



Europäische Akademie

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

Direktor:
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Newsletter

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Editorial

The first issue of *Poiesis Et Praxis as an International Journal of Ethics of Science and Technology Assessment* appeared at the beginning of 2002. The first volume was finished in June 2003. The methodology of technology assessment, bioethics, the theory of sustainability, as well as medical ethics were the most popular subject areas treated. The contributors came from all over the world with a clear focus on Europe.

Beginning with the second volume, a new publication instrument is introduced – the special theme. In these we will focus on a specific subject that deserves an in depth treatment from different perspectives. Some of these special themes will be edited by guest editors who generally are specialists in the particular field. In the first quarter of 2004 specials on 'Health Technology Assessment', 'Biodiversity' and 'Intervening in Psychic Capacities' will appear. The special themes will appear under the heading 'Focus'.

In the other thematic categories 'Original papers' and 'Forum' the discussion of methodological questions in Technology Assessment and Applied Ethics will be intensified

The Newsletter will report regularly about the upcoming special themes in the 'Focus' section.

Focus

All Knowledge is Orientational Knowledge

Gerd Hanekamp

Going back to a proposal of Jürgen Mittelstraß the distinction between orientational and dispositive knowledge (*Orientierungs- /Verfügungswissen*) has been popular for quite a few years now. It would be a quest of its own to reconstruct its career starting from Mittelstraß' original publication. Here, instead, the concept as it is most frequently used in the context of giving scientific advice, e.g. in Applied Ethics and Technology Assessment will be scrutinized. This concept reads as follows: Dispositive knowledge on the one hand allows us to control a certain state or development, i.e. the particular state or development is at our disposition. Orientational knowledge on the other hand is reflective knowledge that allows us to seek orientation about the relevant states or developments, i.e. it allows us to assess and evaluate these.

The German version of this article is available at www.europaeische-akademie-aw.de. Die deutsche Fassung dieses Textes kann auf der Homepage der Europäischen Akademie abgerufen werden unter: www.europaeische-akademie-aw.de.

This categorization of knowledge first of all can be used to criticize approaches to scientific advice that are designed to only provide dispositional knowledge and leave the orientational endeavor to 'politics'. This analytic use of the distinction is pointing out that there is something missing in these approaches. In other words: Scientific advice is not only to provide knowledge about means to established ends (dispositional) but also knowledge to establish ends (orientational) in the first place.

This criticism is enforced by connotations that become clear when the two corresponding predicates 'to dispose' and 'to orient' are scrutinized. If 'to dispose of something' on the one hand is understood as 'to control something fully without restriction' this type of knowledge is qualified as eo ipso not open for restrictions. Technical and scientific knowledge thus are viewed as genuinely deficient. 'Restriction', however, is a term applicable only to the use of this type of knowledge not to the knowledge itself that as such is invariant relative to the ends that it can serve to pursue. If 'to orient' on the other hand is

understood as to find one's way (in view of the rising sun) the corresponding type of knowledge is connotatively qualified as genuinely adequate. This type of knowledge makes things clear, understandable and allows for wellinformed decisions. Only, this orientation has to rely on the relevant 'dispositional knowledge'.

Secondly the above categorization might be used to describe alternative approaches to scientific advice that are based on an integral view of reason. Applied ethics and modern TA are supposed to not only provide dispositive but also orientational knowledge. So instead of only claiming that there is something missing, now a task is formulated to design the scientific effort in a way to provide both types of knowledge in terms of scientific advice. This productive use, however, is not straightforward since it is not self-evident how the two parts combine. Generally, there are three basic approaches comprising the one that excludes the orientational part from scientific scrutiny:

- In the agnostic approach only dispositional knowledge is available for scientific

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reasoning. Orientational knowledge is a product of the 'political process'. This, of course, is the approach criticized above. This view is, however, not only of historical interest. Only recently an advisory board appointed by the German government – the so-called Risk Commission ('Risikokommission' [ad hoc-Kommission "Neuordnung der Verfahren und Strukturen zur Risikobewertung und Standardsetzung im gesundheitlichen Umweltschutz der Bundesrepublik Deutschland"]) – followed this approach. In their final report the commission recommends a strict separation between risk assessment and risk management restricting the aspect of orientational knowledge to risk management. This measure is supposed to avoid 'the interference between scientific risk assessment and the weighing of economic, technical, social and political aspects'. It, nevertheless, is conceded, that despite the strict separation an intensive cooperation and feed-back process between the two stages are necessary.

- The modular approach presupposes that both, dispositional and orientational knowledge are available for scientific reasoning. They can be acquired in separate endeavors, mostly organized in a two-step process. First, the relevant dispositional knowledge is collected, then the orientational knowledge for the field under scrutiny is developed. To further use the Risk Commission's recommendation as an example: Risk assessment and the weighing process of risk management are both available for scientific scrutiny and can be elaborated one after each other.
- The integral approach is based on the realization that the elaboration of dispositional and orientational knowledge has to be organized in an integral process in order to be expedient for an extra-scientific task. Knowledge thus has to be elaborated in a 'transdisciplinary' manner, to use another term made popular by Jürgen Mittelstraß. In terms of transdisciplinarity a separate process would hinder the integration of the relevant disciplinary knowledge. To provide only dispositional knowledge thus is not half of the project to provide adequate advice such that orientational knowledge just had to be added. The adequacy is provided by an integral view of all disciplinary aspects. The Risk Commission example translates into an integral assessment process that includes the described weighing processes. The results are then available for risk management in terms of policy making and enforcement. The feed-back process necessary does in this case not have to cure con-

ceptual short-comings of the assessment but (re-)directs the transdisciplinary endeavor towards the relevant questions. It is important to stress that, of course, the weighing processes in the course of the policy making process is not touched by this sourcing-in of such weighing processes into the scientific endeavor.

These approaches constitute an integral view of reason in different ways. The agnostic approach is agnostic in terms of a scientific treatment of practical questions. Yet, since the practical questions are treated within the political system the view becomes integral when the ensemble of scientific elaboration and political decision-making is seen. To separate the two aspects in terms of systemic responsibilities, after all does not allow to fully exploit the potential the sciences have to provide policy advice (including the cultural sciences).

The modular approach tries to cure this short-coming. But it has to presuppose that practical questions can be treated scientifically (scientific availability). There has been a long and rather sophisticated philosophical discussion on this issue that cannot be appreciated here. The study reports published by the Europäische Akademie might at this point serve as an example that this type of treatment is possible, sensible and helpful in the context of scientific advice. If we accept this to be true the modular approach is the simplest way to elaborate scientific advice in terms of an integral view of reason within science. On the basis of the facts given by the natural sciences a treatment by scientists from the other scientific disciplines can complete the picture. In terms of organization this approach is promising since it allows to independently fulfill the tasks within separate work-packages.

Even so, this approach might be judged deficient since it does not exploit the epistemic synergies that are possible between the natural and the cultural sciences. This criticism has to presuppose that there are significant mutual learning processes within a multi-disciplinary group that are indispensable for trans-disciplinarity as described above (epistemic synergy). – One might think of the unavoidable interference between assessments of means and assessments of ends in order to substantiate this presupposition. – It is the integral approach that cures this deficiency. The price to pay for this is a rather ambitious organizational set-up.

With the two presuppositions of scientific availability and epistemic synergy accepted the order of the three approaches describes a methodological learning process. It then is the integral approach that allows to fully exploit the scientific potential as

well as the epistemic synergies between the different scientific disciplines, given that the organizational challenges are met. The initial distinction of dispositional and orientational knowledge now can be assessed in the light of the integral approach. If it is the result of the integrative, trans-disciplinary effort as a whole that gives orientation it is not sensible any more to separate between two types of knowledge only one of which is able to give orientation. The objective of this distinction, to design an approach that fully exploits the available potentials and to criticize approaches that don't might yet be reached by using a different terminology.

The distinction between the natural and the cultural sciences might serve as a starting point for this task. Connected to this are two basic distinctions that can be traced back to Aristotle: between *poiesis* and *praxis* (pragmatic) as well as between theoretical and practical knowledge (epistemic). Pragmatically *poietic* and practical actions are distinguished. *Poietic* actions are intervening actions that establish certain skills. These skills serve as expedient means for particular ends. Practical actions are cooperative actions to establish and achieve common ends.

An epistemic reading of this pragmatic distinction can result in a separation of dispositional and orientational knowledge. The use of the corresponding epistemic categories theoretical and practical, however, allows for a translation of the latter that fulfills the above requirements. The characterization of the integral project then reads as follows: Expedient knowledge in terms of scientific advice requires both, theoretical and practical knowledge. Of course, the preciseness of this distinction does not compensate for the loss in rhetorical power. A partial regaining of the latter might be achieved by recurring to the means/ends distinction. Theoretical knowledge then is providing an orientation in terms of means, orientational knowledge an orientation in terms of ends. What is distinguished now are theoretical and practical orientation, not two types of knowledge.

Finally thus the criticism of agnostic approaches to scientific advice refers to the lack of practical orientation they give. Integral approaches are characterized by the simultaneous elaboration of theoretical and practical orientation.

Dr. phil. Gerd Hanekamp, Dipl.-Chem., is Vice-Director of the Europäische Akademie. He coordinated the project group "Sustainable Development and Innovation in the Energy Sector" and is a co-author of the respective study report. Dr Hanekamp is also the managing editor of the academy's journal "Poiesis & Praxis".



Working Groups

Nanomaterialien, Nanodevices, Nanocomputing. Standortbestimmung und Perspektiven

The project group "Nanomaterialien, Nanodevices, Nanocomputing. Standortbestimmung und Perspektiven" held a meeting in Kochel am See, Bavaria, on 26th October 2003. As an invited expert, Professor Dr. Mark Alper from the Lawrence Berkeley National Laboratory of the University of California presented his view of the interfaces and links between Biology and Nanotechnology. According to his opinion, nanoscientists can learn a lot from the way nature organizes and runs functional systems on the atomic or molecular level. He also commented on the correct position of nanobiological topics in the structured table to be used by the project group. Professor Alper warned not to raise unrealistic expectations concerning Nanotechnology, reflecting the fact that some hopes might never come true. He also stressed the importance of shaping this area of research together with the public, avoiding campaigns against a technology conceived as possibly hazardous.

A further meeting of the project group was held in the Frankfurt Airport Conference Center on 14th November 2003. There, Professor Dr. Viola Vogel from the University of Washington in Seattle reported on a scientific workshop organized by her that brought together biologists and actors in the field of Nanotechnology. Professor Vogel, who heads the Center for Nanotechnology at the university's Department of Bioengineering, stated that there are still communication problems between the different branches of research. She was also asked to give a structural overview of biomedical topics within the framework of Nanotechnology. This resulted in another ordered table that will be processed and refined throughout the next couple of project group sessions.

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Book Presentation "Embryo Research in Pluralistic Europe" in Brussels

On 15th December the Europäische Akademie will present the newly released volume "Embryo Research in Pluralistic Europe" to the public in Brussels. The 21st volume of the book series "Wissenschaftsethik und Technikfolgenbeurteilung" is the result of the academy's project group "Embryo Experimentation in Pluralistic Europe" which was chaired by Professor Dr. Davor Solter.

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News

German-Italian Seminar on Bioethics

From the 24th-26th September a German-Italian Seminar on bioethics took place at the Villa Vigoni located at Lake Como in northern Italy. The event was organised by the Goethe-Institut Turin, the speakers - Ph.D. students and postdoctoral researchers - were invited by Professor Viano, University of Torino, and Professor Gethmann, Europäische Akademie Bad Neuenahr-Ahrweiler GmbH. After a review on recent developments in applied ethics by professors Viano and Gethmann, five Italian and six German speakers presented the results of their research in three sessions.

The first session was devoted to problems of applying bio-ethics in bio-politics. Felix Thiele, Bad Neuenahr-Ahrweiler, presented an approach to bioethics that sees this discipline as a tool for mastering social conflicts caused by developments in the modern life-sciences. Minou-Bernadette Friele, currently Oxford, and Micaela Ghisleni, Torino, devoted their talks to the problems of applying and institutionalising moral reasoning in political practice. The debate focused mainly on questions of securing scientific standards in the political arena.

A second session focused on animal-ethics and its foundation in the philosophy of science. Arainna Ferrari, Torino, analysed the implementation of animal protection in the German constitution. The subsequent discussion focused on the political evolution of this issue that took place with a rather marked absence of juridical and philosophical expertise. Thorsten Galert, Marburg, analysed the preconditions for correctly stating that an animal feels 'pain'. The debate centred on the (finally not solved) question, whether such statements are normative or descriptive in character. Further talks were given by Francesco Rende, Roma, and Simone Pollo, Roma.

The last session was devoted to several specific topics of the concept of death (Maurizio Balistreri, Roma), xenotransplantation (Jorge Guerra-Gonzales, Bad Neuenahr-Ahrweiler), potentiality and stem cells (Klaus-M. Seel, Erlangen) and risk & responsibility (Rupert Leitner, Bad Neuenahr-Ahrweiler).

Wirtschaftsjunioren Rhein-Ahr

Am 9. Oktober diskutierten in den Räumen der Europäischen Akademie GmbH die Wirtschaftsjunioren Rhein-Ahr mit Professor Dr. C. F. Gethmann über die Bedeutung der Moral für das wirtschaftliche Handeln. Mit dieser Veranstaltung wurde das bundesweite Jahresthema „Wirtschaftsethik“ der Wirtschaftsjunioren aufgegriffen.

Scientific Advisory Board

On 16th October the Scientific Advisory Board of the Europäische Akademie GmbH

held a meeting in the premises of the academy. Thereby, the Europäische Akademie's project "Environmental Standards. Low Dose Effect Relations and their Risk Evaluation" was approved. Furthermore, the projects "Organ Trade", "European Social Policy", "Intervening in Psychic Capacities", "Pharmacogenomics" and "Nanomaterialien, Nanodevices, Nanocomputing. Standortbestimmung und Perspektiven" were evaluated.

Fachgespräch „Effizienzdenken und moralische Verpflichtung im Gesundheitswesen“

Am 6./7. November fand an der FernUniversität in Hagen in Zusammenarbeit mit der Europäischen Akademie Bad Neuenahr-Ahrweiler GmbH und dem Allgemeinen Krankenhaus Hagen ein Fachgespräch zum Thema „Effizienzdenken und moralische Verpflichtung im Gesundheitswesen“ statt. Es war die Fortsetzung einer im Juni 2003 in Bad Neuenahr-Ahrweiler abgehaltenen Tagung mit demselben Thema.

Georg Marckmann (Tübingen) stellte das utilitaristische Prinzip der Nutzenmaximierung im Bereich der Gesundheitsvorsorge als mit Zusatzannahmen taugliches Prinzip heraus. Nicht alle gesellschaftlichen Gruppen können, so Marckmann, von der Nutzenmaximierung im Gesundheitswesen profitieren. Besonders Behinderte und auch ältere Menschen geraten unter dieser Maxime ins Hintertreffen. Dies machte auch Rainer Souchon (Hagen) aufgrund seiner persönlichen Erfahrungen in der onkologischen Radiologie deutlich.

Im Rahmen des forum philosophicum der FernUniversität Hagen sprach Hartmut Kliemt (Duisburg) über den Zusammenhang von Ethik und Ökonomik in Bezug auf Rationalisierung und Rationierung in der Medizin. Ethik und Ökonomik stellen hierbei - wie so oft fehlgedeutet - keine Dichotomie dar, sondern bilden einen untrennbaren Zusammenhang, wenn über Rationierungsprozesse im Gesundheitswesen gesprochen wird.

Eine weitgehende Reform des Krankenhauswesens schlug Klaus-Dirk Henke (Berlin) vor. Demnach sollen regionale Anbietergesellschaften das Gesundheitssystem „aus einer Hand“ ermöglichen. Dabei soll gleichzeitig der Wettbewerb sichergestellt sein. Zum Abschluß stellte Günter Nierhoff (Dortmund) aus seinen Erfahrungen in einer nicht-privatwirtschaftlich geführten Krankenhausgesellschaft Möglichkeiten der praktischen Umsetzung des Effizienzdenkens unter moralischer Verpflichtung vor.

Ahrtalgespräch

Im Rahmen des „Ahrtalgesprächs“, die der Verein „Förderer der Europäischen Akademie Bad Neuenahr-Ahrweiler e.V.“ und die Stadt Bad Neuenahr-Ahrweiler gemeinsam veranstalten, fand am 20. November 2003

im Rathaussaal der Stadt Bad Neuenahr-Ahrweiler um 19.30 Uhr eine Diskussionsveranstaltung zum Thema „Haben die Gewerkschaften zuviel Macht?“ statt. Hintergrund der Veranstaltung war die Tatsache, dass in der politischen Diskussion über Reformen in Staat und Gesellschaft die Gewerkschaften in den vergangenen Jahren vielen Beobachtern als Bremserscheinen, die die notwendigen Entwicklungen behindern. Die Veranstaltung versuchte, in Form eines Streitgesprächs die tatsächliche und wünschenswerte Rolle der Gewerkschaften in unserer Gesellschaft genauer zu bestimmen.

Eingeleitet wurde die Veranstaltung vom Bürgermeister der Stadt Bad Neuenahr-Ahrweiler und Vorsitzender des Vereins „Förderer der Europäischen Akademie Bad Neuenahr-Ahrweiler e.V.“ Dr. Hans-Ulrich Tappe. Die Referenten des Abends, Professor Dr. Manfred J. M. Neumann, Institut für Internationale Wirtschaftspolitik, Bonn, und Professor Dr. Frank Nullmeier, Zentrum für Sozialpolitik, Bremen, führten in das Thema ein. Anschließend fand eine Diskussion unter den Referenten und mit dem Publikum statt, die von Professor Dr. Carl Friedrich Gethmann, Direktor der Europäischen Akademie, geleitet wurde.

Book Series

The 19th, 20th and 21st volumes of the Europäische Akademie's book series "Wissenschaftsethik und Technikfolgenbeurteilung" were published recently.

Volume 19: E. Ehlers, C.F. Gethmann (eds): *Environment Across Cultures*. Springer-Verlag, Berlin 2003, ISBN 3-540-40384-1

Volume 20: R. Chadwick, S. Henson, M. Liakopoulos, B. Moseley, C. Midden, G. Rechkemmer, A. von Wright, G. Koenen: *Functional Foods*. Springer-Verlag, Berlin 2003, ISBN 3-540-20120-3

Volume 21: D. Solter, D. Beyleveld, M. B. Friele, J. Holówka, H. Lillie, R. Lovell-Badge, C. Mandla, U. Martin, R. Pardo Avellaneda: *Embryo Research in Pluralistic Europe*. Springer-Verlag, Berlin 2003, ISBN 3-540-20379-6

Lectures

Minou Bernadette Friele

24.-26.10.03 "Do committees ru(i)n our political culture? On the compatibility of bioethics committees and democracy", Deutsch-Italienisches Doktoranden-Kolloquium zur Bio-Ethik, Goethe-Institut Turin (Menaggio)

Carl Friedrich Gethmann

25.10.03 „Die Geschichte der Ethik und Angewandten Ethik in der deutschen Philosophie des 20. Jahrhunderts“, Deutsch-Italienisches Doktoranden-Kolloquium zur Bio-Ethik, Goethe-Institut Turin (Menaggio)

30.10.03 „Der Bericht der Bioethik-Kommission des Landes Rheinland-Pfalz zur Stammzellenproblematik“, Arbeitsgruppe Gentechnologie-Bericht der Berlin-Brandenburgischen Akademie der Wissenschaften (Berlin)

13.11.03 „Gesundheit – Krankheit. Anthropologische und ethische Grundlagen eines kollektiv verantworteten Gesundheitssystems“, Akademievorlesung der Berlin-Brandenburgischen Akademie der Wissenschaften (Berlin)

Jorge Guerra González

24.-26.10.03 "Xenotransplantation: The zoonosis risk and the German and Spanish constitution", Deutsch-Italienisches Doktoranden-Kolloquium zur Bio-Ethik, Goethe-Institut Turin (Menaggio)

Gerd Hanekamp

24.11.03 „Nachhaltigkeit, Energie, Innovation“, Institut für Technikfolgenabschätzung und Systemanalyse (ITAS) (Karlsruhe)

Rupert Leitner

24.-26.10.03 "Responsibility and uncertainty", Deutsch-Italienisches Doktoranden-Kolloquium zur Bio-Ethik, Goethe-Institut Turin (Menaggio)

Felix Thiele

24.-26.10.03 "Bioethics, its foundation and its application in political decision.", Deutsch-Italienisches Doktoranden-Kolloquium zur Bio-Ethik, Goethe-Institut Turin (Menaggio)

Personalities



Priv.-Doz. Dr. rer. nat. Ursula-Friederike Habenicht studied biology at the Freie Universität Berlin from 1972–1978, taking a Ph.D. at the Institute for Zoology at the Freie Universität Berlin (Dept. of Endocrinepharmacology, Schering AG). From 1979–1981 Dr. Habenicht was scientific assistant at the Institute of Toxicology and Embryopharmacology at the Freie Universität Berlin. From 1982–1990 she first worked for the department of Andrology and Oncology and then from 1990–1998 as Head of Laboratory of Andrology and Hormone Therapy for the Department of Fertility Control & Hormone Therapy Research of the Schering AG, Berlin. Since January 2003, Dr. Habenicht is Head of Corporate Research Business Area Gynecology & Andrology (former Gender Healthcare) of Schering AG.

After her habilitation in 1991 she was managing director of the Ernst Schering Research Foundation from 1991–1998 and managing director of the Institute for Hormone and Fertility Research in Hamburg from 1997–2000.

Moreover, Dr. Habenicht is member of the Board of Trustees of the Berlex Foundation, Board of Trustees of the Ernst Schering Research Foundation, Board of the European Academy of Andrology and the Jury of the "Deutsche Zukunftspreis". Furthermore, she received the Marius-Tausk-Prize (1982), the Schoeller-Junkmann-Prize (1987) both of the German Society of Endocrinology and the Jubilee Medal (1998), in commemoration of the 650th anniversary of the foundation of the Karls-University Prague.

Since 2000 Priv.-Doz. Dr. Habenicht is member of the Scientific Advisory Board of the Europäische Akademie GmbH, of which she is the Deputy Chairwoman since 2003.

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