



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 name Europäische Akademie GmbH highlights "Europe" as the main recipient of the scientific policy advice. "Europe" means in the first place the "Europe of the 44", i.e. the Council of Europe since it was the Council that acted as a pioneer in very important societal questions particularly with regard to the so called "Bioethics Convention". In this context the Academy has a strong focus on Eastern and Central European countries which is reflected in various publications (e.g. Grey Series 9, 10, and 26).

Experts from several countries throughout Europe (for instance from Great Britain, the Netherlands, Austria, Poland, the Czech Republic, Hungary and many others) are participating in the Academy's project groups, whilst colleagues from Greece, Italy, the Netherlands and Spain are part of the scientific staff, thus integrating a European perspective.

Another contributing factor is the Academy's research fellowship programme which started in 2000 (we informed you in our Newsletter 18). So far scholarships were offered to researchers from Greece, Slovakia, Poland, and Great Britain. During their time at the Academy, researchers contribute to the various research activities, with benefits for both parties.

But of course, also the "Europe" of the EU plays a very important part in the scientific work of the Academy. With regard to policy advice for the European Union, the Academy has received grants especially from the 5th Framework horizontal programme "Improving the Human Research Potential and the Socio-Economic Knowledge Base (IHP)". In September 2000 the annual autumn conference was organised as a Euro-Conference on the "Implementation and Limits of Interdisciplinarity in European Technology Assessment (ILIETA)" and since January 2002 the Academy has been conducting an EU-funded project TAMI "Technology Assessment between Method and Impact".

This newsletter will inform you about all current and future European activities of the Academy at regular intervals.

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Focus

The Moral Status of the Embryo and the Protection of its Life

Carl Friedrich Gethmann

A number of current developments in bio-medical research has brought the question of the moral status of the human embryo into the centre of ethical reflection. The context governing pre-implantation diagnosis fundamentally pre-supposes the availability of the embryo prior to implantation, irrespective of whether on the basis of the diagnosis results the embryo is implanted or not. The ethical problems regarding human embryonic stem cells are to be found in taking the cells from the embryo and (at the present state of research) the inevitable result of its destruction. Therapeutic cloning produces an embryo for the purpose of procuring its embryonic material for the therapeutic needs of another (genetically identical or similar) human being.

1. It is undisputed that the act of using an embryo in all three contexts represents - or can represent (in the case of pre-implantation diagnosis) - an act of instrumentalisation. This assessment, however, does not necessarily imply - as is often inferred - that ethical reflection is thereby foreclosed. Namely, instrumentalisation is only inadmissible when the embryo possesses the status of a "person" and when it is a matter of *complete* instrumentalisation. Indeed, in the case of the destruction of the embryo it is a matter of complete instrumentalisation. Thus, the question of the status as a person and its moral significance remains. According to a long tradition emanating from Boethius, the status of a living entity entails a categorical (i.e. unconditional) entitlement to be recognized as "person-status"; since Kant referred to synonymously as "Dignity Status", a term that is anchored in the German constitution. In the international discussion on ethics, on the other hand, "Person" is mostly understood according to the definition of Locke, namely, that person-status is bound up with the describable existence of capabilities and skills. Thus, from an ethical point of view the term "person" in relation to the term

"human being" is in need of clarification to a high degree.

2. Since John Locke a number of capabilities and skills have been under discussion to decide which characteristic feature distinguishes a human being and a "person" in order to establish a definition of person-status. Among these are such attributes as the ability to think, conscious awareness, self-awareness, the ability to experience and be aware of the present or grasp the concept of future, the capability to experience feelings, suffering and/or pain, to possess self-esteem, etc. among many others. Attributes that mark the difference between persons shall be collated here under the term "personal descriptors". Essentially, the establishment of a personal descriptor involves the following problems:

- In view of the many different personal descriptors under discussion, the question as to the *right* descriptor is inevitable. Clearly, the attributes given differ intentionally as well as extensionally.
- There are considerable doubts regarding the adequacy of personal descriptors when it comes to beings whose complementary mass is made up of those that are denied

person-status. Therefore, this holds true, for example, for beings that are incapable of thought, that are unable to experience pain and beings without conscious awareness, etc.

- With a view to the human development in the prenatal phase but also regarding highly disabled human beings, considerable problems exist in the verification of the personal descriptors and/or in establishing unequivocal sub-summptions. This means that further indicators describing behavioural features, are needed in order to decide whether the personal descriptor is applicable or not. Thus, in the best case the explication of the moral status by means of descriptors consists in an iteration of the problem and in the worst case in an *obscurum per obscurius*.

On the basis of the problems summarised above it is therefore possible to conclude that with regard to person-status the designation of a capability or skill in the sense of a personal descriptor is not a suitable criterion.

3. From this situation many participants in the discussion draw the conclusion that the question regarding person-status cannot be decided at all on the basis of recourse to describable attributes but rather that the decision must be regarded as decided *a priori*. On the basis of its possessing the potential "to become" a human being, i.e. irrespective of its manifested capabilities and skills, the embryo is claimed to be regarded, from the very outset, as a being with all the status entitlements of a human being. The seeming plausibility of such a *metaphysical position* owes its existence, above all, to the pre-supposition that distinguishing empirical positions on the one hand and the metaphysical on the other is to be regarded as complete and disjunctive. However, there is no proof for this pre-supposition of completeness. The metaphysical position, with regard to the relationship between human and person, leads to an unassailable "theory of equivalence".

4. A more exact deontic and logical analysis shows that the equivalence theory is unsustainable. It is based on an argument such as the following:

Premise 1: Embryos are humans

Premise 2: Humans are persons

Conclusion: Embryos are persons

Hence, the seeming plausibility of conclusions of this nature is achieved through the fact that the word "human" is used equivocally (*quater-nio terminorum*). The first premise draws its plausibility from the conception that "human" means "human being", i.e. the species of *homo sapiens*; after all, to what other species should human embryos be assigned? Thus, the first premise is analytically true. The plausibility of the second premise is assumed from the intention to regard human being as an "entity possessing categorical entitlements" that is to say the intention to award person-status. In this case the term "human being" is interpreted in a normative sense. The decisive (hidden) premise that all human entities, irrespective of their ontogenetic phase of development, should be *obliged* to be regarded as having person-status is the very element that remains unsubstantiated by sound argumentation.

5. The deontic statements, characteristic of ethics (advisable that p; prohibited that p; permissible that p), can be understood as *categorical* (independent of any antecedents) or as *hypothetical* (dependent upon antecedents). It goes without saying that person-status, if it is given, is to be understood as categorical, i.e. that it is unconditional. The question is whether the right of the protection of life is to be understood as categorical in the same way. This would, in any case, be mandatory if the right of the protection of life were logically implicit in person-status. In term this would be a problem of analyticity. Above all, however, the corresponding pre-supposition, measured against moral intuition, is implausible because protection of life, in certain, albeit extreme cases, is indeed dependent upon antecedents. In this connection we may call to mind three classic examples: self-defence/euthanasia, the death penalty and the just war. Thus, it can be seen that the question as to whether discriminate consideration is permissible with regard to the right of the protection of life on the part of an embryo is ultimately not at all dependent upon the question of person-status.

6. Among many participants in the current discussion the term "evaluate" or "weigh out" evokes the connotation of being arbitrary or subject to arbitrary judgement. In contrast to this, according to all classical ethical paradigms, moral consideration is a constituent component of the power of moral judgement, consequently the reconstruction of universally applicable (canonical) rules of consideration is one part of the task of ethics. These rules constitute a canon for consideration. Thus, one should speak of canonical consideration. In the current discussion on bioethics the objection is raised against this consideration theory that, when it comes to the safeguarding of life, any form of gradation is inconceivable. However, it is arguable that the duty to safeguard the life of an embryo can indeed be subject to gradation. Thus, the life of embryos that have already been implanted may be regarded as possessing a very strong right of protection, whereas in the case of embryos earmarked for implantation, embryos that are "superfluous" but suitable for adoption and finally embryos unsuitable for adoption the right of protection may be regarded as diminishing step by step. Also with regard to the aim of destroying an embryo it is indeed possible to apply gradation, whereby it may be pre-supposed that the healing of a *close individual* in a concrete situation, in the context of a standard therapy with good prospects of success must be regarded as a very high aim, whereas the aim to attain an unspecified benefit for mankind as a whole, via various intermediate steps, may be deemed relatively low.

7. Since the establishment of a capability or skill is no criterion for the question as to the person-status of an embryo, and furthermore, as the duty to safeguard human life – even if person-status is pre-supposed – is basically accessible to consideration from an ethical point of view, there are no reservations in subjecting the right of the protection of life to graded consideration. In this context the question of the status of the embryo and what status

the embryo as such should possess is not decisive but rather what consequences a particular mode of dealing with embryos may have on the co-existence of human kind. Ultimately, it is not a question of describing nature but a question of moral culture.

8. With regard to the gradation of consideration the "context of recognition" of the embryo in which the relationship to the mother is of particular, exemplary significance is the decisive factor. In this connection it must be pointed out that the development of a human being in the pre-natal phase must not be regarded as programmatic, i.e. as though the human being were already "complete" with the fusion of the egg and the semen cell. In particular the role of the mother in the pre-natal development is of fundamental biological and constitutive importance. Therefore, on the basis of insights into a biological development, there are no ethical reservations by regarding conception, the nesting of the egg and the birth as decisive steps in the development of a human being. According to the point of focus it is also possible to effect even finer ontogenetic gradations, such as the beginning of the brain function, the beginning of the formation of individuality, the beginning of the capability to experience feelings. Given that the gradation of the duty to protect life is fundamentally permissible from an ethical point of view, it is also fundamentally permissible from an ethical standpoint to consider that in certain borderline cases, e.g. those characterised by the "Ethos of Healing" to hold that the destruction of an embryo in the early embryonic phase is morally justified.

9. It must be borne in mind, however, that the *options for action* in pre-implantation diagnosis, research on human embryonic stem cells and therapeutic cloning are *different*, from each other. In the case of PID the selection of embryos is fundamental in the context of the desire to have a child; the destruction of embryos because of unwanted attributes is an unintended – not even inevitable side effect (an unwanted embryo could be the very one that is sought by other parents and could therefore be adopted). In the field of research on embryonic stem cells at the present state of the art the destruction of the embryo also is an inevitable side effect (though by no means logically cogent). The aim, however, is not founded upon the desire for a child but on a more or less promising prospect of success in treatment. With regard to therapeutic cloning the aim is also to find treatment options, whereby the destruction of the embryo is not merely a side effect but inherent in the aim syndrome.

This is a shortened version of a lecture held at a symposium of the Parliament of Rhineland Palatinate State on October 10, 2001. An elaborated German version was published in *Deutsche Richterzeitung* 80 (2002) 204 – 208.

The author is director of the Europäische Akademie and professor of philosophy at the University of Essen; he is a member of the Bioethic Commission of the Rhineland Palatinate State.

Working groups

Presentation:

Nachhaltige Entwicklung und Innovation im Energiebereich

On October 21st 2002 the Europäische Akademie's project group "Sustainable Development and Innovation in the Energy Sector" presented its final report to the public at the Representation of Rhineland-Palatinate in Berlin.

Almost every energy scenario is based on trends that would lead to an enormous growth in the demand for energy in the coming decades. Meanwhile, at international conferences among other places, one is concerned with the opposite outlook, a massive reduction of greenhouse gas emissions, especially of CO₂ emissions caused by energy consumption. Experts also point out the political risk of depending on mineral oil and remind us of the fact that resources are not inexhaustible. How can this chasm be bridged? How can we shape a more sustainable energy system from the existing one? Hopes are mostly pinned on technological progress and innovations.

So far, however, there are no specific suggestions concerning the extent to which innovations can really contribute to reconciling ever-growing energy consumption with the limitations referred to, regarding the availability of resources and the environment, and with the structural demands on any energy system.

The study now presented brings together economic, legal, scientific and philosophical competences with a view to developing such proposals.

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Mid-Term meeting: Environmental standards. Low dose effect relations and their risk evaluation

The project group's mid-term meeting took place in Bad Neuenahr-Ahrweiler on 12th and 13th September. The meeting allowed discussion on the problem involved with extrapolation from high to low doses in a broader interdisciplinary expert panel. The meeting emphasized the sound scientific content of the presented drafts and gave valuable comments on the results obtained by the group until now. Suggestions concerned for example a more in depth discussion of the pros and cons in the scientific controversy on dose-response models as well as the standardisation of the style and the integration of the different parts of the future report.

Reviews: Professor Dr. Maria Blettner (University of Bielefeld), Professor Dr. J. Philip Day (University of Manchester), Professor Dr. Anne Fagot-Largeault (Collège de France), Professor Dr. Ludwig Feinen-

degen (Lindau), Professor Dr. Bernd Hansjuergens (UFZ Centre for Environmental Research Leipzig), Professor Dr. Dr. Bernhard Irrgang (Technical University Dresden), Professor Dr. Georg F. Kahl (University Goettingen), Professor Dr. Jos Kleinjans (University of Maastricht), Professor Dr. Wolfgang Köck (UFZ Centre for Environmental Research Leipzig), Professor Dr. Suresh H. Moolgavkar (Fred Hutchinson Cancer Research Center, Seattle), Dipl. Päd. Holger Schütz (Research Centre Juelich).

In the following months the project group will refine the memorandum integrating as much as possible of the feed back of this meeting.

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Reasoning Goals of Climate Protection. Specification of art. 2 UNFCCC

The working group held a progress meeting in Kiel from 10th to 11th September 2002. The working group discussed draft papers on ethical implications of art. 2 UNFCCC, on trade-offs of it's constraints and on concrete positions regarding the stabilization goal as laid down in the Framework Convention.

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Conferences

Spring Conference 2003: Bioethics in a Small World

From 10th to 12th April 2003 the Europäische Akademie will organise an international conference on bioethical problems connected with the globalisation process. The conference will include sessions dealing with methodological problems – "Bioethics. A science and its application in politics"; "Culture-dependent ethics?" – as well as practical problems such as "Research Ethics", "Access to essential drugs", "Patents on biomaterials", and "GMOs and the world's nutrition problem". Speakers will be i.a. Abdallah Daar (Toronto), Weyma Lübbe (Leipzig), Edgar Morscher (Salzburg), Udo Schüklenk (Johannesburg), Carmel Shalev (Tel Hashomer), Joseph Strauss (Munich), Godfrey Tangwa (Yaounde).

For further information please contact the scientific organisers:

Richard Ashcroft (r.ashcroft@ic.ac.uk) or Felix Thiele (Felix.Thiele@DLR.de)

Autumn Conference 2002:

"Nanotechnology Assessment" was the title of the annual Autumn Conference of the Europäische Akademie. It took place in Bonn from 13th to 14th September 2002. The scientific symposium focussed on Nanoelectronics and in this field especially on Nanocomputing. Three high-ranking American scientists, among them the Feynman-Prize for Nanotechnology winners Jim Heath and Stan Williams, reported on the state of the art.

Professor Jim Heath from the University of California, Los Angeles, reported on the use of supra-molecular compounds as Nano-switches in memory chips. Heath's group was able to demonstrate electronically configurable molecular based logic circuitry which is a great stride for molecular electronics towards concrete application. Dr. Stan Williams from HP Laboratories, Palo Alto, focussed on concepts to integrate molecular electronics in computer systems. One main topic is the ability of these computer systems to identify and bypass defect switch elements. Generally it became obvious that the future potential of molecular electronics is not only due to a higher density of integration but also to substantially lower production costs.

In her presentation "Proteins as mechanochemical nanoswitches", Professor Viola Vogel (University of Washington, Seattle), raised the question as to which lessons we can learn from the study of biological systems. In a few examples she illustrated how mechanical stretching of adhesion proteins can switch function. Moreover, Professor Vogel presented motor proteins as nature's "crown jewels", as they convert chemical energy into mechanical force under load. She showed how to use biological motors in man-made materials, for example to engineer a monorail at the nanoscale and incorporated into first motor-driven devices.

Dr. Gerd Bachmann (VDI-TZ Düsseldorf) mentioned economic aspects of nanotechnology. It became obvious that the quantification of the added value of Nanotechnology dramatically depends on the question as to what is or should be taken as nanotechnology? Finally, Professor Alfred Nordmann (University of South Carolina and TU Darmstadt) emphasised the need to clarify the epistemological status of nanotechnology and nano science within an attempt to provide a nanotechnology assessment.

The presentations were complemented by comments given by Dr. Marcel Mayor (Research Centre Karlsruhe), Professor Dr. Ulrich Simon (RWTH Aachen) and Dr. Gerd Hanekamp (Europäische Akademie, Bad Neuenahr-Ahrweiler). The results of the conference will be included in a future project of the Europäische Akademie on Nanotechnology.

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Symposium Biodiversity - Scientific basis and social relevance

On 9th and 10th September the Philosophical Institute Marburg and the Europäische Akademie organised a symposium on biodiversity with the aim to present some results of the Academy's former project group "Biodiversity - Scientific basis and social relevance". The symposium focussed on the significance of modern molecular biology for biodiversity research and its relationship to other relevant sciences as well as on the differences between species concepts used in different scientific fields.

The symposium allowed members of the former project group to meet and discuss with other interested experts in sciences and in humanities. Invited speakers were:

Professor Dr. Rudolf Amann (Bremen), Professor Dr. Jürgen Bereiter-Hahn (Frankfurt/M.), Professor Dr. Michael Bötker (Marburg), Priv.-Doz. Dr. Broder Breckling (Bremen), Dr. Michael Gudo (Frankfurt/M.), Dr. Dr. Mathias Gutmann (Marburg), Professor Dr. Peter Janich (Marburg), Professor Dr. Dr. Peter Kämpfer (Giessen), Professor Dr. Rainer Marggraf (Göttingen), Professor Dr. Ramón Roselló-Mora (Mallorca), Professor Dr. Heinz Saedler (Köln), Dr. Michael Weingarten (Jena).

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News

19. Deutscher Kongress für Philosophie

Carl Friedrich Gethmann hat auf dem 19. Deutschen Kongress für Philosophie, der vom 23. – 29. September an der Universität Bonn stattfand und dem Thema "Grenzen und Grenzüberschreitungen" gewidmet war, das Kolloquium "Die philosophische Bedeutung limitativer Theorien in Logik und Metamathematik" geleitet.

Research Fellowship Programme

The Europäische Akademie has awarded two fellowships this autumn.

Professor Dr. Andrzej Kaniowski, Chair of Ethics, University of Lodz, Poland, is analysing the reasoning and arguments used in justifications of *legal regulations* and particularly those used in the debates on biotechnological operations and techniques.

Dr. Doris Schröder, Senior Lecturer in Philosophy, Preston University, UK, is working on the finalisation of the project report "Functional Foods" and a series of publications on "suicide and altruism" and "rationality and HomoEconomicus".

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Lectures

Carl Friedrich Gethmann

09.09.02 "Wer ist der Adressat der Langzeitverpflichtung?": Ladenburger Diskurs, Gottfried Daimler- und Karl Benz-Stiftung (Ladenburg)

16.09.02 "Pragmatische Semantik": Kolloquium "Der Neopragmatismus und das Wissenschaftsverständnis in den Kultur-, Sozial-, Medien- und Kommunikationswissenschaften" (Bad Neuenahr-Ahrweiler)

22.09.02 "Wissen und Macht – Wissen als Macht?": 122. Versammlung der Gesellschaft Deutscher Naturforscher und Ärzte (Martin-Luther-Universität Halle-Wittenberg)

24.09.02 "Grundprobleme der Technikphilosophie": Lehrerfortbildung der Bezirksregierung Düsseldorf (Haltern am See)

11.10.02 "Universalitätsanspruch und kultureller Pluralismus": Symposium der Karl Heinz Beckurts-Stiftung "Verwundbarkeit der wissenschaftlich-technisch geprägten Kultur" (Bonn)

Christian Langenbach

06.09.2002 "Die elektronische Signatur. Zum Scheitern verurteilt?" Tagung Technische und gesellschaftliche Chancen der Informations- und Kommunikationstechnologien, Evangelische Akademie Iserlohn

Jeanine Lunshof

Interview by Max Lorenzen on the practice and regulation of euthanasia in the Netherlands. For the complete interview please see:

<http://www.philosophia-online.de/mafo/heft2002-03/Lunshof.htm>

Personalities



Ulrich Steger holds the Alcan Chair of Environmental Management at IMD and is Director of IMD's Forum on Corporate Sustainability Management (CSM) and Corporate Governance Research Initiative. He is also Director of the Daimler-Chrysler Partnership Program. Previously, Professor Steger was a full professor at the European Business School, a Guest Professor at St. Gallen University and a Fellow at Harvard University. He holds a Ph.D. Diploma-Oec from Ruhr University, Bochum. Before becoming involved in management education, he was active in German politics. He was Minister of Economics and Technology in the State of Hesse with particular responsibility for transport, traffic and energy. Before that, he was a member of the German Bundestag, specialising in energy, technology, industry, and foreign trade issues.

He is also a member of the supervisory and advisory boards of several major companies and organisations. He was a member of the Managing Board of Volkswagen, in charge of environment and traffic matters and, in particular, the implementation of an environmental strategy within the VW group worldwide.

He is the author or editor of numerous publications.

Ulrich Steger is chair of Europäische Akademie's project group "Sustainable Development and Innovation in the Energy Sector".

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