



Europäische Akademie

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

Direktor:
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Newsletter

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Editorial

As from 1st July 2003 the Europäische Akademie intends to take up at least 5 new projects and thus initiates its fourth project generation. All of the new projects have already received positive evaluation from the Scientific Advisory Board and have now been submitted to the financial sponsors for their approval. As soon as external funding is available to cover the financing of at least one project, the Europäische Akademie will initiate a 6th project ("Intervening in Psychic Capacities IPC").

The 5 new projects comprise: "European Social Policy (ESP)": Evaluation of the room available for the implementation and the necessity of a uniform, supranational European social policy; "Nano materials, nanodevices, nano computing. Determination of norms, standards and perspectives (NAN)": Technical development chances and technical risks of the nano sciences; "Environmental noise: Aircraft noise. Medical, technical, legal and philosophical aspects (NOI)": The paradigmatic dilemma of modern societies exemplified by aircraft noise disturbance; "The complexity of problems surrounding organ trading (ORG)": Discussion on the ethical problems of systems involving economic incentives to increase the supply of organs; "Pharmacogenomics (PCG)": The enhancement of pharmaceutical products regarding their metabolic properties and the avoidance of side-effects: Legal and philosophical aspects; Neurosciences, pharmacology and medicalisation.

Since the start of its work in 1996 the Europäische Akademie is able to point to 9 completed and 5 current, projects. 4 further projects will be completed in the course of 2003. The Newsletter will report regularly about the work of the projects.

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Focus

The Crisis of the Ethos of Science

Carl Friedrich Gethmann

The *ethos* of an interaction and communication community is comprised of a set of uncontested rules of action by which everyone knows that he is bound and whereby each may expect that these rules are complied with by everyone else. Such an *ethos* is normally based on the implicit knowledge of such rules. If this *ethos* is becoming an explicit topic of attention, the process as such is an indication of a crisis concerning the cohesiveness of interaction and communication. The recently increasing number of conventions and debates devoted to the topic "The Ethos of Research" are evidence of a credibility crisis in the field of sciences. This crisis is by no means adequately explained by a number of spectacular cases of faked research that have occurred of late. Instead, the reason that these occurrences could make such a dramatic public impact is only because they manifested and reinforced a profound, more or less latent, mood of uneasiness.

The credibility crisis of the sciences has quite a variety of aspects which, however, to a certain extent, converge on the same point of focus and which by virtue of this simultaneous movement are creating the enormous scepticism scientists today frequently find themselves confronted with, and whoever ventures forth from his laboratory or library in order to deliver talks to the general public will meet up against this scepticism. This process is characterised by a number of overlying developments that are the factors producing this scepticism. For one thing, there is the already familiar, traditional scepticism towards the technical consequences of applying scientific knowledge. Since Los Alamos and Hiroshima it has been clear that scientific knowledge and scientifically founded technology are not guaranteed to bring blessings upon the human species. In contrary to a widespread tradition originating from Plato, the realisation has asserted itself that knowledge is not good in itself but rather that it is only good when applied to serve good ends. Which ends are served by knowledge is, however, not

precisely known in advance, neither by scientists nor by lay-persons, and it may well be that this is not infrequently camouflaged by scientists.

For some time now, however, this has been added to by a second phenomenon, namely that today we are no longer waiting until after the application of knowledge, as in the case of the atomic bomb, before entering into the discussion of moral issues, but rather that we are already debating moral problems during the ongoing process of acquiring knowledge. Since contemporary science is not merely observational science but also interventional science, and causal knowledge can only be acquired by intervening in the courses of nature, it may occur that a certain activity may produce relevant moral problems already in the laboratory – and not just after the laboratory. Indeed, for the mechanical laboratory with its rolling balls – and albeit tiny rolling balls – this is not yet a problem. But, for example, the modern biosciences are characterised, among others, by the fact that what is being done in order to acquire and prod-

uce knowledge is already morally relevant. One only has to think of questions regarding the genetic modification of plants, of issues connected with biodiversity or the problem of experimentation on human beings in biomedical research and it becomes clear that the morality of the researcher is already a matter of significance during the knowledge acquisition process and not just on the application of said knowledge. Whereas the physicist could perhaps refer to the morality of the users, i.e. the politicians or the military – which, admittedly, Dürrenmatt was not prepared to accept even in their case – in the case of the biomedical sciences, it is not merely a matter of the technical capabilities and the cognitive competence of the researcher, as the one acquiring the knowledge, but also a question of the researcher's personal moral integrity. That it is not permissible to conduct human experiments is a restriction that is already placed on the process of knowledge acquisition and not just on the application of that knowledge.

Finally one may speak of a credibility crisis on the basis of recent experience that has given rise to an increasingly concrete recognition that scientists, from their very origin, i.e. through the selection processes leading to their becoming scientists, though they may be perhaps more intelligent and hopefully more diligent than other people, are not necessarily more courageous, more modest, more reliable and, above all, more credible. This, at any rate, is the suspicion that has been so unpleasantly supported of late by the recent spectacular cases of fake and deceit. These events, of course, are much regretted by almost all scientists; the scientific organisations have been quick to introduce codes of behaviour and procedures to prevent such occurrences in the future.

But is it really such a great drama for society if one of its occupational groups is caught up in a credibility crisis? Should the plumbers or taxi drivers ever be affected by a credibility crisis, nobody would become overly agitated. However, what is particular and dramatic about the cases of fake and deceit in the field of science, is that the credibility crisis of the scientists involves the credit standing of science itself and that, therefore, the self-understanding of a whole culture, characterised by science and technology, is placed under debate. For this reason, science must counter a certain enthusiastic trend towards discounting all validity claims and the disregard of validity claims on the part of the institutions that has taken hold of the sciences since Paul Karl Feierabend's "Anything goes". This anarchistic philosophy set in motion a trend which has been strengthened yet again by the post mo-

dern philosophy. If it is asserted – as in this case à la Nietzsche – that validity claims, also scientific validity claims, are nothing else but claims to power and that, therefore, they are actually at the same time instruments of oppression, then science, in the name of human liberty, would have to renounce all validity claims. In that case, faked results could no longer be condemned – on the contrary, they would then indeed have to be welcomed as just another manifestation of the colourful tapestry of different opinions. Attacks against the fundamental acknowledgement of scientific validity claims are not merely attacks against the guild-like self-understanding of a social group, namely that of the scientists, but rather an attack against the foundations of a whole culture, characterised by science and technology, in whose vital interest it must be that there should be recognised procedures to ensure the universalisability of claims and thus the reliability of scientific methods. This said, however, in the field of scientific research only the scientists themselves can ultimately exercise the necessary control over scientific activity – and be it those scientists performing a consultant role on behalf of the institutions. Especially for this reason, the morality of the scientist is of paramount importance. This also means, however, that public scepticism towards a series of scientific developments cannot simply be swept aside by more comprehensive and better information. After all, the citizen is not sceptical towards the cognitive capabilities of the scientist – on the contrary – he is frequently afraid that the scientist may very well succeed in fulfilling his announced intention. It is much more often the case that the citizen is sceptical of the morality of the scientist.

However, here the – by no means trivial – objection must be considered as to whether in this age of mass communication one may still speak of the ethos of scientists at all and also as to what could be involved in sustaining this ethos in a manner that would be operationally feasible. Normally, our concept of ethos is oriented to situations involving the interaction within small groups. And within this scope there continues to be a fairly well-functioning degree of control. Whether a statement is reliable, whether someone keeps his word or tells the truth can, in principle, be verified in the individual case, at least under the conditions governing interaction within small groups. Science in the age of "big science", however, has long ago become a communication phenomenon that is subject to the conditions of interaction existing within a big group. One of these conditions is the anonymity of the actors. Under complex circumstances one cannot but bank on the habi-

tualisation of certain modes of behaviour. The verifiability of this presupposition, however, is to the largest extent inoperable. There is a strong tendency in a mass communication society towards distrust which threatens to destroy communication, and science must face up to this state of affairs. A science and technology oriented culture needs strategies that, under mass communication conditions, enable expectations to be met with regard to the credibility of the scientist – at least in principle.

Thus, given the conditions prevailing in a mass communication society, the question presenting itself is what should such institutional structures that would be able to replace direct personal control look like. Such considerations regarding adequate institutional control mechanisms in the field of science seem altogether doomed to run a ground against the expert dilemma, because, after all, it is again the scientists – in whatever state of aggregation they may be – who ultimately sit in judgement over other scientists. This type of dilemma, however, is by no means uniquely inherent to the field of science; for example, it is always judges who judge the conduct of dishonest judges. Therefore it depends on creating an appropriate form of control and supervisory procedures. For this, considerations must be undertaken in several directions.

The first consideration concerns the non-scientific public. Science can only fulfil its practical role if the general public is in a position, at least in principle and from the structural point of view, to comprehend its discursive processes. A science and technology based culture is only successful if there exists, in reality, a certain degree of scientific enlightenment. By enlightenment, in this context, is meant the ability to comprehend to a certain extent the methodological processes taking place in the sciences, and not the accumulation of knowledge that could perhaps be acquired through crash-courses in certain disciplines. It is not so much a matter of material, substantial knowledge but more about understanding the different forms of scientific procedures for gaining knowledge and the ethos inherent therein. The publishing campaign to promote public understanding should be critically examined from this point of view as to whether sufficient regard is paid to this differentiation.

This condition apparently concerns only the outer side of science. A second consideration must address the question as to how the ethos of science is realised in the internal structure of scientific endeavours. And in this the view turns towards the phenomenon of professional ethos in the sciences. This, by the way, is not only a

phenomenon concerning the sciences but more a phenomenon of society as a whole that professional ethics are losing status and that the State is attempting, by means of its most important instrument for shaping society, namely legislation, to take control of all social conditions. In the face of this, a kind of division of work should be propagated; there exists in a society, besides the productive division of work (the economy) and the cognitive division of work (the sciences) also a moral division of work. Also with regard to the moral division of work, a kind of subsidiarity principle must be taken to heart. According to this, the State should not do what the professional organisations are quite capable of doing. Furthermore – both in the execution of the law as well as in the pronouncement of legal judgements stabilising obedience to the law – the legislative remains dependent on at least partially intact professional morals (e.g. on the part of civil servants and judges). Any society attempting to completely replace ethos by legal legislation would not function.

A third aspect which is closely connected with the current cases of fraud and deceit, has to do with the increasingly differentiated situation of competition. The failure of some individual scientists is doubtless also explainable (albeit not excusable) by the increasing pressure of competition. Whereby it must be recognised that competition is a vital element of scientific research and one of the most important driving forces for the commitment of individual scientists. "Competition", however, in different social contexts, has different meanings. Competition in sport has a different meaning from competition in the economic sense and scientific competition is a third meaning. The criticism should, therefore, not be aimed at the competitive structure of scientific work as such but more at the strong tendency in current scientific policy to superimpose upon the sciences the patterns of commercial competition. Research institutes can only be placed on the same footing as commercial enterprises to a very limited degree, research findings and results can only be regarded to a very limited extent as commercial products (a successful experiment can constitute "damage", a failed experiment may bring "benefits"). Thus scientists can only be compared in a very limited sense with market actors, such as producers or consumers. It must be admitted, however, that science itself has not made a very imaginative contribution towards meeting this need for differentiation. It remains the task of the scientific organisations, by countering an uncritical transfer of economic models of competition, to develop specific scientific structures that enable, for example, means of evaluation

other than those applied to economic measuring methods.

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Professor Dr. Carl Friedrich Gethmann is Director of the Europäische Akademie and professor of philosophy at the University Duisburg-Essen.

Working groups

European Social Policy

The project group "European Social Policy" had its Kick-off Meeting at the Europäische Akademie in Ahrweiler from 10th–11th March 2003. The purpose of the meeting was to gain advice, comments, and critiques on the project plan from the invited speakers, whose contributions were based on a paper prepared by the project group during the preparatory phase of the project. Accordingly the main topics of the discussion were the European social model, the actual tendencies of political and legal harmonisation and co-ordination, the interdependencies between national and supranational political measures of social protection, the ethical aspects of the most important policy goals as well as of the consequences of different institutional arrangements, and the – especially legal and financial – risks and opportunities of policies at union level acting towards the implementation of a Social European Union. Finally it was agreed that the work of the project group should be focussed primarily on the question whether there is room for and necessity of a supranational social policy in the European Union.

Members of the project group are:

Professor Dr. Bernd Baron von Maydell, Skt. Augustin, Germany (Chair); Professor Dr. Thomas Abel, Bern, Switzerland; Professor Dr. Jos Berghman, Leuven, Belgium; Professor Dr. Weyma Lübbe, Leipzig, Germany; Professor Pirkko-Liisa Rauhala, Ph.D., Helsinki, Finland; Professor Dr. Maciej Zukowski, Poznan, Poland.

Invited speakers were: Professor Dr. Klaus-Dirk Henke, European Centre for Comparative Government and Public Policy Berlin, Germany; Professor Dr. Stephan Leibfried, Bremen University, Germany; Professor Dr. Franz Marhold, Graz University, Austria; Professor Dr. Kieke Okma, Queen's University, Canada.

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

The working group submitted a final draft of its report to the customer of the study, the Federal Environmental Agency of Germany (UBA) on 28th March 2003. This version will be evaluated by the responsible UBA-representatives for the subsequent preparation of the final document and its later adoption.

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Conferences

Spring Conference "Bioethics in a Small World"

The Europäische Akademie conducted its annual spring conference on the topic "Bioethics in a Small World" in Bad Neuenahr from 10th–12th April. The central focus of the conference was on the bioethical problems of globalisation, whereby methodological as well as practical problems were discussed.

The scientific conference kicked off by addressing the topic "Bioethics. A Science and its Application in Politics", i.e. a debate on the difficulties of bioethical consultation in politics. In the view of Professor Dr. Udo Schüklenk, Johannesburg, bioethical research is being increasingly obstructed by interest groups, such as the pharmaceutical industry. He pointed out that the funding of bioethical research is to a larger and larger extent only possible with the help of those same interest groups so that their influence on the direction and results of this research is constantly growing. Schüklenk's suspicion was vehemently disputed, among others, in the talk given by Professor Dr. Edgar Morscher, Salzburg.

With regard to the question as to whether fundamental bioethical principles (such as the principle of "informed consent") could claim universal cultural validity, Professor Dr. Oswald Schwemmer, Berlin, expressed his scepticism on the grounds that the validity of moral convictions, in his opinion, was only possible against the background of common historical experience. In the subsequent discussion, critical objection to this point of view was raised to the effect that the demand for a common historical experience would endanger the universal validity of human rights. The discussion showed that on the issue of the

cross-cultural validity of basic rules in bioethics, thus enabling, for example, the establishment of global conventions, a great deal of clarification is still to be achieved.

Dr. Carmel Shalev, Tel Aviv, Dr. Georg Marckmann, Tübingen, Nathan Ford, London, Dr. Richard Ashcroft, London, held a discussion on the subject "Access to Drugs in the Developing Countries". For one thing, medicaments subject to patent protection are often not affordable by people living in these countries. For another thing, there are diseases from which primarily the poor suffer, so that there is insufficient financial incentives to cover the costs of developing a new medicament. In this case, new medicaments are not developed at all. The discussion focussed above all on the question as to which actors (States, pharmaceutical enterprises) should be held responsible to rectify these shortages.

Further speakers of the conference were: Professor Dr. Godfrey B. Tangwa, Yaounde, Professor Joseph Straus, München, Dr. Bronwyn Parry, Cambridge, Professor Dr. Michiel Korthals, Wageningen, Professor Dr. Abdallah Daar, Toronto. The findings of the conference will be published in the coming months by the Europäische Akademie in the series, "Scientific Ethics and Technology Assessment", Springer Verlag.

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News

Scoping of IPCC's 4th Assessment Report

The Intergovernmental Panel on Climate Change (IPCC) invited the national organisations to submit their views on the scope and structure of the forthcoming Assessment Report on climate change. The Europäische Akademie participated in an expert meeting at the Ministry for Research and Education (BMBF) in Bonn on 12th March 2003 with a proposal to strengthen the prescriptive implications of climate change. More concrete, it was proposed

to consider acceptability of climate change, related risk evaluation and measures as well as reflections on the distributive justice of using the climate system as global common good for the "deposition" of greenhouse gases. These recommendations, among others, were submitted to the IPCC Secretariat on 28th March 2003 for their further evaluation and final adoption this year.

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Expert Meeting: Pharmacogenomics

The expert meeting on "Pharmacogenomics" organised by the Europäische Akademie in cooperation with the Max-Delbrück-Centrum for Molecular Medicine took place in Berlin from 20th-21st March. In an initial section, the basic foundations of pharmacogenomic research (Professor Dr. Roots) as well as the chances of enhancing effectiveness within cytostatic therapy (Professor Dr. Eichelbaum) and therapy optimisation in psychiatry respectively (Professor Dr. Holsboer) by the application of pharmacogenetic research were dealt with.

In the second section was the Estnic gene screening programme was taken as an example for the problems of applying pharmacogenetic research in practice (Professor Dr. Sutrop). Furthermore the implications of pharmacogenetics for the concepts of illness and disease were analysed (Dr. Lanzerath). The economic aspect was reflected in legal questions in the field of patents concerning the definition of gene types (Dr. Stein). One of the problems that concern pharmaceutical research are questions concerning information of the patient, which were conveyed with the help of concrete research projects (Dr. Stürzebecher). All the previously mentioned aspects should have an influence on health policy and should be instrumental in its decision making processes (Dr. Härtel). Subsequent to the expert meeting, it is planned to form a project group.

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Personalities



Professor Jos Berghman took his university degree in political and social sciences at Leuven University (1971), specialised in comparative social policy and wrote a Ph.D.-thesis on "The Theory of Social Security" (1981). 1971-1985: Researcher and director of the Centre for Social Policy (University of Antwerp). 1985-1998: Professor of social security studies at Tilburg University where he chaired the multidisciplinary department of Social Security Studies, presided the board of IVA, the Tilburg Institute for Social Contract Research, and was in office as dean of the Faculty of Social Sciences. Professor Berghman had various important functions in science and policy-consulting, for example as advisor to the Commission of the EU (DG V and Eurostat), advisor to the Dutch government and the Council of Europe and chairman of the supervisory commission of the research programme on the reform of the Dutch social security system. Currently he is ordinary professor of social policy and vice-dean of the Faculty of Social Sciences of Leuven University. He is president of the European Institute of Social Security, the European association of social security experts, acts as advisor to EU-presidencies and is member of editorial boards of international journals and of scientific award committees. His main research interests are comparative and European social security, social exclusion and social cohesion.

Professor Jos Berghman is member of the project group "European Social Policy" of the Europäische Akademie.

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