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Direktor:

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Newsletter Akademie-Brief

Editorial

The „Arbeitskreis Medizinethik“ – a discussion circle on Medical Ethics - has been organised by the European Academy since 1998. Physicians from the Ahr-region initiated this circle to discuss problems related to medical ethics. Lectures are periodically given by members of the European Academy or external experts. The lectures serve as a basis of the discussions. Subjects were e.g. „Euthanasia“ or „Rationing in Medicine“.

Within that framework the European Academy organises conferences dealing with medical problems and their ethical dimension, e. g. „Rationing in Medicine“ in March 2000.

This discussion circle on Medical Ethics is part of a number of activities in the region, e.g. a series of lectures in cooperation with the Kreissparkasse Ahrweiler.

For the future the discussion circle plans to take up other subjects such as „Ethical Boards and their Sphere of Activity“, „In-vitro-Fertilisation“ or „The Structural Change of Medicine“.

The „Arbeitskreis Medizinethik“ intends to discuss medical-ethical problems, to impart knowledge of ethical positions concerning current and future medical problems. The medical experience of the participants is highly relevant for the discussions within the forum.

TK/DU

Focus

A Way to Reach Transdisciplinarity. A proposal to organise an interdisciplinary expert group

Michael Decker

Since 1996 the European Academy is calling together project teams in order to do research on societal problems in the context of technology assessment. Thereby the multidisciplinary aspects of these problems are considered not only by inviting experts out of the concerned disciplines but also by a procedure which aims to turn the initial multidisciplinary perspectives into transdisciplinary recommendations to act by an intense discussion between the scientific experts. The procedure includes well defined evaluation loops in order to realise interdisciplinarily based argumentation and transparency. The results of this procedural discussion justifies the transdisciplinary validity of the recommendations.

Disciplinary research in its well established form can rely on generally accepted quality standards for the use in evaluation processes. This is not true for interdisciplinary co-operation since the concept of interdisciplinarity remains rather fuzzy. This is the more surprising considering that the existence of problems which cannot be solved by individual scientific disciplines is widely accepted and interdisciplinary work has been done for a long period of time already. Often interdisciplinarity has been 'downscaled' to mere multidisciplinary by simply taking contributions from several disciplines side by side without creating any cross connections. Instead interdisciplinarity should be upgraded to *transdisciplinarity*, i.e. defining the corresponding problem and solving it as a "real world"-problem independent of particular disciplines. Transdisciplinarity in this sense is problem orientated interdisciplinarity.

If one pursues this problem-oriented approach into the centre of the discussion, taking non-scientific problems e.g. social problems as given, transdisciplinarity can be defined as interdisciplinary scientific

research used to solve particular extra-scientific problems. Thereby the specific "means to an end" character of interdisciplinary research becomes obvious. From this point of view it might be possible to develop criteria for a quality management in interdisciplinary research. The well established evaluation processes of the individual disciplines have to be extended by quality standards for interdisciplinary research which have not been defined up to now.

The European Academy organises interdisciplinary expert groups as a means to the end of 'solving an extra-scientific problem' consisting of a pre-project phase which has definitional character and the project phase. It should be a "real world"-question concerning the future, for example an ecological, a political, a societal question, which has to be answered now instantaneously. Due to the fact that the future is not predictable, it is not possible to find the "right answer". But it is possible to obtain findings based on rational considerations which will serve as orientation in justifying present

decisions concerning the future (*Orientierungswissen*). The means-end relation allows a general definition of quality criteria. The final report, the memorandum should contain both the recommendations to act in order to solve the problem and the reasoning behind these proposed solutions.

Pre-project

The main aim of the pre-project is to select the experts who should participate in the project group. This selection process already has to be justified by referring to the initialising social, political or ecological problems and leads to a draft of a work programme. The resulting set of scientific disciplines found to be relevant will be the basis for the composition of the expert group.

All disciplines found to be relevant should participate. But since a truly interdisciplinary discussion between experts with a different disciplinary background is very time-consuming, and all the more so the bigger the corresponding group. For practical reasons a small group would be preferable. In order to cope with this 'dilemma' different degrees of participation must be established, i.e. *either* being member of the expert group *or* contribute by writing an additional study *or* join only single meetings in order to give evaluative remarks.

Once a scientific discipline is determined to be relevant for the discussion, the problem arises as to which expert out of this discipline should be chosen. The following aspects concern the criteria for recruiting of the experts. Their justification is based on the concept of Rational Technology Assessment and can be transferred into this more general context:

- The experts should be selected in consideration of the real world problems to be solved. Heuristically regarded, these experts will often be *outstanding* scholars within their scientific community. The reason for the requirement of being outstanding is that the expert has to represent the major paradigms in his (sub-)discipline, which is a task the experts have to agree to. He also has to speak on behalf of other stakeholders connected to his discipline. For this purpose a kind of overall view is needed.
- The experts must be interested in *interdisciplinary* discussions. Sometimes especially the 'outstanding' experts feel also eligible to answer questions from outside their discipline. Interdisciplinary

discussion here is meant in a procedural way, which involves, for example, signing a form consenting to stipulated rules of debate. An important point, of course, is that all statements must be supported by comprehensible evidence and arguments. In an interdisciplinary debate this means that the arguments must be comprehensible to all participants. Another point is that concrete recommendations for action should be given. Dissenting votes should be exceptional and have to be supported by strong arguments as well. Due to the fact that, in general, every scientist is an expert in just one scientific field, these rules presuppose a very intensive debate. Not every expert is prepared to participate in such a strenuous procedure.

- The selection procedure generally leads to several experts being chosen, of whom one or two per discipline or sub-discipline will be appointed to participate in the project group. Having equal and small numbers of experts out of every scientific community is not only sensible for organisational reasons, but also helps to *avoid dominance* of particular disciplinary views. Every expert has to convince the experts of other disciplines of his argument. Hence, in the ideal case, the resulting memorandum will not be biased by the aims of any one specific discipline or interests groups.

Project

The set-up of the expert group involves in the participation of just one or two experts per discipline and naturally these experts influence the project in a personal way, even when they are asked to represent all major trends and paradigms in their discipline. The points of view of these individual experts can be better appreciated by organising additional meetings (kick-off- or midterm-Meetings) where *other* experts get the possibility to place their opinions on record. The arguments of the external experts have to be taken into consideration by the expert group in each case either by including the argumentation or by justified non-consideration.

The following structure outlines the procedure to be considered by the expert group in order to reach an interdisciplinary discussion based on rationality:

- Every expert is an expert in his own discipline. Therefore, an interdisciplinary debate starts with dis-

ussion about concepts, their definitions and underlying assumptions, which are common in particular disciplines and consequently rarely discussed. In this way, underlying assumptions are made explicit.

- After this process synthesising the perspectives of the different disciplines is approached by reflecting and incorporating the individual particularities. In this phase, the development of transparent argumentation chains starts, where the arguments come from the different disciplines and have to be accepted by the other disciplines. This results in one or more chains of argument supported by all participants.
- In the last phase, these argumentation chains have to be extended into the area of normative aspects, i.e., the initial impulse of the research project. Again this should be done by reference to rational arguments. In this constructive phase, the experts have to decide on recommendations for actions to be taken. In the procedure described so far, this involves selecting one argumentation chain, consisting of a descriptive and a normative part, out of all those developed so far.

Discussion

The quality of the memorandum is based on different pillars. The (initial) disciplinary statements are subject to the quality criteria of the individual disciplines. The quality of the interdisciplinary findings should be ensured by several interdisciplinary evaluation processes. The initial exposé of the working programme will be modified by the core group of experts and scrutinised by the external experts at the kick-off-meeting. The midterm-meeting is an evaluation process for the work in progress. Typical questions of evaluations are: Are we successful in reaching transparency in the decision-making processes, e.g. by a clear representation of the argumentation chains. Are we obtaining interdisciplinary findings in the sense of orientational knowledge in order to justify the recommendations? Referring to the definition of transdisciplinarity mentioned above, the point of reference for all of these evaluations is the initialising social, political or ecological question.

The resulting memorandum covers the whole discussion from the uncovering of underlying assumptions of the individual disciplines to the generation of the recommendations,

based on rational arguments. These recommendations can be addressed to the legislative body. It can be addressed to the executive body in order to develop promotion programmes. And it can be addressed to the scientific community itself in a reflexive manner, in order to define areas in which scientific research is needed. The memorandum is at least optimised for criticism from other scientific or non-scientific parties. Again, the initialising non-scientific problem will be the basis for the criticism. The whole discussion will be a contribution to transdisciplinarity as a means of solving urgent societal problems.

Dr. rer. nat. Michael Decker is member of the scientific staff of the European Academy and projectmanager of the project „Robotics“. His special field of interest is Technology Assessment.

Working groups

Robotics

The project group has held the Mid-term-Meeting, which took place in Bad Neuenahr-Ahrweiler, on 3/4 April 2000. It was the aim of this meeting to discuss the papers prepared by the project members with external reviewers in order to receive a first evaluative feedback and further suggestions for the preparation of the final report. Following Professors participated as invited reviewers: Dr. D. Birnbacher (Philosophisches Institut Universität Düsseldorf); Dr. van Eimeren (Institut für Medizininformatik und Systemforschung GSF-Forschungszentrum für Umwelt- und Gesundheit, Oberschleißheim); Dr. A. Grunwald (Institut für Technikfolgenabschätzung und Systemanalyse (ITAS), Forschungszentrum Karlsruhe); Dr. P. Janich (Institut für Philosophie, Philipps-Universität Marburg); Dr. W. Mazal (Institut für Arbeits- und Sozialrecht, Universität Wien); Dr. T. Lüth (Surgical Robotics Lab, Charité Berlin); Dr. F.-W. Mohr (Klinik für Herzchirurgie, Herzzentrum Leipzig); Dr. L. Philipps (Institut für Rechtsphilosophie und Rechtsinformatik, Universität München).

Chair: Professor Dr. rer. nat. Thomas Christaller (GMD/AIS, Sankt Augustin)

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Climate Prediction and Precautions

On 22th March 2000 the working group held its 9th project meeting, which centred on transdisciplinary reflexion of climate research. Professor Grunwald (Karlsruhe) gave an introduction for a discussion on goals and the challenges of interdisciplinary research and of the power and limitations of climate models and their results.

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Human Genetics

On 25/26 March 2000 the project group held its final meeting. The group finally adopted the texts including recommendations addressed to science and technology policy makers. The groups memorandum is to appear during the second half of this year.

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(Universität Heidelberg)

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News in Brief

Technology transfer and assessment network

The *Bonner Transferkreis* held its 12th meeting on 14 March 2000 at the European Academy. Dr. Michael Decker (Bad Neuenahr-Ahrweiler) gave an introductory lecture on the methodological aspects of technology assessment using the example of the European Academy's project on "Robotics". Network members are – besides the European Academy – 14 technology research-, development- and transfer-institutions of the Bonn region. Aims of the network are

the promotion of inter-institutional co-operations and contributions to the development of science and technology in the region Bonn/Rhein-Sieg/Ahrweiler.

Official Opening Ceremony

The European Academy presented its new premises with an official opening reception on 23 March 2000. Around 80 guests listened to speeches and greetings by Minister Professor Dr. Jürgen Zöllner for the Bundesland Rheinland-Palatin, Professor Dr. Achim Bachem for the German Aerospace Center, Landrat Dr. Pföhler and Bürgermeister Flohe. On this occasion the sculpture "Europa", created by Titus Reinartz was donated to the European Academy by the Kreissparkasse Ahrweiler – the local savings bank – on permanent loan. The ceremony was framed by music from a clarinet duo.

Rationing in Medicine

This years spring symposium from 23 to 25 March 2000 in Bad Neuenahr-Ahrweiler covered topics such as 'rationing in international perspective', 'rationing and the law' and 'the future of rationing' that were discussed by an international audience. External speakers were: S. Hahn and C. Schultheiss: Alternative Concepts of Rationing; H. Raspe: Prioritising and Rationing; D. Hunter: The Practice of Rationing in the UK; M. Imhoff: Rationing and Intensive Care; C. Szymkowiak: Global Budgets and Rationing; E. Rampfl-Platte: Patient-rights and Rationing; W. Lübke: Where shall rationing go? Philosophical aspects; J. Glover: Ethical Lessons from Twentieth Century Atrocities; J. Fritze: Complementarity of private and public insurance. The proceedings of the symposium will be published in the academy's book series.

Workshop

Eva M. Neumann-Held, member of the scientific staff of the European Academy organised together with C. Rehmann-Sutter the workshop: "Genom und Lebensgestaltung" at the symposium "Religion – Natur – Umwelt; Welches Verständnis von Natur führt zu ethischem Handeln?". The Symposium was initiated by the foundation "Mensch-Gesellschaft-Umwelt" (MGU) of the University of Basel, Switzerland on 1 april 2000.

Organs

Council

On 22 March 2000 the Council of the European Academy – composed of the members of the project groups – convened for its second meeting. Under the title of 'Problems of Interdisciplinary Research' the Council discussed the practice and future development of the academy's working method.

Scientific Advisory Board

On 23 March 2000 the Scientific Advisory Board met for its 7th meeting. Topics were among other things the academy's working programme for the years 2001 - 2006.

Conferences

Implementation and Limits of Interdisciplinarity in European Technology Assessment

13-15 September 2000, Bad Neuenahr-Ahrweiler, organised by the European Academy

Sessions: I. Methodological Aspects of Interdisciplinarity in TA, II. From Interdisciplinarity to Transdisciplinary Validity, III. Interdisciplinarity in TA: Case Studies

Contributors among others: Richard Ashcroft (Empirical College, London), David Cope (POST, London) Sergio Funtowicz (JRC Ispra), Armin Grunwald (ITAS Karlsruhe), Imre Hronsky (Technical University of Budapest), Albert Jovell (Autonomous University of Barcelona), Ortwin Renn (Academy for Technology Assessment Stuttgart), Rob Reuzel (University of Nijmegen), Jeroen van der Sluijs (Utrecht University)

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Lectures

Gerd Hanekamp:

„Kulturalistische Wirtschaftsethik. Ein Programm.“ Jahrestagung des Deutschen Netzwerks Wirtschaftsethik, Seeheim-Jugenheim, 24./25.3.2000.

Felix Thiele:

Genetische Diagnostika im Versicherungswesen. Ethische Aspekte. Ärztekolloquium der Bayerischen Rückversicherung AG, München, 28.3.00.

New Publications

Gerd Hanekamp: Kulturalistische Bemerkungen zur Wirtschaftsethik. In: Forum Wirtschaftsethik. 8.Jahrgang (2000), Heft1, 14-17

Eva M. Neumann-Held, Christoph Rehmann-Sutter: „Philosophy and Developmental Genetics. A Case Study for Transdisciplinary Research“. In: Rudolf Häberli et al. (eds.): Transdisciplinarity: Joint Problem-Solving among Science, Technology and Society, Workbook I, Zürich: Hoffmanns (2000), 90–92

Priess, K. et al.: Fungi in corals: Black bands and density-banding of *Porites lutea* and *P. lobata* skeleton. In: Marine Biology vol. 136/1, 2000, 19-27

Rehberg, U.: Effizienzkontrollen von Grünlandpflegeprogrammen in der Umgebung Heidelbergs. In: Karrasch, H. et al. (Hrsg.), Heidelberger Geographische Gesellschaft: Ozeane und Küsten. (= HGG-Journal 14). –Heidelberg, (1999), 191-204

M. Weingarten: Innovation und Entwicklung. *Graue Reihe* 21, Europäische Akademie, Bad Neuenahr-Ahrweiler, 2000

Personalities

Foto

Dr. rer. nat. *Kathrin Priess* studied Biology and Applied Oceanography at the Universities of Berlin (Freie Universität), Barcelona and Perpignan, where she graduated in 1992. She specialised in Marine Environmental Sciences at the University of Marseille (Aix-Marseille II). This led to a doctorates thesis on Growth variations of massive reef corals in Mayotte Island (Comoro Archipelago) under the auspices of both the University of Marseilles (Université de la Méditerranée - Aix-Marseille II) and the University of Kiel. From 1997 to 1998 she worked with Dr. B. Thomassin (*Centre d'Océanologie de Marseille*) as a post-doctoral researcher on coral reef ecology. In 1999 she received a post-doctoral-grant from Tel Aviv University, and the Interuniversity Institute for Marine Sciences of Eilat, Israel, where she spent 9 months working on coral health under the supervision of Professor Yossi Loya. In 1998 she was a Ramón y Cajal Scholar and EPTA co-ordinator in the Office for Scientific and Technology Options Assessment (STOA) of the Directorate General for Research at the European Parliament in Luxembourg. Since November 1999 Dr. Priess has been a member of the scientific staff of the European Academy. She is the co-ordinator for the publication of the project : Biodiversity. Scientific Foundations and Social Relevance.

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