

POLISH ACADEMY OF SCIENCES
COMMITTEE FOR ETHICS IN SCIENCE

GOOD MANNERS IN SCIENCE
A SET OF PRINCIPLES AND GUIDELINES

Third (amended) edition

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FOREWORD

In the discussions that took place as the two previous editions of this booklet (entitled "Good Manners in Science") were prepared and then published, it was not unusual for doubts to be raised about whether such a publication could in any way change the negative state of almost everyone's feelings regarding the scientific ethos in Poland. The justification for a presentation of exemplary guidelines touching upon the most frequent violations of ethics and designated for the rapidly growing ranks of scientists and scientific personnel reflected a perceived need to supply a framework compilation that would take in the diverse issues and desiderata connected with research activity, with a view to ensuring integrity and reliability in science. Poor scientific research is not only valueless and capable of causing material losses. By leading others astray, even for a short while, it may do damage to both scientific circles and the wider community, where results become a basis for interference in public life, excite emotions in society or raise false hopes.

A set of requirements of the above kind may also be of assistance where opinions are sought on outlays on science and scientific research, where attainments are to be ranked, and where promotion and reward procedures are to be regulated. Ultimately, they set boundaries delineating what is dishonest and false, thereby making it impossible for lack of awareness to be put forward as a defense .

Unlike other creative undertakings, science is today a cooperative enterprise encompassing the whole of society. It has been elevated to the point where it is now one of the main factors determining the development of humanity and the world, and the fates of countries and nations, in the 21 st century. Science thus requires that its practitioners bring on successive generations of young scientists, at the same time inculcating in them the principles of good work and good practice. It also requires the identification and pursuit of those who break these rules. The present movement for ethics in science is, it is true, a relatively new phenomenon, but one whose steady gaining in strength is plain for all to see, at a time when dramatic developments in science continually throw up new challenges.

All of this provides its own full justification for what will be the PAS Committee for Ethics in Science's third round of work to amend "Good Manners in Science" in the space of just 8 years. In fact, there has been a particular stimulus behind this re-editing, in the shape of a 2000 draft of a similar kind of document devised for the European Union by the European Science Foundation. The draft was sent to us in order that we might make remarks and express opinions - something we did, being convinced that eight years of activity and multiple discussions -combined with the changing composition of the Committee every three years - gave us an adequate starting point from which to proceed. Moreover, recalling Poland's aspirations of rapid accession to the EU, and the consequent requirement that our regulations should be ever more in the spirit of those of the Union, we simultaneously drew upon the draft for a series of ideas and formulations absent from our previous editions entitled "Good Manners in Science"; with a view to their being incorporated in a new edition.

We may recall briefly the genesis of this publication with J. Mames's *Kodeks etyczny*

pracownika nauki ("The Ethical Code of a Scientist"), published in *Nauka Polska* ("Polish Science") in 1993. This had in turn based itself upon the treatise entitled *Etyka Ludzi Nauki* ("The ethics of people of science"); published in *Spotkania* (1974/7), as well as being preceded by discussion meetings at Kraków's Jagiellonian University in the years 1976-1978. In 1993, the aforementioned "Code" from Mames was sent out for further comment to 92 higher education establishments and scientific institutions across Poland. Fifty replies were received. From them, and in the course of three consecutive sittings of the Committee, J. Mames (acting as rapporteur) received a total of 220 remarks. Having discounted a small number of opinions of inappropriate banality, as well as repetitions of the same basic idea, the Committee was left with 174 proposed amendments. 130 of these were ultimately adopted for the editing of the "Code". The new text was circulated to all Committee Members prior to a plenary-session discussion at which the entire reformulation was read out and considered point by point, with each being put to the vote. Of the 56 directives in the original version, only 4 were left unchanged in the new text. This was thus a major team effort, which Prof J. Mames could not agree to encapsulate precisely as author. The Committee plenum therefore approved the text for publication unanimously, at the same time assuming auctorial responsibility.

In his foreword to the first (1994) edition entitled "Good Manners in Science", the President of the Polish Academy of Sciences called for the submission of further remarks and proposals that might assist in a further improvement of the text.

1995 saw the publication of an English-language translation of the first edition under the title "Good Manners in Science". The following year the Romanian Academy of Sciences was given permission to produce a Romanian translation, which appeared in Romania in two journals.

Over two years some 33 new responses came in, including one collective submission from one of the Divisional Councils. As a result, the number of individual responses is impossible to determine exactly.

Overall, the double appeal for discussion and criticism brought significant input to enrich the sessions of the Committee, while at the same time increasing the list of co-authors and extending the circle of joint responsibility. Of the 254 remarks, it was possible to separate out 74 amendments which were subsequently voted upon by the Committee preparing the new text. The second (1996) edition preserved the same 8 chapters and the same number of principles (56), with only one being changed for another. In spite of this, bearing in mind the ever greater numbers involved in the discussion, the edition included 2 lists of respondents - those to the first (1993) appeal of the Committee and those to that of the President of the PAS contained in the first (1994) edition of "Good Manners in Science". The makeup of the Committee in its first and second terms of office is also detailed.

The present (third) edition has been embarked upon by a third-term Committee of further changed and expanded composition. We are addressing this matter not merely because Poland is striving for membership of the European Union (with all the consequences this enforces as regards the approximation of national and EU declarations and guidelines), but also because the draft "European Science Foundation Guidelines" sent out to us have yielded several points not reflected hitherto in our publication. Proceeding on the assumption that our text complied fully with the

spirit of the European document in the substantive sense, we did not seek simply to make a translation of the latter available in Poland, but instead opted to take a further step towards the perfecting of our own publication, thereby preserving the dating of our initiative.

In fact, the main difference between the two documents would seem to lie in the fact that ours is directed towards individual academics and scientific personnel, on the basis of a conviction that everything depends on people; while the European document is first and foremost addressed to scientific institutions. Considering that the public image and prestige of science is above all shaped by its practitioners, and not institutions as such, we determined to continue addressing ourselves to the scientific worker, confining ourselves to supplementations of the text with paragraphs of definite value, especially in regard to supervision over the solidity of science and the tracking down of scientific dishonesty. To this end, a list of proposed changes to the text of the third edition was drawn up, and sent out to all members of the Committee, with a view to their being prepared for a subsequent discussion. This came about at the sitting of the Committee of May 9th 2000, at which a resolution to prepare a third edition was adopted almost unanimously (with one vote against). The Members of the Committee therefore took on the obligation to submit further proposals in writing. With a view to a final form based on previous and newly supplied materials being conferred upon the project, an Editorial Team comprising M.K. Byrski, K. Gibiński, A. Grzegorzcyk, Z. Herman, H. Juros, M. Latoszek, J. Pelc and M. Żydowo was selected. All the submitted responses were received on time, after which the Team convened on October 18th 2000 to consider them. A total of 47 comments from 19 Members of the Committee had been supplied. In the main these were of the editorial correction kind. After becoming acquainted with the draft of the new text, Prof. A. Grzegorzcyk confirmed that he would not be able to subscribe to it. He therefore presented his own draft, from which the augmentations proposed for edition III (with a view to our publication being approximated to the ESF "Good Research Practice" guidelines) had unfortunately been rejected. Prof Grzegorzcyk nevertheless played a part in the further discussion, wherein the proposed amendments were considered and voted upon paragraph by paragraph and point by point. A decided majority were adopted unanimously and, in the course of the voting, all but one Committee Member spoke for the publication of the agreed version of the text.

This kind of action to generate guidelines and pointers is now taking place, along various lines, throughout the world. The aim is for the solidity and reliability of science to be maintained, along with the academic ethos and the trust of society. The perfecting of our publication over 8 years, and in the course of three successive versions, attests to the inclusion of ever wider representation of our scientific circles, whose initial passivity in the face of our activity was witnessed many times. The latter was sufficient to ensure that, from the very outset, there appeared the pessimistic view that the issuing of yet another brochure would not break down the barrier of passivity, while its content born of alarmed representatives-of different fields of science would in no way supplant existing handbooks on ethics.

In fact, it was never our intention to do this, and we commenced our action in full awareness of the likely thanklessness thereof. We did not wish to set ourselves up in opposition to the professional handbooks of ethics (which neither the students nor the fully-fledged practitioners

in the different fields of science were actually wont to pick up, unfortunately). Rather, what we were about was - by way of brief guidelines and examples of the ever more frequent distortions or perversions - drawing the attention of the young above all to a lost or disappearing awareness of values in science, providing a motivation for them to work in this realm and to take responsibility for it. We are convinced that neglect of such an action in our own environment would be our fault.

The first (1994) edition of "Good Manners in Science" was given the sub-title a "Collection of rules and guidelines". At this point angry voices were raised concerning what right a group of authors had to set themselves up as dictators of guidelines to a wide scientific community. Suitably admonished, we confined our second (1996) edition subtitle to "A collection of rules". However, when in 1995 (after a wide-ranging public discussion) the National Academy of Science came up with its "On being a scientist", directed in a similar way to young novices in science and seeking to offer them "guidance in situations involving professional ethics"; when many governmental and international institutions around the world were now issuing their "guidelines" or "recommendations"; when we had received our own great measure of support and when three consecutive compositions of the PAS Committee for Ethics in Science had approved ever-better versions, we decided to dispense with our shame at our own "incompetence" and return to the original subtitle: "rules and guidelines".

We are also aware of the difficulties with uncovering violations of ethics in science, and with the evasion and abandonment of inquiries; as well as of the problems associated with the stigmatisation and repression of these violations. We do not encompass within our guidelines these burning issues which could improve the situation, because this would extend both ideologically and legally beyond the bounds of what is a modest publication seeking only to build awareness and promote a sense of moral responsibility. In the modern world, such violations are also carefully heeded and pursued in various other spheres of life, with attempts at their practical resolution being made. Science has joined the battle for the truth which is its fundamental aim; fighting against the weakness of human nature in order that the bad be eliminated from it and its reliability and prestige assured. It is for this reason that we have stressed in this edition the role of scientific institutions and instances as regards the heeding of these principles. In turn, the Appendix offers, in chronological order, some 18 items from what is now a very rich literature in this field.

Kornel Gibiński

Chapter 1

GENERAL PRINCIPLES

Knowledge and reason are today so threatened,
In a way that was once rarely the case,
And threatened along with them is that
Which is simply human: perhaps even humanity itself.
(*J.M. Bocheński, 1992*)

1.1. The scientist is bound by the principles of the ethics of humankind, as well as by the principles of good manners in science.

The ethics of humankind bind scientists in the same way as they do all other men and women, but the responsibility of the scientist is greater, because of a higher degree of consciousness, and also because scientists are assigned high rank in the social hierarchy and perceived as authorities in public life.

The scientist is bound above all by norms of veracity and disinterestedness. The principles of ethics and good manners bind scientists in all their conduct, not only in their professional activities.

If legal or internal service regulations would violate the ethos of scientists, the scientist should strive to change such regulations, in order that they might be made consistent with the canons of good manners in science.

1.2. The scientist cannot demand of his/her co-workers or subordinates behaviour that conflicts with the principles of good manners in science.

1.3. The scientist cannot justify behaviour in conflict with the principles of good manners in science by reference to either obedience or loyalty.

1.4. In a situation in which application of the principles of good manners in science provokes a collision with other generally-accepted value systems, the scientist should make a choice in line with his/her own conscience, taking a personal decision in each particular case of moral conflict.

1.5. The scientist recognizes science as an important component of culture and defends it against any unjust accusation.

The scientist should defend the right to study every scientific problem, regardless of its immediate usefulness, in the conviction that:

- on the scale of historical development, science leads to the overall progress of civilization and improvements in human well-being;
- science satisfies people's natural cognitive needs; the propagation of a knowledge of the world improves human conduct.

1.6. The scientist is obliged to combat the improper use of scientific achievements in general, and their use against humankind in particular.

The scientist should be aware that the results of his/her scientific activity can be wrongfully applied, but this should not dissuade him/her from engaging in purely cognitive work. The

scientist is, however, obliged to counteract any attempt at putting science to what are from the humanist point of view undignified ends, by:

- warning of the possible consequences of such attempts;
- refusing to cooperate;
- informing and mobilising public opinion, and in particular that of the scientific community

1.7. The scientist should continuously extend and deepen his/her knowledge and improve his/her capacities.

1.8. The scientist is obliged to maintain a critical attitude.

In his/her professional activity the scientist respects the opinions of scientific authorities, but ultimately attaches greater importance to material arguments.

The scientist adjusts the determination of his/her responses to the degree to which they are justified.

The scientist should always be prepared to question, revise or reject theories, even if they are his/her own, if they cannot withstand attempts at rational criticism or are not sustained by the facts.

1.9. The scientist should defend scientific freedom.

Scientific freedom is essentially the freedom to select topics, and choose the methods by which they are addressed, and above all, freedom of thought and of speech. The scientist agrees to limitations on free speech and the selection of topics, if such limitations are made necessary by overriding considerations (e.g. State secrets), and are introduced by competent scientific bodies.

The scientist opposes all that is harmful to the development of science, including:

- censorship of speech and scientific publication,
- the limitation of access to primary sources,
- limitations on the free flow of information,
- the limitation of personal contacts between scientists.

The scientist strives to make self-government a universal and permanent form of scientific life at all levels.

A requirement that a scientist declare loyalty toward the political authorities or other non-scientific institutions compromises the freedom of science and should meet with protest from the scientific community.

1.10. The scientist condemns the application of other non-scientific criteria in science, but reserves judgment and condemnation in regard to matters not yet in the scientific domain.

The scientist should be impartial and should object to all forms of discrimination in the scientific world. The evaluation of scientific achievements by reference to personal, national, racial or political outlook is not worthy of a scientist.

1.11. The scientist does not act maliciously to harm the professional reputation of a fellow.

If, however, there is evidence or justified suspicion of scientific behaviour or activity that is against the law or good manners in science, especially in regard to falsified or unreliable research results, then this should not be concealed.

1.12. The scientist does not base the quality of his/her work on remuneration, but is entitled to require a fair salary for his/her work.

1.13. Scientists have a particular duty to promulgate within the scientific community, by themselves or via scientific institutions and organizations, the principles of reliable scientific work and the condemnation of scientific dishonesty and breaches of good practice.

Chapter 2

THE SCIENTIST AS CREATOR

2.1. The scientist recognizes the results of scientific creativity as the personal good of the creator, and at the same time as a common good.

Publication in a peer-reviewed journal under an Editorial Committee is the principal end point of the scientific process. At the moment of issue, content enters the public domain as scientific knowledge, which may be drawn upon on condition that the principles below are abided by. However, many academics share their ideas or observations with colleagues, by word of mouth or correspondence, while work is still ongoing. This reflects the cooperative nature of the scientific venture, but affords opportunities for what are infringements of intellectual property rights, via the use of information for a scientist's own purposes, without the consent of the author.

The scientist abides by the provisions of law, in particular copyright law, that have been adopted internationally and set out in detail in national law. He/she may borrow from printed publications on the condition that the source is cited and a clear delimitation made between his/her own achievements and those of others. Exact replication of photograms, designs, figures and tables requires the prior consent of the author or publisher. Such replications should be avoided if they are not sufficiently motivated by scientific needs. Quotation from the works of others is only acceptable within the limits set by the need for exact and concise informing on the scientific thought of others.

Manuscripts may be used only with written permission from the author and detailing of the source.

Substantive suggestions or advice conveyed by word of mouth or in writing constitute the intellectual property of their author and may only be used if the author's consent is obtained and the origin given.

2.2. The scientist is concerned that recognition for scientific achievements goes to those worthy of this recognition.

The offering of unwarranted co-authorship, the ceding of the authorship of a scientific work to another person, the acceptance of ceded authorship and especially the requirement that authorship be ceded are not permissible. Only the real author of a work is entitled to be deemed such, and this is a right that cannot be dispensed with.

Only real creative input can justify inclusion as an author of a scientific work. Editorial or technical assistance should be registered in the name of those proffering it, by way of an acknowledgment. The fact of heading a scientific department does not of itself justify co-authorship.

2.3. The scientist's main motivation should be a desire for greater understanding and a will to enrich the achievements of science. The goal should in turn be to know the truth.

The scientist has the right and duty to claim his scientific priority. The date of publication, or the date on which a manuscript is received by an editor, is decisive in determining priority. The basis for establishing priority may also be the date on which a patent application was filed.

The publication of unreliable and inconclusive research results, as well as the transmission of results in an undocumented publication, for example with the aim of ensuring priority, is not permissible.

Both publications and reports of scientific activity must provide for repeatability by others. New techniques in particular must be described precisely, with the results being given in full in an objective and comprehensible manner. Statistical analysis or assessment is detailed, especially in the case of any departure from the original design.

2.4. The scientist is obliged to be honest towards his/her sponsor or employer.

The scientist should only undertake tasks (and especially contracted tasks) for which he/she possesses sufficient knowledge and skill. In other situations, he/she should impartially recommend a party better prepared to carry out the task. The scientist should aim to perform a task (and especially a contracted task) in the simplest and most economical way. The scope of research to be done should be limited to that dictated by indispensable needs. Use of existing solutions - one's own or those of others - should be clearly stated in the report and be taken into consideration in the final calculation of costs of the sponsored task.

When research is commissioned by a sponsor, the contract there for must be drawn up in accordance with the "Good Research Practice Guidelines". The steps taken to safeguard and make use of intellectual property must be stated clearly, and the rights of both parties detailed. Rights to the publication and use of such information as should be made available in the public interest or submitted for the information of the relevant authorities will need to be agreed upon. Procedural principles for arbitration in the event of variant interpretations of conditions should be established. Prior to a contract's being entered into, there must be a clear expounding of the ascription of

intellectual property and material benefits from the use of the work. If important commercial considerations rule out publication, and information touches upon the serious issues of health, the environment or other matters of public concern, then it is the duty of the sponsor and chief researcher to ensure the information passes to the relevant authorities or supreme bodies.

2.5. Scientific research should be conducted in a manner which does not degrade human dignity or violate humanitarian principles.

Research of which the human being is the subject should be conducted in accordance with internationally-accepted principles of the Helsinki Declaration and latter supplements thereto. In using human beings as research subjects, scientists should respect the principle of voluntary and conscious acceptance of participation in such research and the principles of confidentiality and anonymity. If the research subject is a minor, then consent from his/her parents or legal guardians should also be obtained. The person under study should have the right to withdraw his/her participation while the research is ongoing.

In a situation in which research may prove painful, it is the duty of the scientist to analyze the necessity of such research, to limit its extent, to minimize the level of affliction, and to restore research subjects to the state they were in prior to the research.

The person under study should be fully advised as to the character, purpose and effects of the research. Infringement of this norm is only permitted in the particular situations where prior full information concerning research may undermine the value of the results. In such cases, the previously concealed information should be presented to the subjects of research following its completion. The right to refuse permission for the use of data obtained should be respected.

Research should not be carried out on a person whose personal freedom is curtailed.

Research on animals should only be conducted where necessary, and then in such a way that suffering is not inflicted. In the case of painful research, the scientist has the duty to limit its scope and to minimize the affliction.

2.6. Scientific research should be conducted in such a way as to not pose a threat to humankind or society, or affect the natural and cultural environment thereof.

If such damage is unavoidable, then human interference in the environment should be minimized, with restoration to the initial state being engaged in on completion of the work.

2.7. The scientist shares his/her achievements and knowledge with others.

The scientist is obliged to present the results of his/her work reliably and honestly, conscious that scientific unreliability is harmful to both science and society. The scientist does not conceal research results which are inconvenient or inconsistent with his/her working hypothesis; or else an alternative hypothesis or means of interpretation. The scientist does not put any pressure on other scientists to purposefully conceal the truth brought out by the research process.

The delayed announcement of the results of scientific work may only be justified in the interests of science itself.

The scientist should show respect for other scientific disciplines and be prepared to

cooperate with representatives thereof

The scientist may file a claim for a patent. Such action should be aimed at protecting the author's rights in the sphere of practice, not at limiting the free flow of scientific information. Inventions may be patented, but not scientific discoveries.

2.8. The scientist does not engage in multiple publication with the purpose of expanding his/her publication record.

If propagation of scientific achievements justifies publication of the same work in different journals, then the editors should be informed and should give their consent. In such a situation, it is necessary that the author cites his/her earlier publications of the same text, and clearly groups together as one item repeated publications in his/her publication record.

In the devising of an author's own bibliography, all works subject to multiple publication must be mentioned as one item.

2.9. The scientist refrains from undue self promotion.

The press, radio and television may be used for the propagation of scientific achievements, but not for the promotion of one's own person.

While a scientist is subordinate to publishers' requirements, it is advisable that he/she not use titles and scientific degrees as an author of a scientific publication. Such information should be given in a separate note.

2.10. The scientist avoids reference to titles and scientific degrees in pronouncements which are outside his/her scientific competence.

He/she separates scientific opinions from other judgments, in particular not putting science to propaganda purposes.

Chapter 3

THE SCIENTIST AS MASTER AND BOSS

3.1. The scientist groups around him/herself and hires pupils in science on the basis of an impartial evaluation of their intellectual, ethical and personal character qualifications only.

The scientist should reveal and combat all manifestations of protectionism, corruption and discrimination,

3.2. The scientist has the duty to look for and pay special attention to particularly capable students, and to encourage them to undertake scientific work.

3.3. The scientist should, by word of mouth and personal example, pass on his/her knowledge, skills and principles of good manners in science.

The scientist should instill responsibility for scientific development in his/her students and co-workers.

3.4. The scientist treats his/her co-workers justly.

The scientist confers benevolence and assistance upon every pupil, does not burden them

with excessive duties and evaluates every co-worker in an incisive and conscientious manner not dependent on extra-scientific circumstances.

As a supervisor he/she consults on promotion applications, and assigns funding and awards according to the results and achievements of each co-worker.

3.5. The scientist does not pass on to his/her co-workers the execution of tasks which he/she should perform in line with the scope of his/her duties.

3.6. The scientist avoids autocratic forms of management in his/her team.

On important scientific and organizational questions he/she asks his/her team for advice. The scientist informs each co-worker of the general tasks of a research project and about the role to be assigned to him/her. He/she ensures internal information exchange at every stage of the research work. Personal links within the team are cultivated and an atmosphere of benevolent fellowship created.

3.7. The scientist should take pleasure in the successes of his/her students, because they are also his/her successes.

3.8. The scientist should neither support nor facilitate the entry into the scientific world of persons lacking proper scientific and/or moral qualifications.

The best way to comply with this requirement is through honest and just evaluation and opinion.

3.9. Scientific institutions.

The heads of scientific institutions in which research is carried out are responsible for creating a climate in which all are encouraged to attain the highest standard in their work. All higher education establishments and research institutes should draw up rules for reliable scientific work based on national and international models, in line with the specifics of the given discipline and including a determination of responsibility for the leading of projects, and control over the quality and reliability of work. The principles of good conduct should be instilled into young scientists, who should be introduced, not only to the techniques needed to carry out their work, but also to a feeling of responsibility for the integrity of the scientific knowledge built up and accumulated, and for the reliability and honesty of their work.

The heads of scientific institutions should take care to ensure the development and futures of young scientists. They should not put students straight onto excessively speculative work outstripping their qualifications or level of preparation, as well as the time or material constraints. Similarly, they should not leave them to carry out work of limited significance for their planned development.

There should be scrupulous safeguarding and preserving - for at least ten years - of documents of completed research, experimental protocols, obtained results and documentation of all kinds, as well as financial calculations, reports and final texts of work. This is the duty not so much of those leading research, who often do it themselves, but of the institutions in which work is carried out.

Institutions responsible for the upkeep and supervision of science have a particular responsibility to ensure that contacts with the entire scientific community are good. They should review and assess the work of other institutions, and of individuals who sit on committees and commissions, in order to ensure that their work is honest, transparent and reliable, as well as just and fully confidential. The principles of the confidentiality of materials submitted for assessment, their safeguarding and their timely return must in particular be heeded. The agencies distributing funding for research must supply clearly-formulated informational guidelines that are widely accessible to applicants, giving assessment criteria, timetables and details of the entire procedure. Punishments for the submission of falsified data in applications should also be detailed.

Chapter 4

THE SCIENTIST AS TEACHER

4.1. The scientist treats his/her student with benevolence and due respect.

The scientist respects the human and civil rights due to the student. He/she respects and upholds the right of students to free association, self government and membership in collegial academic bodies, and treats the opinions of student communities about the progress of studies and didactic lessons seriously.

4.2. The scientist takes care to ensure a steady improvement in the quality of teaching.

The content of lectures should accord with the present state of world science. If such content should contradict the personal conviction of the scientist, he/she is obliged to add his/her own comments. Lectures should take account of competing theories and interpretations of the facts.

The scientist should conduct classes in an interesting form which is understandable for the average-level student. He/she should ensure the proper outfitting of laboratories and libraries. The timetables of classes should be prepared in a way most convenient for students. Excessive packing of teaching classes in the course of a week, semester or academic year is to be avoided.

4.3. The scientist develops the independent and critical thinking of students, and respects their right to free expression of opinions, including on scientific matters.

The abuse of the dependent relationship or advantage in terms of erudition compromises the dignity of a scientist.

4.4. The scientist evaluates every student justly, on the basis of his/her achievements.

The scientist applies the same criteria and rating scale to all students.

4.5. The scientist treats confidentially information of a personal nature which he/she has acquired from a student through didactic activities.

4.6. Apart from in line with official duties, the scientist refrains from expressing negative opinions regarding his/her students, if such a pronouncement allows for the persons concerned to be identified.

4.7. The scientist does not abuse his/her position or personal ties in regard to his/her students.

If a scientist has links with any student extending beyond the purely professional, he/she should not in any situation distinguish this student from others.

4.8. The scientist does not accept any payment or other profits from his/her students for teaching activity.

Individual or group tutoring sessions, classes or consultations, paid directly by the scientist's own students, are not permitted.

4.9. Particular compromises of good conduct are, for example, the granting of paid revision sessions to a scientist's own students or the writing of theses on their behalf.

Chapter 5

THE SCIENTIST AS CONSULTANT

5.1. Neither the promoter of, nor the consultant on, a doctoral thesis may engage in work on its content to an extent that would entitle him/her to co-authorship rights.

Those taking on an obligation to assess applications, both in writing and via participation in assessment or fund-distributing bodies; or to serve as a member of a competition jury, should be asked to certify that their presence will not generate a conflict of interest.

5.2. The scientist expresses his/her opinion about the work and scientific achievements of another scientist in an incisive, impartial and precise way.

All those taking part in and assuming responsibility for assessment of grant applications, and all those sitting on editorial boards, should be asked to confirm in writing that any information coming into their possession as they perform their function is confidential and may not be conveyed to a third party except in line with the committee procedures in force. Nor may such information be put to an individual's own purposes. Those participating should also take appropriate steps to ensure that such information and materials are kept safely during the time they are doing their work.

Trite or over-courteous positive opinions are not permitted, in just the same way as malicious negative ones. Such opinions do not merely hurt other applicants and evoke bitterness in the scientific community, they are also highly injurious to the public standing of science, undermining its right to self government.

5.3. The scientist strives to prepare his/her opinion on time.

Intentional or neglectful delay in the preparation of an opinion is not permitted.

5.4. When preparing an opinion or work intended for publication, the scientist should evaluate his/her competence to assess and confirm the subject matter of the work, its scientific value and the lack of evident mistakes.

Only statements of a scientific character should be permitted for publication. The substance of a statement should enhance scientific knowledge or contribute to its dissemination. It should be

formulated with proper exactitude and criticism, while deductions included should be correctly formulated and the text should attest to the author's competence in the field of science to which the evaluated work belongs.

5.5. The scientist ensures that scientific criticism, discussion and polemics are engaged in with due regard to the principles of respect, relevance and reliability.

All participants in discussion or polemics should be assured equal rights, regardless of position or scientific title. The principle of relevance excludes argument *ad personam* from the critique and polemics. The principle of reliability condemns deformation of the subject of a critique made in order to mock the subject or facilitate imputation. The obstruction of responses to criticism is not permitted.

5.6. In his/her critical and consultative activity, the scientist should be guided by his/her own conscience and legal standards, as well as by drawing lessons from this code of good manners in science,

Chapter 8

THE SCIENTIST AS EXPERT

- 6.1. The scientist only undertakes to draw up an expert opinion within his/her field of specialisation, and then only when this may be based on his/her appropriate knowledge and experience**
- 6.2. The scientist precedes every expert opinion with a clear statement as to in whose name and for whom it is being drawn up.**
- 6.3. The scientist prepares every expert opinion reliably, honestly and responsibly, taking into account the current state of knowledge and a full cognizance of existing facts and circumstances.**
- 6.4. While preparing an expert opinion, the scientist neither takes into account the expectations of the employer nor submits to pressure from it which would have any influence on the substantive content of the opinion.**
- 6.5. To avoid any suspicions of partiality, the scientist declines to prepare an expert opinion wherein a part of the conclusions thereof could be linked with his/her personal interest.**

If such a case arises, the scientist should inform the employer of the reasons for which he/she declines to prepare the expert opinion.

6.6. The information the scientist obtains in connection with the preparation of an expert opinion should not be used against the employer or for his/her own unjustified profit.

Where there is a conflict of interests, the scientist should rate the common good higher than the interest of the employer.

Chapter 7

THE SCIENTIST AS PROMOTOR OF SCIENCE

7.1. The scientist should propagate publicly reliable information about science and its attainments, while not concealing any limitations.

The scientist does not refuse to cooperate with popular science journals, nor declines to participate in popular lectures for the general public.

The scientist should expose and denounce pseudo-science which seeks to cloak itself in a veil of scientific-sounding terminology.

7.2. The scientist respects the human rights to information and to know the truth, and tries to facilitate exercising of this right.

The scientist considers it his/her duty to supply the public or interested groups with reliable scientific information within the scope and to the degree necessary for the defense of interests and proper understanding. The scientist opposes all attempts to block, distort or delay the provision of such information.

Chapter 8

THE SCIENTIST AS A MEMBER OF THE PUBLIC AND THE INTERNATIONAL COMMUNITY

8.1. In line with his/her interests and possibilities, the scientist should put his/her knowledge, intellect and standing to practical use for the benefit of society and the world.

Science is universal in nature, in the sense that "Polish science" cannot be spoken of, only science in Poland. Reference to the priority of research in a country is of dubious value. This is often a contribution rather than a scientific achievement.

8.2. The scientist should participate in the life of his/her own scientific circle, as well as broaden contacts with the international scientific community.

The scientist should not refrain from taking up elected positions in his/her scientific environment without an important reason. He/she should take an active part in the work of collegial bodies. As a member of such bodies, he/she should pay most attention to the common good of science, and only then to the good of his/her parent institution.

8.3. The scientist does not permit the standing of science or his/her own authority to be used for publicity purposes and propaganda.

8.4. The scientist abides by the international principles and conventions on the shared responsibility of academics.

This is particularly true of threats associated with the running of biological experiments and the introduction of new industrial technologies, irrespective of any moral assessment of their possible consequences for future generations.

APPENDIX-1

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Appendix-2

The list of chairmen and scientific secretaries of the Committee for Ethics in Science at the Board of the Polish Academy of Sciences

1993-1995

Chairman: Professor Kornel Gibiński, member of the Polish Academy of Sciences, Silesian Medical Academy in Katowice.

Scientific Secretary: Professor Zbigniew S.Herman, Silesian Medical Academy in Katowice,

1996-1998

Chairman: Professor Kornel Gibiński, member of the Polish Academy of Sciences, Silesian Medical Academy in Katowice.

Scientific Secretary: Professor Zbigniew S.Herman, Silesian Medical Academy in Katowice.

1999-2002

Chairman: Professor Mariusz M.Żydowo, Medical Academy in Gdańsk

Honorary Chairman: Professor Kornel Gibiński, member of the Polish Academy of Sciences, Silesian Medical Academy in Katowice.

Scientific Secretary: Professor Marek Latoszek, Medical Academy in Gdańsk

2003-2005

Chairman: Professor Jerzy Pelc, University of Warsaw

Honorary Chairman: Professor Kornel Gibiński, member of the Polish Academy of Sciences, Silesian Medical Academy in Katowice.

Scientific Secretary: Professor Zbigniew Szawarski, University of Warsaw.