II, Bad Neuenahr-Ahrweiler

6 Qualification Plan

6.1 Habilitation

Georg Kamp

Normative Instrumentalism. A Language Philosophical Critique of Practical Reasoning

This project undertakes an analysis of those speech acts that constitute rational practical discourses. Discourses are to be called practical insofar they are targeted on being effective for the action planning of oneself or others (postulate of practical effectiveness). They are to be called rational insofar their effectiveness should depend only on the successive and rule-conform establishing of arguments (postulate of rationality). With the Tradition of the enlightenment it will be supposed, that the participants of such discourses ascribe to each other no more epistemic competences as they are disposed to ascribe to themselves (postulate of epistemic symmetry). It will be shown, that rational practical discourses that comply with these postulates will always have the interests of its participants as one of its issues. They therefore have the form of counselling and negotiation. This leads to a conciliatory understanding of ethics that does not aim to absolute justifications of categorical norms, but to interest-relative and therefore instrumental justifications of weakly regulating speech acts such as recommendations and suggestions.

Felix Thiele

Priv.-Doz. Dr. med. Felix Thiele, M.Sc., worked out a study on autonomy and informed consent. The habilitation procedure was successfully finished in early 2009: "Autonomie und Einwilligung. Eine moralphilosophische Rekonstruktion", mentis, Paderborn, in print

6.2 Doctoral Projects

Jan Bollinger

Transformational Leadership and Interim Management

Globalisation and dynamic change are the main drivers of economy in the 21st century. To be successful in this environment, business companies must adapt to its development. On the organisational level, companies need to manage change processes and utilise their resources in an efficient and flexible way. Interim Management (i.e. the ex ante temporary assignment of an executive manager specifically for the task and with the authority to manage a period of transition, crisis or change within an organisation) has proven to be an effective tool for planning and managing fundamental change in organisations successfully. The most important obstacle to organisational change is that it is often perceived as a threat by the employees of the organisations, resulting in loss of motivation and performance and even active resistance against necessary changes. The theory of transformational leadership postulates that leaders may influence their followers' values, attitudes and behaviour and thereby increase their work motivation and performance by using a combination of inspirational leadership and external rewards. The dissertation thesis analyses the correlation of transformational leadership and organisational success in the Interim Management context.

This dissertation project is conducted at the Universität Kassel under the supervision of Professor Dr. rer. pol. habil. Hans G. Nutzinger in cooperation with Professor Dr.-Ing. Jacques J. A. M. Reijniers of the Nyenrode Business University.

Ulrike Henckel

Anthropological Basics of Medical Ethics

The goal of the study is to provide a reasonable understanding of the human being for handling suicide, especially in the field of psychiatry. One precondition is that the human is defined as an autonomous being. The theme is dealt with by allocating suicide to various mental states of the disease and by analysing a general term of the disease applicable to psychiatry. In order to take the two possibilities of understanding suicide both as a disease and as free will as a basis, the next step is to find an anthropological fundamental theory permitting that the human being is identified as an acting being. This is being attempted on the basis of analysing anthropological

theories that are to be examined as to whether they define the human as an acting being in order to be able to handle and treat the suicidal person in a way that suicide can be regarded both as free will or as a disease.

This dissertation project is supervised by Professor Dr. phil. Dr. phil. nat. Mathias Gutmann.

Katja Stoppenbrink

Unintentional Actions? Foundations of Negligence in Action Theory and Philosophy of Law

Legally, we are not only responsible for intentional or wilful actions but, under certain conditions, also for unintentional or negligent actions. However, it is questionable as to why an unintentional action is ethically and legally relevant. The aim of this thesis is to clarify how we are to understand negligent actions. I will thus ask whether it makes any sense to speak about “negligent actions” (cf. § 15 of the federal German criminal code) in the first place. The point of departure is the discussion among legal scholars and philosophers of law on the appropriate explication of liability for negligence in tort law. Depending on whether its function is regarded as fault-based liability, compensation for damage or prevention of loss, the concept of negligence is construed in a different way. Another fundamental problem in law is whether, and in what respect the structure of negligent actions in criminal law coincides with their structure in tort law. Based upon a systematic clarification of the positions and arguments put forward in this debate, I will propose an analysis of the structure of negligent actions grounded in philosophical action theory. A central question is the delimitation of negligent actions and omissions. Furthermore, I will examine the relevance of the moral philosophical doctrine of double effect for the ethical and legal evaluation of negligence. The aim is to develop a conception of negligence which can adequately explicate liability for negligence in tort law. This dissertation project by Katja Stoppenbrink, LL.M., M.A., is conducted at the Universität zu Köln under the supervision of Professor Dr. phil. Michael Quante (Philosophisches Seminar).

7 Research Fellowship Programme

The Europäische Akademie Bad Neuenahr-Ahrweiler GmbH deals with the scientific study of the consequences of scientific and technological advances for individuals, society and for the natural environment. The main focus is on the examination of foreseeable mid- and long-term processes that are specifically influenced by the natural and engineering sciences and the medical disciplines. As an independent scientific institution, the Europäische Akademie pursues a dialogue with the world of politics and society at large. The work of the Europäische Akademie is mainly conducted by temporary interdisciplinary project groups. The resulting analyses and recommendations are addressed to the members of the relevant scientific disciplines and political authorities in the fields of science and technology and to the public. As guest fellows, highly qualified researchers from European countries may make use of the Europäische Akademie's infrastructure and network to carry out a project that fits in with our research programme. The work can range from completion of ongoing work to the preparation of new projects. Guest fellows can be self-funded or apply for (partial) funding from the Europäische Akademie. Typically, guest fellows stay for a period of one to six months.

In 2009 the Europäische Akademie invited one scientist as research fellow:

- July 2009–August 2009: Professor Doris Schröder, Ph.D. (University Lancashire, Preston, Great Britain and University of Melbourne, Australia)

Contact: Kristin Hagen, Ph.D.

kristin.hagen(at)ea-aw.de

8 Colloquiums of the Academy

20.7.2009

Professor Doris Schröder, Ph.D. (University of Central Lancashire, England, and University of Melbourne, Australia), and Roger Chennells, LL.M. (Chennells Albertyn, Stellenbosch and Cape Town, South Africa):

“Equity in Governance – Challenges for Indigenous Peoples’ Trusts”

9 Scientific Cooperation

The cooperation between the Europäische Akademie and other scientific institutions is implemented especially within the interdisciplinary working groups. As a result of these cooperations, several conferences have been organised together with other scientific institutions. Further cooperations are described in the following.

9.1 Institutional Collaboration

Berlin-Brandenburgische Akademie der Wissenschaften (BBAW)

“Zukunftsorientierte Nutzung ländlicher Räume” (2004–2007; completed), Deputy Project Co-ordination: Professor Dr. Dr.h.c. Carl Friedrich Gethmann
“Globaler Wandel – Regionale Entwicklung” (since 1/2008), Project Member: Professor Dr. Dr.h.c. Carl Friedrich Gethmann

“Clinical Research in Vulnerable Populations” (since 12/2008), Speaker: Professor Dr. Dr. h.c. Carl Friedrich Gethmann; Project Member: Priv.-Doz. Dr. med. Felix Thiele, M.Sc.

Post Graduate Master Study Programme in Medical Ethics

Since October 2008 the “Advanced Master’s Degree Course in Medical Ethics”, so far offered at the FernUniversität in Hagen, continues at the Institute of History, Theory, and Ethics in Medicine at the Johannes Gutenberg-Universität Mainz in cooperation with the Europäische Akademie GmbH. The latter contributes to the course in medical ethics by providing teaching material originating in various interdisciplinary studies resulting from the work of its project groups (see section 2.1 for further information).

Bundesamt für Straßenwesen (BASt)

The Europäische Akademie evaluates the ongoing research process within BASt’s joint project “SKRIBT” (Protection of Crucial Bridges and Tunnels of Road Traffic).

Deutsche Akademie der Technikwissenschaften (acatech)

Dr. Stephan Lingner is member of the academy’s working group “Akzeptanz von Schlüsseltechnologien” (acceptance of key technologies) which drafted a

corresponding dossier on July 2010 towards the innovation dialogue between the federal government, the German economy and the national science system.

9.2 Memberships in Networks

- American Association for the Advancement of Science (AAAS)
- Deutsches Netzwerk Wirtschaftsethik (dnwe)/European Business Ethics Network (EBEN)
- European Association of the Study of Science and Technology (EASST)
- European Ethics Network
- European Society for Philosophy of Medicine and Health Care (ESPMH)
- International Association of Bioethics (IAB)
- Netzwerk TA (NTA); the Europäische Akademie is also represented in NTA's Co-ordination Team by Dr. rer. nat. Stephan Lingner
- Deutsche Gesellschaft für Luft- und Raumfahrt (DGLR)
- ESPRAN: European Space Policy Research and Academic Network (Vienna)

10 Regional Activities

10.1 Sponsors' Club

The sponsors' club (Verein der Förderer) was founded on 15th November 2001 by companies and citizens of the county Ahrweiler in order to support the Europäische Akademie in scientific and regional activities. To this end, the 36 members of the association support science in the field of ethics and technology assessment and maintain close contact with the regional economy and organisations. Other regional activities are the permanent art exhibitions which are shown within the rooms of the Europäische Akademie and the workshops of the working group "Medical Ethics" ("Arbeitskreis Medizinethik"). In summary, the tasks of the sponsors' club are concentrated on three main fields: Science, Economy, Art.

10.1.1 Working Group "Medical Ethics"

At the suggestion of medical professionals from the Ahr Valley and its neighbouring region, the Europäische Akademie's Sponsors' Club founded a working group on Medical Ethics (Arbeitskreis Medizinethik) in 1998; the academy has thus strengthened its regional activities. The working group's members are medical doctors and other health professionals from the greater Bonn and Ahr Valley area. As part of the working group, the Europäische Akademie hosts regular lectures and debates with external speakers and members of the academy. It thus offers a platform for an exchange of ideas between practising doctors and experts from science and politics. It is the goal of the working group to stimulate discussions about current issues in medical ethics and health law, to transfer current knowledge in the field, as well as to assess concepts of medical ethics in practice by including the participants' experience when developing new concepts.

14.10.2010

Die Patientenverfügung aus verfassungsrechtlicher Sicht

Priv.-Doz. Dr. jur. Dr. rer. pol. Tade Matthias Spranger

21.4.2010

Technological development in medicine. Ethical implications of withholding treatment
Dr. Dorothee Dörr

11.11.2009

Baby drop-off boxes and anonymous births: Protection of life by anonymity?
The anonymous drop-off of children in conflict with the rights of children, mothers
and fathers
Dr. jur. Stephanie Wiesner-Berg

31.8.2009

Medical research in developing countries
Professor Doris Schröder, Ph.D.

11.5.2009

Was spricht gegen Hirndoping?
Ethische Probleme des pharmazeutischen Neuroenhancements
Dr. Thorsten Galert

10.1.2 Art Exhibitions

2009

May 2008–February 2009 • Hanna Ludwig-Schmidhuber
March 2009–September 2009 • Günther Winkler

2009/2010

October 2009–March 2010 • Christiane Stahl

2010

March 2010–February 2011 • Karl-Otto Weinreich

10.1.3 Ahrtal Talks: Expert Discussions in Cooperation with the City of Bad Neuenahr-Ahrweiler

18 November 2009

“Was it really greed? The market, the crisis and the morality”

(Professor Dr. rer. oec. Friedhelm Hengsbach SJ and Professor Dr. rer. pol. Albert Löhr)
Council chamber, Bad Neuenahr-Ahrweiler

17 November 2010

“Will the Deutsche Mark come back?”

Professor Dr. Wilhelm Hankel and Professor Dr. Karlhans Sauernheimer
Council chamber, Bad Neuenahr-Ahrweiler

10.2 Lecture Events in Cooperation with the Kreissparkasse Ahrweiler

5 November 2009

“Sind wir vernünftig? Eine neuropsychologische Betrachtung”

(Professor Dr. rer. nat. Lutz Jäncke)

29 April 2010

“Klimaforschung und Klimapolitik. Rollenverteilung und Nachhaltigkeit”

(Universitätsprofessor Dr. rer. nat. h.c. Hans von Storch)

IV APPENDIX

1 Partners' Assembly

- Federal State of Rhineland-Palatinate (Bundesland Rheinland-Pfalz), represented by the Ministry of Finance Rhineland-Palatinate
- German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt e.V.), represented by the Chairman of the Executive Board

2 Managing Committee

- Professor Dr.-Ing. Johann-Dietrich Wörner, Chairman of the Executive Board, German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt e.V.) (Chair)
- Regierungsdirektor Reinhold Bott, Ministry of Finance of Rhineland-Palatinate (Ministerium der Finanzen Rheinland-Pfalz)
- Staatssekretär Michael Ebling, Ministry of Science, Further Education, Research and Culture of Rhineland-Palatinate (Ministerium für Bildung, Wissenschaft, Jugend und Kultur des Landes Rheinland-Pfalz)
- Stefan Latussek, Head of Audit and Participations, German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt e.V.)

3 Scientific Advisory Board

Professor Dr. jur. Peter Marburger, Trier (Chair)

Professor Dr. phil. Peter Fricker, Bern (until 10/2008)

Professor Dr. ir. W. J. Geysen, Leuven

Professor Dr. rer. nat. Ursula-Friederike Habenicht, Berlin

Dr.-Ing. Margarete Hofmann-Antenbrink, Pully

Professor Dr. med. Dr. h.c. Dietrich Kettler, Göttingen

Professor Dr. med. Jörg Michaelis, Mainz

Professor Dr. phil. Jürgen Mittelstraß, Konstanz

Professor Dr. rer. pol. Herbert Paschen, Berlin

Professor Dr.-Ing. Norbert Wehn, Kaiserslautern

4 Council

Professor Dr. Wouter Achterberg†, Amsterdam
Professor Dr. rer. nat. Rudolf Amann, Bremen
Dr. phil. nat. Klaus Ammann, Bern
Professor Dr. sc. phil. Gerhard Banse, Karlsruhe
Professor Dr. med. Claus R. Bartram, Heidelberg
Dr. jur. Helmut Bäuml, Kiel
Professor Dr. phil. Jan P. Beckmann, Hagen
Professor Dr. Jos Berghman, Leuven
Professor Dr. Deryck Beyleveld, Sheffield
Professor Dr. Kornelis Blok, Utrecht
Gerard Boer, Ph.D., Amsterdam
Professor Dr. med. Dr. rer. nat. Hermann M. Bolt, Dortmund
Professor Dr. rer. nat. Michael Bölker, Marburg
Professor Dr. med. vet. Dr. med. vet. habil. Dr. h.c. Gottfried Brem, Wien
Professor Dr. rer. pol. Friedrich Breyer, Konstanz
Professor Dr. med. Frank Buttgerit, M.D., Ph.D., Berlin
Professor Dr. jur. Ulrich Büdenbender, Dresden
Professor Dr. rer. pol. Dieter Cansier, Tübingen
Professor Dr. Ruth Chadwick, Lancaster
Professor Dr. rer. nat. Thomas Christaller, Sankt Augustin
Professor Dr. rer. nat. Martin Claussen, Potsdam
Professor Dr. jur. Wolfgang van den Daele, Berlin
Michel Dreano, Ph.D., Geneva
Professor Dr.-Ing. Georg Duda, Berlin
Professor Dr. jur. Jos Dumortier, Leuven
Professor Dr. med. Dr. h.c. Friedrich W. Eigler, Essen
Professor Dr. rer. pol. Holger Ernst, Koblenz
Professor Dr. phil. Eberhard Feess, Aachen
Professor Dr. med. Jörg Fegert, Ulm
Professor Dr. rer. nat. Georg Fey, Erlangen
Professor Joseph J. Fins, Ithaca/NY
Professor Dagfinn Føllesdal, Ph.D., Oslo/Stanford
Professor Dr. phil. Christa Fonatsch, Wien

Professor Dr. jur. Walter Frenz, Aachen
Professor Dr. rer. nat. Harald Fuchs, Münster
Dr. jur. Riccardo Genghini, Mailand
Professor Dr. med. Joachim Gilsbach, Aachen
Professor Dr. med. Barbara Griefahn, Dortmund
Dr. rer. nat. Werner Grünwald, Stuttgart
Professor Dr. Annette Grüters-Kieslich, Berlin
Professor Dr. rer. nat. Armin Grunwald, Karlsruhe
Professor Dr. med. Gundolf Gubernatis, Hannover
Professor Dr. agr. Robert Guderian, Essen
Professor Dr. sc. nat. Hans-Joachim Güntherodt, Basel
Professor Dr. med. Dr. rer. nat. habil. Walter H. Günzburg, Wien
Professor Dr. phil. Dr. phil. nat. Mathias Gutmann, Marburg
Professor Dr. phil. Gerhard de Haan, Berlin
Professor Dr. Ursula-Friederike Habenicht, Berlin
Per Hall, M.D., Ph.D., Stockholm
Professor Dr. med. Dr. med. vet. Claus Hammer, München
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Professor Dr. rer. nat. Andreas Hense, Bonn
Dr. Spencer Henson, Guelph
Professor Dr. rer. nat. Wolfgang Hesse, Marburg
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Professor Dr.-Ing. Heinrich Hofmann, Lausanne
Dr.-Ing. Margarethe Hofmann-Antenbrink, Lausanne
Professor Dr. Jacek Hołowka, Warschau
Kalle Hoppu, M.D., Ph.D., Helsinki

Professor Dr. sc. nat. Dieter Imboden, Zürich
Professor Dr. phil. Dr. theol. Bernhard Irrgang, Dresden
Dr. rer. nat. Peter Jacob, Neuherberg
Professor Dr. phil. Peter Janich, Marburg
Rikke Bagger Jørgensen, Ph.D.Sc., Roskilde
Professor Dr. phil. Matthias Kaiser, M.A., Oslo
Professor nadzw. Dr. hab. Andrzej M. Kaniowski, Lodz
Professor Dr. rer. nat. Wolfgang Kaysser, Köln
Professor Dr. phil. habil. Andrzej Kiepas, Katowice
Professor Gernot Klepper, Ph.D., Kiel
Professor Dr. phil. Hartmut Kliemt, Duisburg
Professor Dr. jur. Michael Kloepfer, Berlin
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Cynthia S. Kubu, Cleveland/OH
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Professor Dr. med. Dr. med. dent. Dr. h.c. Wolfgang Müller-Ruchholtz, Kiel
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Professor Dr. phil. Konrad Ott, Greifswald
Professor Dr. Deborah Oughton, Ph.D., Aas/Oslo
Professor Dr. jur. Boris P. Paal, Freiburg
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Professor Dr. med. Thomas E. Schläpfer, Bonn
Professor Dr. med. Hans Jürgen Schlitt, Regensburg
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Professor Dr. rer. pol. Dieter Schmitt, Essen
Professor Dr. jur. Jens-Peter Schneider, Freiburg
Professor Dr. Angelika Schnieke, Ph.D., München
Professor Dr. med. Bettina Schöne-Seifert, Münster
Professor Dr. jur. Dr. h.c. Hans Ludwig Schreiber, Göttingen
Professor Miranda Schreurs, Ph.D., Berlin

Professor Doris Schröder, Ph.D., Lancashire
Professor Dr. jur. Meinhard Schröder, Trier
Professor Dr. jur. Dr. soc. oec. Erich Schweighofer, Wien
Professor Dr.-Ing. Gerhard Schweitzer, Zürich
Professor Dr. rer. nat. Ulrich Simon, Aachen
Professor Davor Solter, M.D., Ph.D., Freiburg
Detlef Sprinz, Ph.D., Potsdam
Professor Dr. rer. pol. Ulrich Steger, Lausanne
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Professor Dr. phil. Fritz F. Steininger, Frankfurt a. M.
Professor Dr. Günther Stock, Berlin
Professor Dr. rer. nat. Dr. med. h.c. Christian Streffer, Essen
Professor Dr. med. Volker Sturm, Köln
Professor Dr. phil. Dieter Sturma, Essen
Dr. phil. Elisabeth Swaton, Wien
Professor Agu Tamm, M.D., Ph.D., Dr. M.Sc., Tartu
Professor Dr. jur. Jochen Taupitz, Mannheim
Dr. rer. nat. Michael Türkay, Frankfurt a. M.
Dr. rer. pol. Otto Ulrich, Bonn
Dr. Gert Verschraegen, Leuven
Benedetto Vitiello, M.D., Bethesda
Professor Dr. phil. nat. Viola Vogel, Zürich
Professor Dr. sc. pol. Reinhard Voßbein, Wuppertal
Professor Dr.-Ing. Heinrich B. Weyer, Köln
Professor Dr. jur. Dr. h.c. Rüdiger Wolfrum, Heidelberg
Professor Dr. Atte von Wright, Kuopio
Dr. jur. Peter Wysk, Münster
Professor Dr. rer. pol. Thomas Ziesemer, Maastricht
Professor Dr. Maciej Żukowski, Poznan

5 Staff

Management

Professor Dr. phil. Dr. phil.h.c. Carl Friedrich Gethmann

(Director)

Studies of philosophy at the universities of Bonn, Innsbruck and Bochum; 1968 lic.phil. at the Institutum Philosophicum Oenipontanum; 1971 was conferred the Doctor of Philosophy degree at the Ruhr-Universität Bochum; 1978 habilitation for philosophy at the Universität Konstanz. 1968 assistant professor; 1972 lecturer in philosophy at the Universität Duisburg-Essen; 1978 private lecturer at the Universität Konstanz; 1979 professor of philosophy at the Universität Duisburg-Essen; other professorships at the universities of Düsseldorf and Göttingen; was offered full professorships at the Universität Oldenburg (1990; refused), at the Akademie für Technikfolgenabschätzung in Stuttgart (1991; refused) as well as at the universities of Duisburg-Essen (1991; accepted), Konstanz (1993; refused) and Bonn (1995; refused); director of the Europäische Akademie zur Erforschung von Folgen wissenschaftlich-technischer Entwicklungen in Bad Neuenahr-Ahrweiler (since 1996); member of the Academia Europaea (London); ordinary member of the Berlin-Brandenburgische Akademie der Wissenschaften; elected member of the “Deutsche Akademie der Naturforscher Leopoldina” (Halle) (section: Philosophy of Science).

Priv.-Doz. Dr. med. Felix Thiele, M.Sc.

(Deputy Director)

Deputy Director since 1999. He brings combined expertise in medicine and philosophy to this position. Thiele studied medicine in Hamburg and Heidelberg and received an M.D. from the University of Heidelberg for an experimental work in the field of high blood pressure research. He furthermore received a Master of Science in Philosophy and History of Science from the London School of Economics. Before joining the Europäische Akademie he worked in the field of Science Management at the Max-Delbrück-Center for Molecular Medicine Berlin-Buch. At the academy he was manager of the project “Human Genetics. Ethical Problems and Societal Consequences” and is currently member of the study groups “Practical Philosophy” and “Interdisciplinary research and transdisciplinary claims of valid-

ity”. From 2006–2008 he was head of the junior scientists within the project group “Pharming. Genetically Modified Plants and Animals as Future Production Site of Pharmaceuticals?”. Currently, he is member of the academy’s project group “Clinical research on vulnerable populations” (duration 2008–2011) and co-ordinator of the EC-funded project “Development of novel nanotechnology based diagnostic systems for Rheumatoid Arthritis and Osteoarthritis” (duration 2010–2013). Within this project he is also leader of the work package “Ethical, Legal, and Social Aspects, Technology Assessment”.

From 2002–2007 Thiele was member of the “Junge Akademie an der Berlin-Brandenburgischen Akademie der Wissenschaften und der Deutschen Akademie der Naturforscher Leopoldina”. In the academic year 2009/2010 he has been fellow and co-leader of the research group “Herausforderungen für Menschenbild und Menschenwürde durch neuere Entwicklungen der Medizintechnik” at the Center for Interdisciplinary Research (ZiF), University Bielefeld. He is member of the scientific advisory board and the steering committee of the Master study course Medical Ethics that the Europäische Akademie runs together with the Universität Mainz; within this course he also teaches medical ethics. Since 2009 he has been Privatdozent at the Institute of Philosophy, University of Duisburg-Essen.

Dr. rer. nat. Stephan Lingner, Dipl.-Geol.
(Deputy Director)

Studies in geology with focus on geochemistry at the Universität Würzburg and the Universität Tübingen; 1984 Diploma. 1990: doctorate at the Universität Münster, Chemistry Department. Professional activities: 1983-1985 civil service at BGU Hospital Tübingen. 1985–1990 planetary research at the Universität Münster. 1990–1995: systems analysis at German Aerospace Center (DLR), Cologne. Since 1996 technology assessment at Europäische Akademie Neuenahr-Ahrweiler GmbH. Co-ordinator of the BMBF-funded projects “Climate prediction and climate precautions” and “Environmental noise; Risk assessment and regulations in the traffic sector” as well as of study groups on “Preventive soil protection. Sensing concepts and ethical aspects”, on “Reasoning goals of climate protection. Specification of article 2 UNFCCC” and on “Interdisciplinary research and transdisciplinary claims of validity”. Ethical evaluation of the BMBF-project “Protection of crucial bridges and tunnels of road traffic” on behalf of the “Bundesanstalt für Straßenwesen”. 2000–2007: lecturer in “Ecology” at the Koblenz University of Applied Sciences.

Since 2005 deputy director of the Europäische Akademie with specific responsibility for the academy's research programme on environment and technology. Since 2005 Managing Editor of the "Poeisis & Praxis. International Journal of Ethics of Science and Technology Assessment" (Springer). Member of the German speaking Network Technology Assessment (NTA) as well as within its co-ordination team. Member of European Space Policy Research and Academic Network (ESPRAN), Vienna.

Dipl.-Kff. Margret Heyen

(Chief financial executive and assistant of the director)

1994–1995 High School Year in Houston, Texas, at Spring Woods High School. After the A-level exam 1997, job training at Thomas Cook Travel Agency for 2.5 years. From 2000 on studies at Rheinische Friedrich-Wilhelms-Universität Bonn and Universität Bielefeld in economics and business with emphasis on German taxes, economic computer science and political economics. She graduated in June 2006 as Diplomkauffrau. Since July 2006 staff member of the Europäische Akademie: personal assistant of the director of the Europäische Akademie and responsible for administrative issues. Heyen also is responsible for the work of the sponsors' club: She organises the meetings of the working group "Medical Ethics", the "Ahrtalgespräche" and the art exhibitions in the Europäische Akademie GmbH.

Scientific Staff

Dipl.-Betriebswirt (FH) Jan A. Bollinger (exited in 2010)

Studies of Business Administration and Economics in Greifswald, Bonn and Koblenz from 1998 to 2005. After graduation he worked as Project Manager in a business consulting firm specialising in corporate strategy, business development, marketing and sales. In June 2007 he joined the Europäische Akademie as Ph.D. Student and member of the Project Group "Responsibility for Future Generations: Implementation of Sustainability in Schooling". As a result of the latter he became author of the Graue Reihe Volume 45 "Strategic Positioning and Quality Development in Schools through education for sustainable development" in September 2008. He now is member of the Project "Protection of crucial bridges and tunnels of road traffic". His doctoral dissertation project is concerned with the topic "Transformational Leadership in Interim Management".

Dr. med. Dorothee Dörr, M.A.

1984–1988 Studies of German philology, history and medicine at the universities of Freiburg, Rome and Bonn, 1995–2001 Resident at the Department of Anesthesiology and Intensive Care Medicine, University of Bonn. 2001 Specialist for anesthesiology, 2001–2008 Senior consultant at the Department of Anesthesiology and Intensive Care Medicine, University of Bonn, 2010 Master of Arts in Medical Ethics (Fernuniversität Hagen, University Medical Center Mainz, Europäische Akademie Bad Neuenahr-Ahrweiler), 2008–2010 Scientific assistant at the Institute for the History of Medicine and Medical Ethics, Medical Faculty, University of Cologne, in the German-Canadian BMBF-joint project “Ethical, legal and social aspects of Deep Brain Stimulation – health quality of life and personal identity”. Since 2009 Head of the Study Group “Patients evaluation of perioperative medical care” at the Department of Anesthesiology and Intensive Care Medicine, University of Bonn. Teaching assignments at the Medical Faculty of the University of Bonn and at the Medical Faculty of the University of Cologne. 2010 Fellow of the Research Group “Human Dignity and Medical Technology”, Center for Interdisciplinary Research (ZiF), University of Bielefeld. Since July 2010 Member of scientific staff at the Europäische Akademie GmbH. Member of scientific staff and co-ordinator of the work package “Ethical, Legal, and Social Aspects, Technology Assessment” (ELSI) of the EU-funded project “Development of novel nanotechnology based diagnostic systems for Rheumatoid Arthritis and Osteoarthritis” (NanoDiaRA), Co-ordinator of the “Medical Ethics Working Group”, Member of the Study Group “Practical Philosophy”.

Dr.-Ing. Bert Droste-Franke, Dipl.-Phys.

Studied physics with the second subject of economics and an emphasis on environmental issues in Göttingen and Heidelberg. From 1995 to 1996 he worked at the Atmospheric Physics Division of the Max-Planck-Institute for Nuclear Physics, Heidelberg, for his diploma thesis. From 1996 to July 2006 he worked as researcher at the institute of energy economics and the rational use of energy of Universität Stuttgart. During this time he contributed significantly to a large number of national and international projects in the area of assessing impacts and damage costs from environmental pollution. Beside EU-projects like e.g. GARP, GREENSENSE, NEEDS and INTARESE, these include projects for the German contribution to the Convention of Long-Range Transboundary Air Pollution funded by the German environment

agency and several consulting projects, e.g. for the World Bank Group. Additionally, he was responsible for the further development and distribution of the widely applied integrated assessment model EcoSense. In 2004 he received his doctoral degree with a thesis about the quantification of environmental damages as contribution to environmental accounting. Since July 2006 he is member of the scientific staff at Europäische Akademie and was co-ordinator of the project “Fuel Cells and Virtual Power Plants as Elements for a Sustainable Development. Innovation Barriers and Implementation Strategies” (completed). Currently he co-ordinates the project group “Energy Storages and Virtual Power Plants for the Integration of Renewable Energies into the Power Supply: Potentials, Innovation Barriers and Implementation Strategies”.

Thomas Engel, M.A. (exited in 2009)

Studies of philosophy, history and sociology at the Universities of Hagen und Bochum; graduation as M.A. with a thesis on normative implications of philosophical anthropology; studies of psychology at the University of Bochum; diploma envisaged 2008; since 2004 member of the scientific staff of the department of philosophy at the University of Hagen, section Medical Ethics; since 2006 member of the scientific staff of the Europäische Akademie GmbH and project co-ordinator of the project: “The Research Guiding Function of Metaphors from the Information Sciences and their Relevance to the Transformation of the Philosophy of Man” (completed).

Dr. phil. Margret Engelhard, Dipl.-Biol.

1990–1997 study of biology with microbiology as a main subject at the Philipps-Universität Marburg, Germany, at the University of Edinburgh, Scotland and with an external diploma thesis at the Max-Planck-Institute for Terrestrial Microbiology, Marburg. 8/1995–9/1995 research expedition to Nepal to collect microbial samples for the diploma thesis, 1997 Dipl.-Biol., 8/1997–6/2004 Ph.D. course at the Botanical Institute of the University of Basle, Switzerland with micro- and molecular biology and botany as main fields of research. 11/1997–1/1998 research stay at the Laboratoire de Biologie Moléculaire des Plantes Supérieures, University of Geneva, Switzerland, 2004 Dr. phil. with the dissertation “The role of trehalose in nitrogen fixing nodule symbiosis: studies of rhizobia deficient in the trehalose-6-phosphate synthase gene *otsA*”. Since January 2004, member of the scientific staff at the Europäische Akademie and project co-ordinator of “Incentives for

Organ Donation” (completed) and “Pharming. Genetically modified plants and animals as future production site of pharmaceuticals?” (completed). Currently she is co-ordinator of “Clinical Research in Vulnerable Populations”.

Dr. phil. Thorsten Galert, M.A.

Thorsten Galert studied philosophy and chemistry at the Universities of Marburg and Vienna (M.A. in 1997). He received his Ph.D. in philosophy at the Philipps-Universität Marburg in 2004 with a thesis on animal pain, exploring fundamental problems of research in animal consciousness. Since 2004 Dr. Galert is member of the scientific staff of the Europäische Akademie GmbH. Up until now, two projects have been completed under his co-ordination: “Intervening in the Psyche – Novel Possibilities as Social Challenges” (1/04–6/06) and “Potentials and Risks of Psychopharmaceutical Enhancement” (7/06–10/09). He is currently co-ordinating a third project on “Deep Brain Stimulation in Psychiatry – Guidance for Responsible Research and Application” (10/08–9/11). From 2006 until 2010 he was a member of the European Platform for Life Sciences, Mind Sciences, and the Humanities, a network of 60 young academics doing research at the interface between neuroscience, philosophy and psychology, funded by Volkswagen-Foundation. Research areas: applied ethics in general and neuroethics in particular; philosophy of mind; philosophy of science in general and philosophy of psychology in particular; animal consciousness in general and animal pain in particular.

Kristin Hagen, Ph.D.

Studied biology, philosophy and agricultural science at the University of Tromsø (Norway), where she graduated in 1997 (interfaculty cand.mag.). Postgraduate studies with the Animal Welfare and Human-Animal Interactions Group, Department of Clinical Veterinary Medicine, University of Cambridge, as a member of St John’s College. Ph.D. awarded in 2001 with the thesis entitled “The expression of learning and emotions in cattle”. 2001–2002: postdoctoral scientist at the Institute of Animal Welfare and Animal Husbandry, University of Veterinary Medicine Vienna, investigating the effects of robotic milking on dairy cow health and welfare. 2002–2004: research on heart rate variability and vocalisations in cattle, affiliated with the University of Veterinary Medicine Vienna, the Free University Berlin, and the Research Institute for the Biology of Farm Animals, Dummerstorf.

2005: teacher at a primary school in Bergsfjord, a tiny fishing community in the far North of Norway. Since February 2006 member of scientific staff at the Europäische Akademie for the project group “Pharming” (completed). Since 2009 she has been responsible for different tasks such as, for example, the scientific organization of the autumn conference 2009 or co-ordination of the Research Fellowship Programme.

Dipl. Päd. Ulrike Henckel

1979 first state examination for teaching profession at Cologne. 1986 diploma in pedagogics, psychology and sociology at the Universität zu Köln. 1994 studies in philosophy at the FernUniversität Hagen. Since 2000 employment at the Institut für Philosophie at the FernUniversität in Hagen. Beginning of dissertation on ‘Anthropological Basics of Medical Ethics’. Since 2002 member of scientific staff at the Europäische Akademie and working for post graduate master study programme in Medical Ethics. Since 2006–2009 project co-ordinator of the project: “The Research Guiding Function of Metaphors from the Information Sciences and their Relevance to the Transformation of the Philosophy of Man” (completed). Currently she is scientific staff member of the project group “Clinical Research in Vulnerable Populations”.

Dr. phil. Georg Kamp, M.A.

After commercial training and two years working as a retail manager studies of philosophy and German language and literature at the universities of Essen, Duisburg and Bochum. Magister Artium 1993, thereafter until 1999 staff member of the Institute of Philosophy at the University of Essen, in 1999 completion of a philosophical dissertation about the possibilities and design of argumentation in regulative contexts. From April 1999 up to March 2002 staff member of the Europäische Akademie, then manager of the study group “Practical Philosophy” and sub-editor of the journal “Poiesis & Praxis” and responsible for the library. During a parental leave he worked as freelance consultant, docent und editor and absolved further education as Mediator at the FernUniversität Hagen. After managing a project on discontinuity in working biographies at the Niederrhein University of Applied Sciences for a year he returned to the Europäische Akademie as co-ordinator of the project group “Responsibility for Future Generations. Implementing Sustainability in Schooling” and again as headmaster of the study

group “Practical Philosophy”. In 2008 he assumed the co-ordination of the project “Radioactive Waste. Technical and Normative Aspects of its disposal” and currently is co-ordinator of the project group “Long-term Planning. The Relevance of Social and Cognitive Resources for Sustainable Economic Activities”.

Dr. rer. nat. Ruth Klüser, Dipl.-Chem.

1991–1998 study of chemistry at the Rheinische Friedrich Wilhelms-University in Bonn. Student assistant at the University of Bonn from 10/1997–2/1998 and diploma with a thesis on syntheses of heterocyclic components at the department of Organic Chemistry in 3/1998. 1998–2003 Ph.D.-studies on Combinatorial Chemistry, mainly as a modern concept of determination of active agents. At the same time graduate assistant at the University of Bonn and Co-operation in the BMBF-Project ‘Validated Lead/Target Systems’ within the scope of the part-project “Model-experiments for the combinatorial Synthesis of biologically active heterocyclic systems (new pharmaceutical leads) with the building kit principle”. Junior scientist at the German Aerospace Centre in the department of Solar Research from 2004–2006. The project group HYDROSOL she worked for attracted international recognition and has been awarded different prizes, most notably the 2006 Descartes Prize for Collaborative Scientific Research which is endowed with a total of 1 Mio. Euro. Since March 2006 Member of scientific staff at the Europäische Akademie and co-ordinator of the project group “Societal Implications of Electrical Power Grids” (completed). Currently she is scientific staff member of the project group “Energy Storages and Virtual Power Plants for the Integration of Renewable Energies into the Power Supply: Potentials, Innovation Barriers and Implementation Strategies”.

Katja Stoppenbrink, M.A., LL.M., Maître en Droit (exited in 2009)

Studied German, French, European and international law at the universities of Cologne and Paris I (Panthéon-Sorbonne) and history and philosophy at the University of Cologne. In 2006 she was co-co-ordinator of the French-German Master of Laws programme of the universities of Cologne and Paris I. In 2007 she joined the staff of the Europäische Akademie to work on an integrated research project on nanotechnology applications in medicine (NanoHealth) in which she was responsible for the study on “The Restoration and Enhancement of Human Capacities by Neuronal Implants”. In 2008 and 2009 she also worked as project

assistant at the Europäische Akademie for the project group “Deep Brain Stimulation in Psychiatry. Guidance for Responsible Research and Application”. Presently, she works as assistant at the Philosophy Department of the University of Luxembourg and prepares a doctoral thesis in philosophy that is jointly supervised by Professor Dr. phil. Michael Quante and Professor Dr. jur. Thomas Gutmann at the Westfälische Wilhelms-Universität Münster and Professor Dr. phil. Dietmar Heidemann at the University of Luxembourg.

Organisation and Administration

Katharina Mader, M.A.

(Editing, Public Relations)

1999–2005 studies of English, Communication Research/Speech Sciences/Phonetics and Psychology at the universities of Jena, Nottingham (UK) and Bonn (M.A. degree in 2005). Voluntarily working experience as a welfare worker both in Germany and the USA. During the studies scientific assistances at universities and editorial assistances at radio stations (Deutschlandfunk, Westdeutscher Rundfunk); journalist co-worker at several radio stations inland and abroad; teaching and supervising experiences (English and German language courses both in Germany and the UK). Since December 2005 member of the staff at the Europäische Akademie GmbH; responsible for editing, public relations and organisation of events. Member of the “Netzwerk Wissenskommunikation” (network on science communication), the “Netzwerk Technikfolgenabschätzung (NTA)” (network on Technology Assessment) and the “Bonner Medienclub” (press association Bonn).

Friederike Wütscher

(Editing, Public Relations)

Studied German and English at the University of Cologne (1991 to 1997). During this time she had a six month scholarship which she spent at the University of North London. At Cologne University she worked as student assistant at the linguistic institute of the English department. In her University years she gained work experience in different fields of journalistic working fields., e.g. public relations agency, tv-station, and newspapers. After her examination she worked for the publishing company RAABE Fachverlag für Wissenschaftsinformation which

is specialised in scientific publications. Her main working focus was in editing, marketing and developing concepts for new publications. In 1998 she began to work for the Deutsche Krankenhausgesellschaft (German hospital federation) as press officer. Here she was responsible for public relations and events and edited different publications. In March 2001 she started to work for the Europäische Akademie in editing scientific texts and public relations. She works in all fields of the academy which concern publications and events. Member of the “Netzwerk Wissenskommunikation” (network on science communication).

Dipl.-Ing. Anja Schlochtermeyer, M.A.

(Acquisition and administrative support of externally funded, in particular EU-funded, research projects)

Studied geography, political sciences as well as town planning and regional planning at the University of Oldenburg. Main focuses of her studies were European policy as well as cross-border- and interregional structural development. After her university studies she worked at the European Commission in Brussels in the Directorate General “Regio” as a “Stagière” where she was responsible for the mid-term evaluation of INTERREG II-A-projects carried out in German border regions (cross-border-cooperation). Since 2000 she worked at the EU-Bureau of the Georg-August-University of Göttingen as EU-research adviser which she finally headed since 2001. Ensuring the participation of researchers at the University Göttingen in the Research Framework Programme of the EU was her main responsibility. In addition, she co-ordinated a European educational project with 12 partners from four countries. After the birth of her daughter, Anja Schlochtermeyer joined the European Academy Bad Neuenahr-Ahrweiler where she is responsible for national and European research funding.

Margret Pauels, Diplom-Übersetzerin

(Reception, Guest Relations)

1965–1969 studies of English and French at the Auslands- und Dolmetscher-Institut Gernersheim der Universität Mainz (Institute for Interpreters and Translators in Gernersheim, section of the University of Mainz). 1967 studies at Salford University, Lancashire, United Kingdom. 1969–1977: translator at the British Embassy in Bonn. 1978–1980 translator at the Embassy of Sudan in Bonn. 1990–1999 lecturer of English courses organized by the Chamber of Industry and Commerce Koblenz

in Bad Neuenahr-Ahrweiler for foreign correspondence clerks. 1993– 2000 social secretary to the Minister and Ambassador at the British Embassy in Bonn and Berlin. Since January 2001, receptionist and guest relation manager at the Europäische Akademie, responsible for the preparation and organisation of international conferences and meetings of the project groups.

Heidemarie Zimmermann

(General Administration)

Office clerk training. 1981–1999 employment as office clerk and secretary with the Dr. Ernst Clinic, the Federal Armed Forces and the Volksbank – all located in Bad Neuenahr-Ahrweiler. 1995–1999 maternity leave. Since November 2000, member of staff at the Europäische Akademie responsible for the central administration, including personnel, the organisation of meetings of the project groups as well as the accounts of travel expenses.

Swetlana Laier

(Accounts)

From 1978 to 1980 Swetlana Laier underwent a training as accountant at the Professional Technical School of the Ministry of Trade of the autonomous Republic of Burjatija, Union of Soviet Socialist Republic (USSR). From 1981 to 1996 she worked as financial accountant at the Experimental Agricultural Industrial Administration in Serebrijanye-Klutschi, USSR. In June 1996 she entered the Federal Republic of Germany and became naturalized in December 1996. From then on she trained in accounting and data processing. Since 2001 she worked as financial accountant with several German enterprises in Bonn. Since November 2009 she has been employed as financial accountant at the Europäische Akademie GmbH Bad Neuenahr-Ahrweiler.

6 Archive

Fuel Cells and Virtual Power Plants as Elements for a Sustainable Development. Innovation Barriers and Implementation Strategies
(Duration: 7/06–12/08)

Project Members

Chair: Professor Dr. rer. pol. Thomas Ziesemer

Department of Economics, Maastricht University und United Nations – Economic and social Research and training centre on Innovation and Technology (UNU-MERIT)

Professor Dr. jur. Joh.-Christian Pielow

Institut für Berg- und Energierecht
Ruhr-Universität Bochum

Professor Dr.-Ing. Ingo Romey

Lehrstuhl für Technik der Energieversorgung und Energieanlagen,
Universität Duisburg-Essen

Dipl.-Ing. Holger Berg (Junior Scientist)

Lehrstuhl für Technik der Energieversorgung und Energieanlagen,
Universität Duisburg-Essen

Dr.-Ing. Bert Droste-Franke, Dipl.-Phys. (Head of the Junior Scientist Group)

Europäische Akademie Bad Neuenahr-Ahrweiler GmbH

Dipl.-Volksw. Annette Kötter (Junior Scientist)

Universität Münster

(formerly Europäische Akademie Bad Neuenahr-Ahrweiler GmbH)

Jörg Krüger, RA (Junior Scientist)

Institut für Berg- und Energierecht
Ruhr-Universität Bochum

Dr. rer. pol. Karsten Mause, Dipl.-Pol. (Junior Scientist)

Universität Bremen

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Funding

Federal Ministry of Education and Research (BMBF): Competition for interdisciplinary junior scientist groups within the framework of innovation and technology analysis

Final report

B. Droste-Franke, H. Berg, A. Kötter, J. Krüger, K. Mause, J.-C. Pielow, I. Romey, T. Ziesemer, Brennstoffzellen und Virtuelle Kraftwerke. Energie-, umwelt- und technologiepolitische Aspekte einer effizienten Hausenergieversorgung (volume 36 of the series “Ethics of Science and Technology Assessment”, ed. C. F. Gethmann). Springer, Berlin 2009

In addition, the English summary of the study was published in the Europäische Akademie’s “Graue Reihe”:

B. Droste-Franke, H. Berg, A. Kötter, J. Krüger, K. Mause, J.-C. Pielow, I. Romey, T. Ziesemer: Fuel Cells and Virtual Power Plants. Energy, Environmental, and Technology Policy Aspects of an Efficient Domestic Energy Supply. Executive Summary (volume 47 of the “Graue Reihe”), 11/2008

Pharming. Genetically Modified Plants and Animals as Future Production Site of Pharmaceuticals? (Duration: 7/06–12/08)

Project Members

Chair: Professor Dr. jur. Eckard Rehbinder

Johann Wolfgang Goethe Universität Frankfurt/Main, Germany

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Professor Rafael Pardo-Avellaneda, Ph.D.

Fundación BBVA, Madrid, Spain

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Kristin Hagen, Ph.D.

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Funding

Federal Ministry of Education and Research (BMBF): Competition for interdisciplinary junior scientist groups within the framework of innovation and technology analysis (BMBF-Wettbewerb für interdisziplinäre Nachwuchsgruppen im Rahmen der Innovations- und Technikanalyse)

Final report

E. Reh binder, M. Engelhard, K. Hagen, R. B. Jørgensen, R. Pardo Avellaneda, A. Schnieke, F. Thiele, Pharming. Promises and risks of biopharmaceuticals derived from genetically modified plants and animals (volume 35 of the series “Ethics of Science and Technology Assessment”) Springer, Berlin 2009, ISBN 978-3-540- 85792-1

R. Pardo et al.: „The role of means and goals in technology acceptance. A differentiated landscape of public perceptions of pharming“. EMBO reports Vol. 10(10) 2009

In addition, external speakers’ papers at the kick-off meeting and the symposium were published in:

M. Engelhard, K. Hagen, F. Thiele (eds) Pharming. A New Branch of Biotechnology. Volume 43 of the “Graue Reihe”, Europäische Akademie Bad Neuenahr-Ahrweiler, 11/2007

M. Engelhard, K. Hagen, M. Boysen (eds) Genetic Engineering in Livestock. New Applications and Interdisciplinary Perspectives (volume 35 of the series “Ethics of Science and Technology Assessment”) Springer, Berlin 2009, ISBN 978-3-540-85842-3

Responsibility for Future Generations. Implementation of Sustainability in Schooling

(Duration: 1/06–9/08)

Project Members

Professor Dr. phil. Gerhard de Haan

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Professor Dr. phil. Anton Leist

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Funding

Federal Ministry of Education and Research (BMBF): Research for climate protection and protection from climate impacts – a contribution to the BMBF-framework programme “Research for Sustainability”

Final report

G. de Haan, G. Kamp, A. Lerch, L. Martignon, G. Müller-Christ, H. G. Nutzinger, Nachhaltigkeit und Gerechtigkeit. Grundlagen und schulpraktische Konsequenzen (volume 33 of the series “Ethics of Science and Technology Assessment”) Springer, Berlin 2008, ISBN 978-3-540-85491-3

In addition to the final report there are two separate and independent studies that emerged in the context of the project and that were published in the Europäische Akademie's Graue Reihe:

J. A. Bollinger, Profilierung und Qualitätsentwicklung von Schulen durch Bildung für eine nachhaltige und gerechte Entwicklung. Volume 45 of the "Graue Reihe", Europäische Akademie Bad Neuenahr-Ahrweiler 11/2008

Societal Implications of Electrical Power Grids (Duration: 1/06–6/08)

Project Members

Chair: Professor Dr. rer. pol. Ulrich Steger

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Final report

U. Steger, U. Büdenbender, E. Feess, D. Nelles, Die Regulierung elektrischer Netze. Offene Fragen und Lösungsansätze (volume 32 of the series "Ethics of Science and Technology Assessment") Springer, Berlin 2008, ISBN 978-3-540-68417-6

In addition, the English summary of the study was published in the Europäische Akademie's "Graue Reihe":

U. Steger, U. Büdenbender, E. Feess, D. Nelles, The Regulation of Electricity Networks – Open Questions and Methods of Solution. Executive Summary. Volume 44 of the "Graue Reihe" Europäische Akademie Bad Neuenahr-Ahrweiler, 7/2008

Funding

Foundation for Innovation in Rhineland-Palatinate

Intervening in the Psyche. Novel Possibilities as Social Challenges
(Duration: 1/04–6/06)

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Final report

R. Merkel, G. Boer, J. Fegert, T. Galert, D. Hartmann, B. Nuttin, S. Rosahl, *Intervening in the Brain. Changing Psyche and Society* (volume 29 of the series “Ethics of Science and Technology Assessment”) Springer, Berlin 2007, ISBN 978-3-540- 46476-1

Environmental Noise. Risk Assessment and Regulations in the Traffic Sector

(Duration: 7/03–12/05)

Project Members

Chair: Professor Dr. Michael Kloepfer

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Final report

M. Kloepfer, B. Griefahn, A. M. Kaniowski, G. Klepper, S. Lingner, G. Steinebach, H. B. Weyer, P. Wysk P, *Leben mit Lärm? Risikobeurteilung und Regulation des Umgebungslärms im Verkehrsbereich* (volume 28 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”, ed. C. F. Gethmann) Springer, Berlin 2006, ISBN10 3-540-345 09-4

Incentives for Organ Donation (Duration: 7/03–6/06)

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Final report

F. Breyer, W. Daele van den, M. Engelhard, G. Gubernatis, H. Kliemt, C. Kopetzki, H. J. Schlitt, J. Taupitz, Organmangel– Ist der Tod auf der Warteliste unvermeidbar? Springer, Berlin 2006, ISBN 3-540-33054-2

Publications

F. Breyer, M. Engelhard (eds) Anreize zur Organspende. Volume 39 of the series “Graue Reihe”, Europäische Akademie Bad Neuenahr-Ahrweiler, 11/2006

Nanomaterials, Nanodevices, Nanocomputing. Determination of Present Position and Perspectives

(Duration: 7/03–12/05)

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Institut für Technikfolgenabschätzung und Systemanalyse, Forschungszentrum Karlsruhe GmbH

Dr. Werner Grünwald

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Professor Dr. Hans-Joachim Güntherodt

Institut für Physik, Universität Basel, Switzerland

Professor Dr. Heinrich Hofmann

DMX Ecublens, EPF Lausanne, Switzerland

Dr. Harald Krug

Institut für Toxikologie und Genetik, Forschungszentrum Karlsruhe GmbH

Professor Dr. Peter Janich

Lehrstuhl 1 für Philosophie, Philipps-Universität Marburg

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Institut für Nanotechnologie, Forschungszentrum Karlsruhe GmbH

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Professor Dr. Viola Vogel

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Project Co-ordination: Dr.-Ing. Wolfgang Rathgeber

Final report

G. Schmid, H. Brune, H. Ernst, A. Grunwald, W. Grünwald, H. Hofmann, H. Krug, P. Janich, M. Mayor, W. Rathgeber, U. Simon, V. Vogel, D. Wyrwa, Nanotechnology. Assessment and Perspectives (volume 27 of the series “Wissenschafts-

ethik und Technikfolgenbeurteilung”, ed. C. F. Gethmann) Springer, Berlin 2006, ISBN-103540-32819-X

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European Social Policy (Duration: 1/03–6/05)

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Professor Dr. Ruud Muffels, Tilburg
Professor Dr. phil. Michael Quante, Essen
Professor Dr. Pirkko-Liisa Rauhala, Ph.D., Helsinki
Dr. Gert Verschraegen, Leuven
Professor Dr. Maciej Żukowski, Poznan

Project Co-ordination: Dott. Rupert Leitner

Final report

B. v. Maydell, K. Borchardt, K.-D. Henke, R. Leitner, R. Muffels, M. Quante, P.-L. Rauhala, G. Verschraegen, M. Żukowski, Enabling Social Europe (volume 26 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2006, ISBN 3540-29771-5

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Functional Foods **(Duration: 1/01–5/04)**

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Mr. Gerrit Koenen, Den Haag

Professor Dr. Cees Midden, Eindhoven

Professor Dr. Bevan Moseley, Reading

Professor Andreu Palou, Mallorca

Professor Dr. rer. nat. Dr. rer. nat. habil. Gerhard Rechkemmer, München

Dr. Doris Schröder, Preston

Professor Dr. Atte von Wright, Kuopio

Project Co-ordination: Miltos Ladikas, Ph.D.

Final report

R. Chadwick, S. Henson, G. Koenen, M. Liakopoulos, C. Midden, B. Moseley, A. Palou, G. Rechkemmer, D. Schröder, A. von Wright, *Functional Foods* (volume 20 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2004, ISBN 3-540-20120-3

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TAMI: Technology Assessment in Europe: between Method and Impact **(Duration: 1/02–12/03)**

Members

TAMI was co-ordinated by the Europäische Akademie. The following institutions have participated in the TAMI project:

- The Europäische Akademie zur Erforschung von Folgen wissenschaftlich-technischer Entwicklungen Bad Neuenahr-Ahrweiler GmbH, Germany

- The Parliamentary Office of Science and Technology (POST), UK
- The Forschungszentrum Karlsruhe GmbH (FZK), Institute for Technology Assessment and System Analysis (ITAS), Germany
- The Academy for Technology Assessment in Baden Württemberg (CTA), Germany
- The Danish Board of Technology (DBT)
- The Centre for Science and Technology Studies (TA-SWISS), Switzerland
- The Centre of Science, Technology and Society Studies at the Institute of Philosophy of the Academy of Sciences (STSS Centre), Czech Republic
- The Warsaw School of Economics (SGH), Institute of Modern Civilisation (IPWC), Poland
- The Consejo Superior de Investigaciones Científicas (CSIC), SPRITTE (Spanish Policy Research on Innovation & Technology, Training and Education), Spain

Additionally, the following institutes have also participated in the project albeit not as full members. They have been invited to TAMI meetings and also been asked to contribute to the scientific outcome as external experts:

- The Committee on Industry, External Trade, Research and Energy, European Parliament, Belgium
- The Rathenau Institute, The Netherlands
- The Flemish Institute for Science and Technology Assessment (viWTA), Belgium

Project Co-ordination: Dr. Miltos Ladikas, Dr. Michael Decker

Final report

M. Decker, M. Ladikas (eds) *Brigdes between Science, Society and Policy. Technology Assessment – Methods and Impacts* (volume 22 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2004, ISBN 3-540-21283-3

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**Embryo Experimentation in Europe.
Bio-medical, Legal and Philosophical Aspects
(Duration: 1/01–12/03)**

Project Members

Chair: Professor Dr. Davor Solter, M.D., Ph.D., Freiburg

Professor Dr. jur. Deryck Beyleveld, Sheffield

Professor Dr. med. Axel Haverich, Hannover

Professor Dr. Jacek Holówka, Warsaw

Professor Dr. jur. Hans Lilie, Halle

Professor Dr. Robin Lovell-Badge, London

Priv.-Doz. Dr. rer. nat. Ulrich Martin, Hannover

Project Co-ordination: Minou Bernadette Friele, M.A.

Final report

D. Solter, D. Beyleveld, M. B. Friele, J. Holówka, H. Lilie, R. Lovell-Badge, C. Mandla, U. Martin, R. Pardo Avellaneda, *Embryo Research in Pluralistic Europe* (volume 21 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2003, ISBN 3-540-20379-6

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**Environmental Standards. Low Dose Effect Relations and their
Risk Evaluation
(Duration: 1/01–5/04)**

Project Members

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Faculty of Law, Johann Wolfgang Goethe Universität Frankfurt/Main

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Final report

C. Streffer, H. Bolt, D. Follesdal, P. Hall, J. G. Hengstler, P. Jacob, D. Oughton, K. Prieß, E. Reh binder, E. Swaton, Low Dose Exposures in the Environment. Dose-Effect Relations and Risk Evaluation (volume 23 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2004, ISBN 3-540-21083-0

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Sustainable Development and Innovation in the Energy Sector (Duration: 9/00–12/03)

Project Members

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Final report

U. Steger, W. Achterberg, K. Blok, H. Bode, W. Frenz, C. Gather, G. Hanekamp, D. Imboden, M. Jahnke, M. Kost, R. Kurz, H. G. Nutzinger, Th. Ziesemer, Nachhaltige Entwicklung und Innovation im Energiebereich (volume 18 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2002

Publications

G. Hanekamp, U. Steger (ed) Nachhaltige Entwicklung und Innovation im Energiebereich. Volume 28 of the “Graue Reihe”, Europäische Akademie, Bad Neuenahr-Ahrweiler, 7/2001

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Climate Prediction and Climate Precautions (Duration: 12/98–12/01)

Project Members

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Final report

M. Schröder, M. Claussen, A. Grunwald, A. Hense, G. Klepper, S. Lingner, K. Ott,
D. Schmitt, D. Sprinz, Klimavorhersage und Klimavorsorge (volume 16 of the
series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2002

Publications

S. Lingner, C. F. Gethmann, Klimavorhersage und -vorsorge. Volume 6 of the “Graue Reihe”, Europäische Akademie Bad Neuenahr-Ahrweiler, 7/1997 S. Lingner, Klimavorhersage und -vorsorge. Aufgaben und Ziele eines interdisziplinären Forschungsprojekts. In: TA-Datenbank-Nachrichten 8 (2): 26–28, ITAS Karlsruhe, 1999

M. Schröder, S. Lingner (eds) Modelling Climate Change and Its Economic Consequences. A Review. Volume 15 of the “Graue Reihe”, Europäische Akademie Bad Neuenahr-Ahrweiler, 6/1999

M. Schröder, M. Claussen, A. Grunwald, A. Hense, G. Klepper, S. Lingner, K. Ott, D. Schmitt, D. Sprinz, Climate Prediction and Precautions (Summary). Volume 23 of the “Graue Reihe”, Europäische Akademie Bad Neuenahr-Ahrweiler, 9/2000

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Electronic Signatures. Cultural Controllability and Moral Justifiability (Duration: 9/99–12/01)

Project Members

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Project Co-ordination: Dr.-Ing. Christian J. Langenbach

Final report

C. J. Langenbach, O. Ulrich (eds) Elektronische Signaturen. Kulturelle Rahmenbedingungen einer technischen Entwicklung (volume 12 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2002

Publications

C. J. Langenbach, “Didaktik im Spannungsfeld zwischen NetUse und IT-Sicherheit”, In: BSI (ed) Zur Didaktik der IT-Sicherheit. Interdisziplinärer Diskurs zu querschnittlichen Fragen der IT-Sicherheit. SecuMedia Verlag Ingelheim, 1999

C. J. Langenbach, “Elektronische Unterschrift. Verliert der Bürger seine Identität?”, in: Akademie-Brief Nr. 15, Europäische Akademie Bad Neuenahr-Ahrweiler, 1999

O. Ulrich, “Protection Profile – ein industriepolitischer Ansatz zur Förderung des ‘neuen Datenschutzes’”. Volume 17 of the “Graue Reihe”, Europäische Akademie Bad Neuenahr-Ahrweiler, 11/1999

G. Banse, C. J. Langenbach, O. Ulrich, “Digitale Signaturen im Weitblick”, KES 99/5, SecuMedia Verlag Ingelheim, 1999, 85–87

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Robotics: Options for Human Replaceability
(Duration: 2/99–12/01)

Project Members

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Final report

T. Christaller, M. Decker, J.-M. Gilsbach, G. Hirzinger, K. Lauterbach, E. Schweighofer, G. Schweitzer, D. Sturma, Robotik. Perspektiven für menschliches Handeln in der zukünftigen Gesellschaft. (volume 14 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2001

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Ethical Questions and Societal Consequences of Human Genetics (Duration: 4/98–3/00)

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Final report

C. R. Bartram, J. P. Beckmann, F. Breyer, G. Fey, C. Fonatsch, B. Irrgang, J. Taupitz, K.-M. Seel, F. Thiele, Humangenetische Diagnostik. Wissenschaftliche Grundlagen und gesellschaftliche Konsequenzen (volume 7 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2000

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Xenotransplantation of Cells, Tissues or Organs. Scientific Developments, Ethical Implications and Social Relevance
(Duration: 4/98–3/00)

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Final report

J. P. Beckmann, G. Brem, F. W. Eigler, W. Günzburg, C. Hammer, W. Müller-Ruchholz, E. M. Neumann-Held, H.-L. Schreiber, Xenotransplantation von Zellen, Geweben oder Organen. Wissenschaftliche Entwicklungen und ethisch-rechtliche Implikationen (volume 8 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2000

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E. M. Neumann-Held, Xenotransplantation von Zellen, Geweben oder Organen. Wissenschaftliche Entwicklungen, ethische Implikationen und gesellschaftliche Relevanz, in: TA-Datenbank-Nachrichten 11/98

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Biodiversity. Scientific Foundations and Social Relevance (Duration: 10/97–10/99)

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P. Janich, M. Gutmann, K. Prieß (eds) Biodiversität. Wissenschaftliche Grundlagen und gesellschaftliche Relevanz (volume 10 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2001

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Environmental Standards. Combined Exposures and their Effect on Human Beings and their Environment (Duration: 1/97–1/00)

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C. Streffer, J. Bücken, A. Cansier, D. Cansier, C. F. Gethmann, R. Guderian, G. Hanekamp, D. Henschler, G. Pöch, E. Reh binder, O. Renn, M. Slesina, K. Wuttke, Umweltstandards. Kombinierte Expositionen und ihre Auswirkungen auf den Menschen und seine Umwelt (volume 5 of the series “Wissenschaftsethik und Technikfolgenbeurteilung”) Springer, Berlin 2000

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Technology Assessment of the Research and Development of New Materials

(Duration: 1/97–12/99)

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