

Ethics Committee (COMETS)

Ethics and expert assessments

Expert assessments are an area of intersection between science and society and a major topic in many debates. In 2003, Gérard Mégie, the President of the CNRS, the French National Centre for Scientific Research, made a formal request to the ethics committee (COMETS) to submit its own contribution on the subject. This text is the outcome of the first stage in reflections that the COMETS intends to pursue, enrich and update, in particular through case studies and, more generally, by drawing on experience gained in national and international contexts.

After launching a work programme on *Ethics and Evaluation* (see <http://www2.cnrs.fr/band/254.htm>), the COMETS began its study on *Ethics and Expert Assessments*. It soon became clear that a great many points were common to both projects and that the two texts were complementary.

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1. Introduction

Demands on the scientific community from the various sections of society are increasingly pressing and varied. Legitimate as they are, however confused or contradictory, these demands are changing the relationship between science and technology on the one hand, and society on the other. The traditional but increasingly complex links between scientific advances and technical and economic development are giving rise to new or more acute questions on safety, disease prevention, sustainable development, solidarity in today's context of rampant globalisation, or the balance of the global environment.

Humanity is gradually becoming aware that major problems are weighing on its future: the climate, earthquakes, the environment, energy, confidentiality, genetic manipulations, and so on. Although all these problems are potentially open to analysis, few of our contemporaries have anything but a fragmentary vision of the processes involved in developing scientific knowledge on such topics, or of the true nature of the technical objects intruding into our daily lives.

This situation is changing the role of science in society. Research aims are increasingly associated with immediate applications, and the value of innovation for its own sake is no longer taken for granted, while technological advances often give rise to concern. These changes are linked to the accelerating pace of new discoveries, to the increasing complexity of overarching issues and also to a sense of disconnection from natural systems and cycles. Some complex technological achievements, which draw on multiple fields of competence,

now permeate the entire fabric of society. Because these technologies are fragile and sometimes difficult to control, the immediate and more distant consequences of their implementation demand careful analysis and reflection.

In the developed countries, societies and their many components are reacting to these changes in different ways:

- on the one hand, there is growing suspicion of technological “progress” and new scientific “advances”, as people extrapolate from past experience and from consequences that were improperly assessed or unforeseeable;
- on the other hand, the same society is demanding that researchers, in their perceived capacity as purveyors of knowledge, provide assessments that are unambiguous, within the grasp of a wide public and as objective as possible.

Moreover, the demand for expert opinion, whether from political and administrative authorities, economic actors or representatives of civil society, is becoming ever more wide-ranging and diverse as the need increases for information and arguments with which they can justify, contest or oppose decisions.

As a result, considerable demands are being made on specialist researchers, since all those who “know” are considered as experts despite the fact that when faced with a multi-dimensional question or complex future situation, researchers can often communicate no more than a firm belief based on their own experience and knowledge.

When a demand for expert opinion concerns the less developed countries now being drawn into the globalisation process, their own sensitivities, expectations and analyses need to be fully taken into account, not only for reasons of solidarity but because they contribute their own experiences or practices.

Whatever the situation, the complexity and multiplicity of possible approaches mean that any expert point of view can only be relative and should be viewed in a spirit of humility.

We believe that a well-conducted expert assessment can play a major role in mediating between sometimes very distant areas of interest - producers of knowledge on the one hand and users of technologies or processes on the other - with evident benefits for decision-making.

In these different contexts, expert assessments will be requested either from individuals who are reputed for their experience and knowledge, or from organised groups of experts. For example, national bodies, such as the French food safety agency (AFSSA), or international bodies like the Intergovernmental Panel on Climate Change (IPCC), will organise joint expert assessments on complex issues requiring a multidisciplinary approach.

Launching expert assessments of situations and projects that involve different people and affect the development of society can have a considerable impact. The approach and the conditions under which the assessment is conducted therefore have to be examined with great care and codified whenever possible.

Our aim here is to discuss the ethical framework of the function and conduct of an expert assessment when carried out jointly or by an individual within the CNRS. This discussion of ethics takes place upstream from any legal regulations governing expert assessments. Our aim

is to suggest conditions that are capable of securing genuine trust in the conduct of expert assessments. By highlighting the values, principles and ethical rules that might serve as references, these proposals seek to help scientists take on their responsibilities towards society, contribute to the forging of closer links between different sections of society and take part with others in solving the major issues confronting the world and its human societies.

The ethical dimension not only concerns the processes involved in setting up an expert assessment and the relationship between experts and society, but also the criteria used, their pertinence and the way they are brought into play. An expert assessment does not exist in itself, since it is only given meaning by its purpose and by the ways in which it is appropriated by those for whom it is conducted. We will therefore look first at the ethical context of the expert assessment as such, and then at the practical dimensions that ensue from its set-up and use.

2. On expert assessments and scientific experts

An expert assessment is the whole set of activities required to analyse a given problem, based on the current state of knowledge, on demonstrations and on the experience of the experts concerned. It will generally result in a document (assessment report) with a conclusion that, depending on requirements, provides interpretations and sometimes recommendations. The assessment may be commissioned by a public or private body or person and may or may not be charged for.

An evaluation and an expert assessment have many points in common and the two terms are often used interchangeably. In both cases, the activity revolves around research and researchers. However, in the former case, research and researchers are themselves the main objects of the evaluation. In the latter case, the activities are implemented by research institutions and the scientists conducting the assessment, and have a much broader social scope.

Expert assessments, in the classic acceptance of the term may concern a wide variety of aspects and topics, ranging from the certification or authentication of a product or sample to appreciations of a situation or state as in legal or psychiatric assessments. In a broader acceptance of the term, encompassing the economic and social sciences and the humanities, an expert scientific assessment may cover some of the previous fields, when the objective is to analyse dysfunctional situations or disasters of natural or human origin which have occurred in the past. However, there is an increasing and specific demand for *prospective* expert assessments that forecast the overall impact of a given operation, a new technology or a new research field (nanotechnologies, neuroscience or genome science applications for example). In these cases, the demand is for an assessment of the possible benefits and risks, with or without recommendations as to necessary precautions.

Assessments of this type may be requested from individual experts or joint assessment bodies. It has also been suggested that expert assessment bodies, which work on specific areas and are relatively permanent, should be distinct from knowledge-producing organisations or institutions. However, this position raises difficulties of two kinds. On the one hand, the diversity and variety of the questions asked demand rapid adaptation and responses, which may raise questions as to the qualifications of practising experts in necessarily fluctuating fields. On the other hand, this approach may diminish the sense of responsibility of the

research organisation, if its expert assessment work is dissociated from the production of knowledge.

In the context of expert scientific assessment we are concerned with here, what is at issue is not a profession but rather a function and a responsibility that arise in response to a request. The expert is identified and chosen primarily for his or her ability and reputation for excellence in the field under consideration. However, it is obvious that these alone are not sufficient, since a high quality assessment also requires independence of thought and a capacity for self-criticism, as well as tolerance, humility and the ability to listen to others. These attributes are related to the ethical dimension of expert assessments and contribute to greater recognition of experts and trust in assessment processes - trust which is essential if expert assessments are to fulfil their role as a way of forging links between different sections of society.

3. Ethics in expert behaviour and in the conduct of expert assessments

a. Expert assessments by individuals

Although researchers devote most of their time to research, they are also asked to carry out evaluations and, more rarely and either individually or in small groups, expert assessments. With evaluations, researchers are required to give their point of view on research work carried out by a colleague or programme, or in a laboratory. In this case, they work within their usual environment, i.e. within the scientific community, in order to evaluate research in accordance with methods that involve traditional and well-established academic procedures.

As experts, however, researchers are required to provide an opinion or take part in an expert assessment for one or more sections of society - political or legal authorities, local authorities, industries, associations, the media, etc. - on a clearly identified issue within his or her field of competence, or on a multi-faceted issue. In these usually highly complex situations, researchers have to delve beyond their own field of knowledge to express a belief that results from their experience and their thinking. In such cases, they are working outside their normal environment to deliver appreciations that the social entities concerned expect to be as clear as possible.

Over and above a perfectly understandable sense of satisfaction at being called on as an expert, researchers need to be well aware of the nature and the boundaries of the expert assessment requested, of their own capacity to produce an independent point of view, of their experience and knowledge, of the time they have available to respond to the request and of the possible consequences of their responses.

For experts to express a position under the right conditions, the first requirements are specific and explicitly worded terms of reference and thorough knowledge of the rules of the game and the objectives of their 'client'. The request itself should enable the experts to assess their ability to respond, their independence from the client and the client's expectations, and their freedom from any "uniform thinking" or "moral imperialism". To clarify their own position, they will generally need to distinguish clearly between what is relevant to research, to science, to expert assessment and to politics. Concerning the people involved, their function and involvement as experts need to be totally separated from any decision-making process.

Next, experts have to be extremely clear in their formulations. A major requirement in expert assessments is explicitness in stating the conditions, criteria and reasons underlying the positions taken. This is absolutely essential if society is to understand and accept the expert's responses to the questions raised. The expert has to justify the conclusions reached so that they can stand scrutiny in the event of an appeal or second opinion procedure. Reasons have to be specific and clearly argued, avoiding any innuendo or ambiguity. To make sure they are understood by as many people as possible, a pedagogical approach is needed in formulating analyses and recommendations. Whenever the importance of an expert's work has been underestimated, deviations from these essential rules are likely to occur.

Experts are often chosen for abilities that are recognised within the establishment where they work. Their assessments may therefore have a positive or negative effect on the image of that establishment. This is why the relationship between the researcher and the establishment needs to be made clear. It would no doubt be advisable for experts to indicate systematically that they are being called upon in an individual capacity, specific procedures apart. Although an expert assessment from a researcher or engineer does not legally bind the establishment to which they belong, experts are generally called upon because of their professional status and recognition within that establishment. The problem is that society will tend to attribute an expert's position to their establishment as well, so that any inadequacy or inappropriateness on the expert's part will be extended to their establishment, and their personal standpoint, however legitimate as such, perceived as a collective position.

Researchers therefore have to find the right balance between the freedom of expression and action traditionally associated with the "CNRS culture" on the one hand, and their sense of responsibility insofar as they have been called upon in the capacity they occupy in their establishment. If the fundamental context of freedom is to be preserved, the work accomplished by experts, without being restricted, needs to be given a clearer framework.

Consciously or not, experts can become involved in power games. Their opinions may be biased by financial, personal or collective interests. Conflicts of interest have to be carefully anticipated in any expert formulation. Finally, during the assessment itself, information and communication often become a more prominent concern than science and knowledge. Entering the public arena, often with media attention, an expert may be tempted to take advantage of the situation as a militant scientist, another may become an instrument of those exploiting their scientific reputation, or succumb to the lure of media stardom, or even be led into expressing points of view on subjects of which he or she does not have adequate knowledge. All these risks make it essential for experts to distinguish explicitly between scientific fact, scientific uncertainty and their own personal beliefs. Explicitness in this regard also has the advantage of strengthening the pedagogical value of their responses.

To sum up, the imperative need for humility in making judgments cannot be overemphasised, whether in the researcher's own community or, and all the more so, outside it. A researcher who, as an expert, expresses an opinion that calls on areas beyond his or her knowledge will soon become aware that in most cases, science is not the crux of the debate. This means they have to exercise their ethical responsibilities as both scientists and citizens, clearly indicating the boundaries of each.

Experts therefore have to be both responsible and prudent in interpreting what is asked of them, in constructing their point of view, in formulating their opinions and in their contacts

with society. *Responsibility* refers here to scientific credibility and reliability, but also to legal responsibility, since an expert assessment can in some cases be brought before a court of law.

These analyses and recommendations obviously also concern assessments conducted jointly by several experts whose services are requested independently of their establishment.

b. Expert assessments by institutions

Expert assessments are of direct concern to research organisations because their researchers and research engineers are called upon, individually and sometimes jointly, to formulate opinions. In the previous section, we drew attention to the fact that in doing so, they can affect the scientific credibility of their establishment.

However, the case also arises where the research establishment itself, directly or through one of its laboratories, may be officially asked to formulate a point of view, by national or local politicians for example, or pressed into doing so by the media. The establishment employing the researchers and engineers involved in the expert assessment should not merely call on the responsibility of each expert, but should ensure that these responsibilities are exercised under credible guarantees and that the establishment itself stands by their conclusions.

The establishment may, for example :

- support the introduction of a code of good practice and provide appropriate training for its agents ;
- organise institutional expert assessments, with appropriate concern for the composition of the expert team chosen and the qualifications and independence of its members, and ensuring that the work is carried out under the best possible conditions: quality in formulating terms of reference, transparency in the conduct of the assessment and discussions, clarity in the formulation of opinions, etc.;
- publicise its availability and interest in organising expert assessments, provided that it is prepared to take on the work required ;
- organise discussions, internally or with partners and open to the public or not, on current or anticipated social issues. These CNRS discussions should be multidisciplinary in nature and thereby enrich the diversity of viewpoints.
- Facilitate subsequent publications of reference monographs on the topics in question.

A research establishment's responsibilities essentially relate to research and science. But because of the sheer complexity of requests from spheres outside research circles, expert assessments involve more than scientific knowledge and require a high level of responsibility that encompasses not only scientific aspects but also personal beliefs and a sense of citizenship. Responsibilities are more readily accepted if they are identified individually. For example, in the case of an institutional expert assessment, the chairman of an expert panel may commit himself by explaining how the panel functions and indicating the names of the experts who sign the final report. If disagreements arise within the panel, it would be preferable to deliver firm opinions expressed by several spokespersons with the corresponding reports, leaving subsequent choices to the political sphere. If an establishment guarantees the methodology and conditions of an expert assessment, it will also be in a position to validate the assessment report, which will then be considered as an institutional expert assessment and issued in the name of the establishment.

4. Ethics in implementing and using expert assessments

Any expert assessment is initiated by a client and, once completed, used by that client or, more randomly, by various media. These different levels demand reflection on the ethics involved.

The client defines the topic of the expert assessment and formulates the request. In the case of a request for an individual or joint assessment, the client identifies and selects the experts to be called upon. With an institutional assessment, the interlocutor will be the institution approached, which will choose the experts and organise the study itself. In all cases, the boundaries of the assessment will need to be clearly set out and the corresponding terms of reference meticulously defined. The objectives of the client in using the report have to be clearly described. The choice of experts must be based on scientific excellence, independence and the critical abilities mentioned earlier, and not on considerations of proximity to or membership in self-maintained networks. In particular, the choice must avoid groups of experts with shared cultural or ideological sensitivities.

In institutional expert assessments that call, for example, on organisations such as the CNRS, the terms of reference and the expert panel may be set up jointly. This should help to optimise the use of expert bodies as well as their adaptation to complex situations.

Even if the conclusions of an expert assessment are very clear, vigilance is required to ensure that they are put to proper use. Clients must take care not to misuse the content of an assessment or use it selectively to suit their own analyses or preferences. They must acknowledge that they are morally bound by the conclusions of the expert assessment requested and must not reject the opinions delivered without sound reasons for doing so, nor allow them to be ignored. They should keep a check on circulation of the results, ensuring the greatest possible transparency – other than in certain specific cases – and making sure that only accurate information is delivered to the media. An ethical stance must be equally apparent in the media, with conclusions reported objectively and balanced presentation of any analyses and comments associated with the dissemination of the assessment.

5. Recommendations

➤ **For the experts :**

- Experts must ensure that they have been given specific terms of reference from the client. They must also be aware of the client's intentions as to the use of the expert report.

- Experts must acknowledge, in view of the complexity of the issue submitted to them, the limits of their own knowledge, capacities and availability. They must distinguish between their levels of knowledge, from certainty to high probability to hypothesis.

- Experts must give their opinion, but without giving the impression that this opinion reflects that of their entire community. They should underline any differences of opinion between experts, and if possible specify whether their own position is in the minority or the majority. They must not feel indebted towards those who designated them and must have no hesitation, should their reason and conscience so dictate, in taking an opposite stance to that which the client may prefer.

- Experts must be very attentive to any conflicts of interest that may bias their judgement, whether these stem from close connections with industrial or economic interests or, more subtly, from sympathies with a distinct ideological position. It is their responsibility to appreciate whether, given their personal commitments, if any, they can deliver a reasonably objective point of view.
- Experts must consider any potential effects of their position on partners or parties other than the client. Any expert assessment is liable to have major repercussions on social justice, individual liberty, health, sustainable development, environmental protection, solidarity between countries of the North and South, and so on. By interacting with society, researchers acting in an expert capacity are necessarily contributing to the relationship between research and society.
- Experts must conduct the assessment using all the intellectual and rigorous characteristics of scientific methodology. They must be responsible for their final positions even when these are not popular.
- Experts must be aware of their own ethical limitations and avoid situations where they would not be able to obey the ethical principles set out above, however attractive considerations of power or personal interest may be.

➤ **For the Research establishment :**

- The research establishment, when called upon for expert assessments, should include the ethical dimension in the choice and balance of experts selected to conduct a joint assessment. It should ensure that the assessment calls as broadly as possible on the variety of CNRS competence.
- It should define rules for conducting the assessment that are based on ethical recommendations. It must be particularly attentive to any potential conflict of interest.
- It should ensure wide internal distribution of experience in expert assessments. It should be attentive to possibilities for synergies in the field between different research bodies and establishments.
- It should introduce procedures to follow up on its expert activities, to ensure that recommendations on ethics are effectively put into practice.
- It should consider setting up training in the application of ethical concerns in research activities relating to, amongst others, the dissemination of knowledge in every form, including university teaching and continuing education.

SUGGESTIONS FOR THE ATTENTION OF EXPERT ASSESSMENT CLIENTS

- The terms of reference for the expert assessment should be as specific as possible and the objectives of the assessment and the purposes for which it is to be used must be clearly set out.

- Clients must avoid the temptation to choose experts on the basis of an assumed favourable attitude towards their own preferences and analyses.
- The boundaries of an expert assessment must be taken into consideration and no demands must be made for a univocal and definitive response; it should be acknowledged that experts can disagree and that they must not be pushed into a consensus of opinion if consensus is not attainable.
- The results of an expert assessment must be used in full and with intellectual honesty; their dissemination should be ensured and facilitated without bias, censorship or subjectivity.

6. Conclusions

Expert assessments, if they develop and become better organised, especially within the CNRS, can become an effective interface between scientists and the different sections of society: the public at large, institutional and political spheres and industrial and economic sectors. They have the potential to engage these different spheres in dialogue and to close gaps between sectors that tend to be impervious to each other's concerns. They can also contribute to the development of a scientific culture in civil society and, conversely, to a better understanding among scientists of the demands made upon them by society. Finally, they can strengthen the role of civil society in democratic decision-making processes, while helping civil society to overcome attitudes that sometimes lead to *a priori* opposition to reasonable technical advances.

A well-conducted expert assessment should combine an ethical precautionary approach with an ethical approach to action, thus making a certain amount of risk-taking more acceptable.

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GLOSSARY

- Opinion :
A term applying to the result of a consultation on a given issue, a recent and important result, often conducted in response to a pressing media request. An opinion is usually individual and can only involve its author's responsibility.
- Expert assessment :
A response to a specific and clearly defined request from an administrative authority or body or a third party, on a given topic. Its purpose is to supply a technical but also societal appreciation that sheds light on a given issue for those requesting the assessment.

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- Individual assessment :
An expert assessment carried out by a single expert under his or her own responsibility.
- Joint assessment :
An assessment carried out by several experts.
- Institutional assessment :
An assessment conducted under the responsibility of an institution and carried out by several experts authorised to do so by that institution.