



OPINION n°2019-39

« INTERESTS AND CONFLICTS OF INTEREST IN PUBLIC RESEARCH »

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I. SUMMARY

The current social context is such that conflicts of interest that may influence decisions about public life are increasingly being brought into the spotlight. The scientific research sector is directly concerned by this issue insofar as Higher Education and Research (HE&R) players participate in assessments or expert appraisals and benefit from contracts either with the private sector, the French public sector or the European Union. It therefore appears necessary to specify the procedures for assessing and handling conflicts of interest in HE&R. Today, however, these are too often a matter of trial and error, and still include many blind spots. This COMETS Opinion focuses first on distinguishing conflicts of interest from the interests arising from protagonists' relationships. Interests may be of different kinds: tangible or intellectual, direct or indirect. This Opinion analyses the situations in which these interests must be declared. Such declarations are necessary for the proper functioning of research and are used to avoid bias in expert appraisals of public interest. They should not, however, bring proceedings to a halt by excluding too many of the skill sets required. The recommendations of this Opinion call for the development of a clear doctrine for HE&R staff when called upon to act as assessors or experts, or in certain cases when they hold more than one position or perform more than one role. They suggest a clarification of the procedures for declaring interests arising from relationships, as well as the desirable harmonisation of these procedures among institutions and research agencies. Finally, they advocate the greatest possible transparency in the declaration of the interests of researchers and research units, including in their communication with the media, in order to strengthen public trust in science.

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II. FORMAL INTERNAL REQUEST

Conflicts of interest are a topical issue. The scope of this notion has grown in recent times, erasing the distinction between suspected and actual conflict, and including "any situation that causes interference between a public interest and public or private interests, which could influence or appear to influence the independent, impartial and objective performance of a duty"¹. Collective outrage over cases of deception, fraud or defective medicines, as in the case of Mediator, is seen by the general public as the consequence of a conflict of interest. For several years now, intense legislative and regulatory activity has aimed to address these conflicts. Researchers² benefitting from contracts while taking part in assessments or expert appraisals, have their own interests that may lead to a conflict of interest³. In such a context, it appears necessary for research institutions, and indeed science in the broadest sense of the term, to shed light on these situations, propose appropriate remedies and dispel unfounded concerns. The trust of citizens in their researchers is at stake here. The issues concern not only integrity and the law but ethics too.

These issues appear to be all the more topical as public authorities encourage researchers to forge relationships with private stakeholders, and their institutions encourage them to develop public-private partnerships. At the same time, some social or societal issues require scientific expertise that only researchers can provide. They may thus find themselves helpless in the face of contradictory and often excessive orders from funding bodies about their personal interests. They may also find themselves at odds in complex situations where their freedom of expression is restricted or distorted. COMETS considers it appropriate to clarify the conditions that could give rise to conflicts of interest, in particular:

(a) *in the academic assessment carried out by researchers or their peers.* There is an increasing number of assessments linked to the management of research projects (in France and abroad) and careers (with repeated applications for promotions, bonuses, awards, etc.). The personal and/or professional interests of assessors could bias their opinions either positively or negatively. COMETS has deliberated on the regulations needed. This Opinion discusses the effects of regulations that are either too informal or, on the contrary, too intransigent — leading to undue suspicions of a conflict of interest, and thus to the systematic disqualification of competent experts, which would be detrimental to the quality of assessments.

(b) *in the context of contracts obtained with non-academic partners, such as companies or stakeholders with private or public interests.* In this context, the funding of research actions is increasingly coveted, although the partners' objectives are not necessarily the same. Contract staff may then find themselves under direct or indirect pressure. In addition, the participation in multiple activities — which it is planned to facilitate in the future — creates clear interests. This Opinion discusses the risks to the objectivity of research and expert appraisals that this incurs.

(c) *in expert appraisals requested by institutions or the State to guide decisions concerning public life, or requested by the media or think tanks.* Chosen for their knowledge of particular subjects, experts are also the most likely to have conflicts of interest. COMETS has deliberated on the way those seeking an expert appraisal may control and manage researchers' interests, and conversely on the way researchers may be protected from disqualification, particularly in the media. We have also examined the question of possible bias resulting from any activist involvement and the relationship between objectivity and freedom of opinion.

In the research sector, the characterisation of conflicts of interest arising from relationships must be assessed on a case-by-case basis. Rather than making an illusory inventory of conflicts of interest, this Opinion attempts to circumscribe their ethically harmful aspects and puts forward recommendations to meet a general demand for transparency while granting staff greater peace of mind.

¹ This is the glossary entry for conflict of interest, a definition close to that of Article 2 of French Act no. 2013-907 of 11 October 2013 on transparency in public life

² The term "researcher" refers to all research players, regardless of their sex or status.

³ See the reference work: Joël Moret-Bailly Les conflits d'intérêts : définir, gérer, sanctionner [Conflicts of interest: define, manage, punish] LGDJ L'Extenso ed. 2014

III. ANALYSIS

A. Interests in peer assessments of research

All research assessment processes are based on peer reviews, whether recruiting researchers and other faculty members, assessing teams, research units and organisations, or considering individual promotions and selecting research projects. This fundamental principle is also applied to the expert appraisals asked of researchers when addressing a suspected breach of scientific integrity. However, everyone naturally has his/her own interests and is therefore exposed to the possibility of a conflict of interest. These personal interests become sensitive in a wide range of assessment situations and can lead to a conflict of interest that renders the assessment invalid. Since the 2012 COMETS Opinion, “*Pour une charte déontologique de l'évaluateur scientifique*”, which addressed the issue of ethical standards for scientific assessors⁴, the situation in research has changed significantly. It is necessary to clarify what constitutes an interest and what constitutes a conflict of interest.

Box: COMETS glossary

A **tangible interest** is an interest that can be quantified and measured, mainly in financial form (shareholding, remuneration, funding, etc.). Other interests arising from relationships (with family members, friends, fellow professionals, etc.), are described as **intangible**.

An individual's **indirect interest** is the interest of somebody close to the person (whether a relative, friend, colleague or other) or of the person's host structure.

A positive **interest** is when a natural person or legal entity has a direct or indirect, tangible or intangible benefit from their relationship with a natural person or legal entity. The inverse is also true: a negative interest is when a natural person or legal entity has a direct or indirect, tangible or intangible disadvantage due to their relationship with a natural person or legal entity.

According to Joël Moret-Bailly, **conflicts of interest** can be defined as “situations in which a person in charge of an interest other than his/her own does not act, or may be suspected of not acting, loyally or impartially with regard to this interest, but aims instead to benefit either his/her own interest or that of a third party”. While this is not a criminal offence in itself, a conflict may lead to a criminal offence (see Annex).

The **assessment of interests arising from a person's relationships** and a **conflict of interest** depends on the institution's definition of each one. A person's relationships may automatically be considered as giving rise to interests depending on their nature or on quantitative criteria such as the duration or **intensity** of the relationship (value of gifts received, number of publications, etc.).

Major interest (red light) or **minor interest** (amber light): this distinction depends on the importance of the relationship that creates the interests. It is often used by an institution to separate relationships that involve a conflict of interest from those that do not.

An **actual conflict of interest** is a situation in which it is proven that the person may favour his/her own interest or that of a third party to the detriment of another interest that he/she is required to preserve in the course of his/her public duties.

An **apparent conflict of interest** is a situation in which the person may be suspected of having an actual conflict.

⁴ <http://www.cnrs.fr/comets/IMG/pdf/005-avis-comets-integrite-recherche.pdf>

The term **potential conflict of interest** is often employed today but with very different and often vague meanings, so it is not therefore used in this Opinion.

Funding effect is the tendency of a scientific study (or a researcher speaking as an expert) to defend the interests of a funding organisation.

1. Greater assessment workloads and risks of conflicts of interest

In many countries, researchers are increasingly called upon either individually or collectively to assess their colleagues. The risk that peer assessors find themselves in a conflict of interest situation is increasing proportionately. This kind of peer assessment may include panels deliberating on recruitments, careers and promotions, or committees assessing research units. Such assessments also concern the quality of scientific production, whether for selecting projects and their leaders in response to calls from funding agencies such as France's *Agence Nationale de la Recherche* (ANR) or the European Research Council (ERC), or for the peer review of publications, the number of which is constantly increasing. These two types of situation differ according to the object of the assessment. However, the risks to the regularity of peer assessments that their own interests incur appear to us to be of the same nature and will not be distinguished in the rest of this analysis.

Generally speaking, the interests of a peer assessor that arise from a particular relationship are more of an intangible nature (see the glossary) and he/she may not be fully aware of them. The assessor may be a rapporteur tasked with reporting on a person — or the project of that person (or structure) — close to him/her, such as a relative, a partner, a research colleague, a person from the same laboratory or institute, a former student or doctoral student who has recently left (within the past 2 or 5 years depending on the institutions), or on the contrary a person in conflict with him/her. Assessors may also be tasked with evaluating an application, publication or project that competes with their own interests. They may then be suspected of bias, whether the assessment is considered to be too positive or too negative. Thus, in the case of a peer review of an article, reviewers may be suspected of delaying their review or writing it in such a way as to delay publication, to give themselves time to publish a paper on the same subject before their competitor. Similarly, an opinion on a funding request from a team with a competing project is likely to be biased by a conflict of interest. Finally, suspicions of a conflict of interest may also arise in the handling of a departure from scientific integrity: when an assessment is requested on an allegation of fraud, all the interests of the expert or members of the group of experts consulted — whether anonymously or not — must be taken into account⁵ so as to avoid professional bias tending to distort the assessment of the practices of a close colleague.

It is important to remember here the difficult context in which peer assessors work. The time taken by their assessment tasks may conflict with their own research activity. Moreover, the choices they have to make are often almost impossible when the resources to be allocated are so limited that they have to refuse equally excellent applications. Finally, the large size of university and educational institution communities (COMUEs) in French HE&R may lead to situations where conflicts of interest arise from divergent strategies in the different institutions making up the superstructure: in the absence of harmonisation, should researchers follow the instructions of their direct employer or those of the topmost structure?

2. Declarations of interest are multiplying but lack standardisation

The ethical rules applicable to research assessments are developing on a European scale. The French Act of 2016 on ethical standards and the rights and obligations of civil servants has taken over the obligation of impartiality and integrity, and has clarified the duties of civil servants in order to prevent situations where

⁵ See the guide to procedures recently published by RESINT, the French network of research integrity advisers, which stipulates that care must be taken to "identify interests that may appear to influence the persons solicited during the investigation". http://www.hceres.fr/content/download/33342/507076/file/2018_Guide-traitement-signalements-IS_RESINT.pdf

there could be a conflict of interest⁶. The French Ministry of Higher Education, Research and Innovation (MESRI) has just set up a College of Ethics⁷, which can be consulted by any employee wishing to obtain an opinion on his or her situation, particularly in terms of a conflict of interest. One of its remits concerns impartiality in selection panels. It plans to implement assessment rules in all research institutions and funding agencies. These rules will differ depending on the object of the assessment.

Today, there is considerable disparity among and within organisations and agencies in the description and handling of interests and conflicts of interest. Some structures have benefited from long-standing reflection, with declaration of interest forms explained by a detailed guide, and a well-established process for characterising conflicts of interest. Others adopt an equally precise but minimal declaratory approach to comply with legislative, regulatory or jurisprudential provisions. Finally, both public and private structures are sometimes satisfied with a single box asking “Do you have any conflicts of interest? If so, what are they?” which puts people who have to answer in an awkward situation. The disclosure of declarations of interest gives rise to a whole range of practices, some of which are justified, others less so. The names of assessors may remain confidential or may be disclosed while their declarations of interest remain confidential; or full disclosure may be implemented either *ex ante* or *ex post*. The characterisation of a conflict of interest and even the vocabulary used are also very disparate. Some terms — such as “potential conflict” — are used with very different meanings, making it difficult for staff to understand the issue of a conflict of interest (see glossary). The conflict is most often assessed interest by interest, which does not take into account situations where several relationships may simultaneously give rise to interests.

The detailed forms used to declare interests all tend to have a common core detailing different types of interest and stating how far back interests arising from relationships have to be declared (5 years in arrears being the most common). In France, rules have been set up by the Council of State (which is the highest administrative tribunal) for recruitment panels. Interests arising from relationships are to be characterised as red, green or amber according to criteria that are usually poorly defined. They are normally accessible on request. The French National Council of Universities (CNU) has adopted a charter on interests to be declared when serving on a panel. The CNRS Human Resources Department (HRD) has also formulated a memo on compliance with the principles of impartiality and unicity for panels judging competitive research projects⁸. The College of Ethics has drawn up an initial indicative self-assessment grid to help detect situations of bias among members of selection panels⁹.

Furthermore, funding agencies such as the French ANR¹⁰ or the European Research Council (ERC) have also issued numerous instructions on declaring interests and avoiding conflicts of interest. Thus, the ANR charter is designed to “stop and prevent conflict of interest situations” and provides a non-conflict of interest document to be signed by board members.

However, reporting requirements are far from being unified, differing from one institution to another in terms of both personal and professional, direct or indirect interests. Declarations vary for interests arising from “family” relationships. The CNRS HRD, for example, does not provide a definition for members of competitive research selection panels. The ANR limits reporting obligations to the spouse/civil partner/PACS partner. For its independent experts, the ERC considers more precisely “close family ties or personal relationship (spouse, domestic or non-domestic partner, child, parent, etc.)” for the project’s principal investigator or a legal representative of one of the project’s partner institutions.

⁶ Act No. 2016-483 of 20 April 2016 on ethical standards and the rights and obligations of civil servants
<https://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000032433852&categorieLien=id>

This Act states that civil servants are to carry out their duties “with dignity, impartiality, integrity and probity”.

⁷ Founded on 1 March 2018

<http://www.enseignementsup-recherche.gouv.fr/cid138740/le-college-de-deontologie-de-l-enseignement-superieur-de-la-recherche-et-de-l-innovation.html>

⁸ In-house memo of 27 March 2018, revised in August 2018, drafted by the CNRS Human Resources Department and sent to members of National Committee sections.

⁹ Official journal (*Bulletin Officiel*) no. 8 of 21/02/2019. This indicative grid characterises types using two colour indicators: red for presumed bias, and amber when further appraisal is required.

¹⁰ In 2018, the ANR drafted a new charter on ethical standards and research integrity

<http://www.agence-nationale-recherche.fr/fileadmin/documents/2018/ANR-Charte-deontologie-et-integrite-scientifique-2018.pdf>

Declarations also vary for “professional” ties. The CNRS HRD considers that the impartiality of a competition panel member cannot be called into question if professional ties with one of the candidates are more than 2 years old. The French National Scientific Research Committee, CoNRS, requires withdrawal from the competition panel should any member have a “major”¹¹ conflict of interest with regard to an applicant. Members may nonetheless take part if they have supervised the applicant's work or thesis, or if they have been a panel member for his/her thesis or authorisation to supervise research (HDR). However, ongoing hierarchical relationships with an applicant requires abstention from the panel in order to respect its unicity. Within the French National Council of Universities (CNU), a panel member can benefit from the right of abstention without having to give a reason.

The rules among funding agencies also differ. Most of them consider a time base of five rather than two years in the characterisation of interests arising from a relationship. In ANR committees, assessors simply refrain from attending the committee's discussion of an applicant's project if they may have a conflict of interest, but still participate in the final deliberations. The same is true for the ERC.

3. Tackling conflict of interest situations in HE&R

Despite the disparity in criteria applied, it is becoming increasingly essential for research institutions and funding agencies to clearly identify situations that could give rise to a conflict of interest. Not only do institutions need to comply with the rules of professional ethics, but they are legitimately concerned by the possible handling of such conflicts by the courts¹². Among other things, it may be feared that widening the scope of criteria applied when defining major conflicts of interest could lead, for example, to a reconsideration of the way recruitment is currently carried out. There is considerable room for improvement at all levels in such structures to raise awareness among research staff and to take into account the issue of interests and conflicts of interest in assessments. The remedies proposed to tackle this situation are neither stable nor fully specified as yet. They also need to be standardised, if possible. The convergence of uses must be clarified. Generally speaking, a balance could be found based on the two principles of collegiality and transparency. On the one hand, the collegiality of a group of assessors, if fairly balanced, helps to reduce the bias resulting from personal interests. When composing a group, care should be taken to avoid choosing members with the same relationships (whether the interests that arise lead to positive or negative bias) so that the various interests somehow cancel each other out. More generally, it is hoped that the vigilance of all the members of a group will limit the adverse effects of possible conflicts of interest, unless there are charismatic personalities who lead all the others by their authority, or any kind of illicit agreement, which can be avoided by renewing the committees regularly. On the other hand, it is highly desirable, and indeed ethically recommended, to have complete transparency as to selection processes (whether competing for a job, promotion or funding) and routine assessments (mid-term and final assessment of researchers and CNRS laboratories, etc.). This implies publishing the names of assessors in the groups responsible for selections or for giving their opinion¹³, as well as their declarations of interest (except for items considered confidential) *ex ante* and updated as necessary during the process¹⁴. Should external assessors be used to examine specific cases, their names and declarations of interest should be published *ex ante*.

¹¹ The CoNRS does not give a precise definition of this term, which appears to depend on a consensual assessment within each section

¹² See the recent case of a competitive CNRS research directorship: in July 2018, the French Administrative Court's judgement annulled the deliberations of the “DR2 2017” political science contest (section 40).

¹³ In some cases, the anonymity of members of a panel or assessment board may appear preferable before the final decision-making meeting, as is the case at the ERC, to avoid anyone bringing pressure to bear on these members. Nevertheless, the name of the committee chair is public *ex ante* and the names of all the members are revealed as soon as the competitive selection process is over. The question of anonymity also arises for members of expert committees recruited to assess suspected fraud or breaches of scientific integrity.

¹⁴ The issue has not yet been resolved. In the health sector, where there are rules on the management of conflicts of interest, such as those laid down in the expert health appraisal charter (*Charte de l'Expertise Sanitaire*), experts' interests are published. Some relationships leading to potentially problematic interests may be with family or close friends. HAS, the French health authority, has, for example, decided to publish information that indicates the existence of interests linked to the activity of such people but does not specify them, even though the expert must declare them and HAS knows what they are.

The transparency of peer reviews for publications is based on other procedures that are dictated by the publishers. Many alternatives to single-blind expert appraisals (when the names of the rapporteurs are hidden but they themselves know the names of the authors) are being considered as part of ongoing reflections on Open Science¹⁵. However, double-blind peer reviews, and those without any anonymity, have both disadvantages and advantages.

4. Limitations and questions about declarations of interest

At this stage, we cannot fail to mention the difficulty that everyone has in drafting relevant personal declarations of interest: clear typologies and adequate training/information are required to complete the questionnaires (see recommendations). These will ensure that declarations of irrelevant interests do not exclude the most competent assessors. For example, it seems inappropriate to systematically disqualify a CNRS researcher as an assessor of another CNRS researcher, given that the vast majority of laboratories in France are joint CNRS research units covering all disciplines. Additionally, obstacles to a dispassionate assessment are multiplying with the strong development of national or international cooperation, and the extension of research networks (especially in order to respond to calls for tenders). While all this enriches the ties between researchers, it often makes it difficult to find totally “unattached” assessors.

The criteria used for declarations of interest must take into account the nature of the assessment, particularly with regard to internal peer reviews, which require detailed background knowledge. Overly restrictive rules can lead to a halt in proceedings due to the exclusion of the most competent assessors or even an invalid appraisal. This kind of situation is becoming more and more frequent for thesis juries¹⁶. Assessments in highly specialised scientific fields also pose particular problems, as the researchers best suited to evaluate work often have close ties to the people, projects or publications to be assessed. The same problem applies to expert appraisals (see below). Bearing this in mind, a transparent declaration of interests (even when the relationships leading to these interests are close) could be enough to ensure that the appraisal is both thorough and impartial.

The issue of conflicts of interest could possibly be avoided by the systematic use of foreign assessors, which is an increasingly frequent and justified practice in many cases. However, this “good” practice is often only an illusion: as we have already pointed out, international ties can be even more frequent than national ones; moreover, foreign colleagues may not have a very detailed knowledge of the national scientific fabric, while assessment criteria must take into account the context, in particular for the recruitment and programme-based funding of researchers and teams.

A final hurdle today is the frequent lack of precise information on the management of declarations of interest within institutions, and in particular, on the question of who characterises the existence of a conflict within the institution requiring this declaration? Who is responsible for processing these declarations? In many cases, there is a lack of transparency: is the person or entity responsible a link in the administrative chain, the chair of a jury or panel, or an ad hoc committee, for example? This lack of transparency often hides the case-by-case handling of declarations. In the end, it is detrimental to the appropriation by all staff of the reporting process and raises doubts about fair treatment.

There is also the problem of a researcher's failure to report interests. This may be due to a lack of attention or an underestimation of the importance of these interests, but wilful failure to report interests arising from a relationship is problematic because lying in a declaration may be considered fraud, which is an offence. In addition, there is currently no procedure for researchers who wish to report interests not declared by some

¹⁵ See, for example, the discussion in the article on expert appraisal processes before and since Internet: <https://www.sciencedirect.com/science/article/pii/S1269176304000410>

¹⁶ While there is no formal declaration of interests to be filled in to become a member of a thesis jury, universities are publishing increasingly strict rules to exclude rapporteurs who may have ties to the PhD student. Thesis supervisors cannot be jury members if they take part in its defence.

of their colleagues¹⁷. This issue had already been raised by the INSERM Ethics Committee¹⁸, but does not appear to have been fully resolved. We may also mention here the absence, in France, of any characterisation of a failure to declare interests: some agencies (such as the DFG, which funds German research) already consider and treat such failures as breaches of research integrity, whereas in France they do not yet have a status¹⁹.

Let us end this analysis with an optimistic, even utopian reflection: we have to rely on the self-regulation of the wider community (which includes all the stakeholders), in order to reach broadly accepted and sustainable solutions. Education and training are key factors in preventing problems. There has been much progress in regulating research integrity, which is on the agenda of all institutions. Similarly, the prevention of conflicts of interest will require a sense of responsibility on the part of stakeholders that transcends rules and charters. It is also to be hoped that public players will understand that primary prevention of conflicts of interest in the field of assessment will require less extreme selectivity for projects and less excessive tensions in recruitment or promotions.

¹⁷ It should be noted that the job of the institution's ethics adviser is to advise staff on their professional practice, but not to collect reports on declarations of interest

¹⁸ INSERM memo of December 2014 on the management of declarations of interest and conflicts of interest "[la gestion des déclarations des liens d'intérêts et des conflits d'intérêts](#)" <https://www.inserm.fr/recherche-inserm/ethique/comite-ethique-inserm-cei/notes-comite-ethique-en-reponse-saisines>

¹⁹ Failure to declare interests due to a breach of integrity should be dealt with by the institution's integrity officer.

B. Interests and conflicts of interest raised by contractual relationships

1. Contract research

Public-private conflicts of interest are becoming increasingly frequent in research because of the current context and the increasing disengagement of the State in the funding of public research. Furthermore, there is growing awareness of health and environmental problems, which are leading to increasingly stringent regulations on industrial products (food, medicines, cosmetics, plant protection products, etc.) and the exploitation of natural resources (biodiversity, environment, mining resources, etc.). The result is an increasing demand for scientists as experts. However, as they have to work for the private sector yet provide neutral advice as public service specialists, they are increasingly likely to face conflicts of interest.

In recent decades, research funding practices have changed significantly. What are known as “recurrent” credits, which allow basic research free of predetermined objectives, are increasingly rare²⁰. On the other hand, contracts with the private sector have become a major source of public research funding, especially since the “Crédit-Impôt-Recherche” research tax credit²¹ encourages companies to establish relationships with public research. During their speeches for the 80th anniversary of the CNRS on 4 February 2019, the French Prime Minister and the Minister of Research encouraged HE&R institutions to go even further in the development of public-private partnerships.

This situation potentially creates an unprecedented risk of conflicts of interest for researchers²². We focus here on contracts with private-sector partners, but our analysis is also pertinent for some funding from non-academic public stakeholders such as ministries, local authorities or government agencies.

One of the missions of public research, inscribed in the French Research Code, is the transfer of knowledge and its application in companies and in all fields contributing to the progress of society (“Code de la Recherche”, Art. L411-1²³). Partnership relations with private players (or public operators) no longer evoke the same rejection from researchers as they did a few decades ago. Establishing ties with industry is seen not only as a financial necessity for laboratories but also as a way for researchers to fulfil one of their missions, i.e. to contribute to the economic development of their country and, today, of Europe. By bringing the world of academic research closer to the industrial world, researchers can also tackle new research themes that stimulate their creativity while responding to societal demand. Examples can be found in all disciplines: in chemistry and physics, for example, CNRS laboratories work on catalysis, corrosion, energy conversion and storage, new drugs, and the development of evermore efficient and intelligent materials. There are now many public-private partnerships with the pharmaceutical industries, in the fields of information technology, materials, aeronautics and defence; action-research in management science is funded by companies, etc.

However, the goals of each partner in all these collaborative projects may differ. Researchers remain motivated above all by the desire to advance knowledge while developing the methods and instruments they use. Manufacturers, for their part, are naturally keen to bring to the market a “good product” that will be economically profitable in an increasingly competitive environment, and that will offer the most guarantees of meeting customer needs. The contracts concluded for this purpose are generally of limited duration and their scope clearly defines the framework of researchers' work. This situation results in a number of direct or indirect constraints and pressures on the individuals or teams concerned in academic laboratories, which are obvious sources of actual or potential conflicts of interest. A conflict of interest occurs when the interest of

²⁰ See COMETS Opinion no. 2018-35 on freedoms and responsibilities in academic research, “[Libertés et responsabilités dans la recherche académique](#)”

²¹ This is a French tax credit intended to support and encourage research and development efforts by companies, regardless of their economic sector, size or organisation.

²² Contracts concluded with institutional funding agencies such as the ANR for France or the ERC for Europe, and resulting from competitive calls for projects — which lead to many risks of a conflict of interest — have already been discussed above.

²³ <https://www.legifrance.gouv.fr/affichCode.do?cidTexte=LEGITEXT000006071190>

an external player competes with the primary interests of research, in particular the production of fundamental or applied knowledge for the benefit of society. Some examples are given herein, but the list is far from exhaustive.

2. Conflicts arising from research contracts with companies

Many companies use researchers from the academic sector to provide them with new or complementary expertise. But such partnerships are not free from bias. Some companies may be tempted to use the data and interpret the results provided by researchers in a way that meets their needs. They may seek to “manipulate” the results of tests performed on their products. Researchers may also be tempted to distort their results to obtain an extension or renewal of their contract. Sometimes the inconclusive or negative results²⁴ of a study are ignored, with researchers reporting only “what works” in accordance with the manufacturer’s wishes²⁵. This is the result of what is known as the “funding effect”²⁶. It should be noted that the risk of such an effect now extends to researchers responsible for a training course that cannot survive without the funding of a sponsoring company²⁷. Such interests should be declared in the same way as those resulting from research funding.

Conflicts may also arise when limitations that appear to lie outside the specific terms of the contract with the company are imposed on the disclosure of results, these terms not having been clearly explained at the time of the researcher’s signature. It should be noted that such situations could also arise for teams working in joint CNRS/industry units, or in scientific cooperation foundations funded by non-academic players.

Contractualisation does not necessarily imply the payment of funds; it can establish a “free” offer of resources that places the research under the control of the private player. One example is the provision of massive databases by Internet giants: the researchers who benefit from them do not have control over the entire corpus made available and the offer made to them is not without a vested interest.

3. Sowing doubt and inciting “diversionary research”

We cannot ignore the questionable methods of certain funding lobbies that select or divert research results to ensure that they promote their own interests. HE&R employees or teams participating in such diversionary research are exposed to a conflict between the interests of these lobbies and the purpose of public research, which is based on the rigour of the scientific approach.

This kind of abuse has been extensively documented in recent years. The actions of tobacco companies, oil, seed or agri-food industries push study topics in their favour and introduce biases in knowledge, with harmful consequences for health, the environment or the climate²⁸: thus it is that tobacco is apparently only one factor among many other pollutants causing lung cancer; CO₂ is actually beneficial for the climate, etc. Other recent investigations involve work in the agri-food sectors to justify the continued supply of products suspected of being carcinogenic²⁹. These cases involve the “strategic creation of ignorance”, reliable elements of knowledge being brought into question in the minds of the public and decision-makers. This approach sometimes relies on pseudo-scientific foundations funded largely by the industries concerned³⁰.

²⁴ Whether it is contractual work or academic research, it is important to stress the importance of negative results. In many cases, their disclosure can avoid mistakes.

²⁵ *These typical breaches of research integrity are part of the “grey zone” of inappropriate research behaviour, lying outside the scope of well-defined fraudulent behaviour (fabrication and falsification of results or plagiarism)*

²⁶ Stephan Lewandowsky and Dorothy Bishop 2016, “Don’t let transparency damage science”, *Nature*, 529, 459-61.

²⁷ *The financial needs of higher education institutions are reflected in a growing call for private philanthropy through master’s and, more recently, undergraduate degree chairs. In some cases, these chairs can be 100%-funded by a particular private stakeholder, who furthermore requires non-disparagement clauses whose influence on the research activity of faculty members delivering such courses is currently unknown.*

²⁸ See Erik Conway and Naomi Oreskes, *Merchants of Doubt*, Bloomsbury Press, 2010

²⁹ See Stéphane Horel, *Lobbytomie [Lobbytomy]*, La Découverte, 2018, 367 pages

³⁰ See Stéphane Foucart *La fabrique du mensonge [Making lies]*, Paris, Denoël, 2013

All research sectors are potentially concerned. Lobbies continue to rely on falsified research published by Andrew Wakefield linking MMR (measles, mumps, rubella) vaccination to the risk of autism, to denounce the danger of vaccines, supported in this by anti-vaccine activist associations³¹. In other research sectors, including the humanities and social sciences, financial lobbies are at work. Some have generously funded research on financial illiteracy — the lack of the general public's control over financial objects — as the source of the subprime mortgage crisis that led to the global financial crisis of 2008: researchers are then mobilised and the scientific literature places the responsibility for the ensuing turmoil on citizens, which is a mechanical diversion from in-depth research on the responsibility of financial institutions.

4. Researchers with multiple positions and roles

The above situations may arise in a direct contractual relationship between researchers and private (or even public) interests without any intermediate academic institution. Researchers may thus find themselves, even unwittingly, in a conflict of interest situation either because they receive a direct remuneration for the knowledge they transfer to the company, or because they provide an intellectual endorsement of the company's interests. The case of pulmonologist Michel Aubier is edifying in this respect: he was convicted on appeal in 2018 for failing to inform his employer, the Paris public hospitals organisation AP-HP, that he had been an employee and a member of the Total Group's Board of Directors for several years³²³³. Researchers holding more than one position must declare them and the employer can then authorise or forbid the other positions.

It should be noted that a new way of circumventing the obligation to declare multiple positions is to accept remuneration in the form of copyright for the production of a document following expert or consultancy work. Declaration of interest forms may not necessarily ask about this type of relationship. Other interests can be identified by looking at the invitations to conferences that private companies may extend to certain researchers³⁴. Rules have recently been introduced in the medical sector to limit overly visible forms of gifts³⁵. However, in other areas, some companies provide significant benefits to researchers, for example by encouraging them to attend lavish congresses, all expenses paid (when they are not paid for their contribution), to "facilitate" contacts and benefit from their work: such relationships should be declared to avoid suspicion.

Until now, HE&R staff with a second position as an entrepreneur had been limited in principle to one fifth of their time, and remuneration was capped; their participation in the creation and development of a company was closely supervised and required an authorisation from the French civil service ethics commission³⁶. The provisions of France's PACTE³⁷ act will modify the time and remuneration parameters authorised for this type of "double dipping", while in some cases eliminating the need to go before the ethics commission. Authorised by the HE&R employer to keep their fully paid laboratory job, researchers will be strongly encouraged to develop at the same time their own company. It should also be added that the PACTE act will

³¹ Andrew Wakefield is a former British surgeon known for his work on the MMR (measles, mumps, rubella) vaccine and its alleged link to autism, published in 1998 in *The Lancet*. An investigation revealed the fraudulent nature of his work and brought to light an enormous conflict of interest. The article was only retracted 12 years after its publication. Wakefield bears a heavy burden of responsibility in the decrease in immunisation coverage against measles.

³² https://www.lemonde.fr/pollution/article/2018/11/09/la-condamnation-pour-faux-temoignage-du-pneumologue-michel-aubier-confirmee-en-appel_5381362_1652666.html

³³ Following this case, the Paris public hospitals organisation, AP-HP, commissioned a report submitted in March 2016 and entitled *Les conflits d'intérêts au sein de l'AP-HP, mieux les connaître, mieux les prévenir* [Better knowing and preventing conflicts of interest within the AP-HP]. The report puts forward six proposals limited to medical professions in hospitals. It should be noted that no distinction is made between interests arising from relationships and conflicts of interest.

³⁴ The Committee for ethical standards and prevention of conflicts of interest of ANSES, the French Agency for Food, Environmental and Occupational Health & Safety, is considering making it mandatory for the Agency's experts to declare such interests.

³⁵ See what is known as the "Sunshine Act" no. 2013-414 of 21 May 2013, which sets up a system for publishing business interests in order to consolidate the safety of medicinal and healthcare products. This implies that companies have an obligation to declare information relating to the agreements concluded and benefits provided for any health professional, so that they can be published.

³⁶ See the COMETS Opinion of 2014: [Problèmes éthiques pour la recherche publique en mutation](#)

³⁷ PACTE in French stands for action plan for business growth and transformation (*Plan d'Action pour la Croissance et la Transformation des Entreprises*): see [PACTE](#). This act was adopted in April 2019.

allow public employees to keep up to a 49% stake in the share capital of their company without express authorisation. These are new exemptions from the separation of roles in public and private research, which expose researchers to conflicts of interest that may arise between public employees who are also key shareholders in a private company.

It should be noted here that the situation of entrepreneurial researchers can also generate conflicts of interest that are more or less the opposite of the above: this is the case of researchers in a research team that is a customer of a company that they themselves created using their own skills or those of one of their students. They may favour their own company over its competitors.

Such behaviour may be punished outside the HE&R framework and may even be considered a criminal offence (see the Annex for a description).

C. Interests in expert appraisals for public third parties and in the media

The participation of researchers in public-interest expert appraisals is an integral part of public research missions. The same applies to their duty to become involved in public debate as experts, to inform and explain. In both cases, requests are increasing very sharply. HE&R employers encourage their staff to participate. Researcher assessment bodies are increasingly taking into account these outside activities, which staff now detail in their activity reports. While some aspects are common to public-interest and media expert appraisals, in practice, these two missions are distinct and will be addressed successively here.

1. Ensuring that there is no bias in public-interest expert appraisals

Expert appraisals for public third parties such as health agencies are similar to assessment and involve the elements of analysis already provided in the first part of this Opinion. However, they are clearly distinguished by the nature of the interests involved and the expert appraisal processes. On the one hand, public interests are of great importance, for example in the fields of health and the environment. They involve significant interests on the part of various third parties (private companies, administrations, NGOs, etc.) and require the collaboration of experts from both academic and other backgrounds. On the other hand, this type of expert appraisal is subject to a particular temporality, which also requires scientific "evidence". Finally, it should be recalled that experts are neither responsible nor liable for the political decisions taken by decision-makers following their expert report, although they cannot ignore the public use that will be made of it³⁸. They must therefore be aware that what they say actually influences public decisions. However, if their report is biased due to obvious interests, they contribute both to policies that are harmful to the social body as a whole and to the discredit of the scientific community.

In 2012, the CNRS adopted an in-house version of the national charter on scientific expert appraisals³⁹. However, this charter only concerns collective appraisals carried out on behalf of the institution and not the frequent case of expert appraisals produced in an individual capacity by research staff, who may be asked to participate by national or international regulatory and control agencies. In France, we can mention health agencies such as the ANSM (France's national agency for the safety of medicinal and healthcare products), ANSES (the French agency for food, environmental and occupational health & safety) or the HAS (the national authority for health), and also physics agencies such as the French nuclear safety authority, ASN, which ensures the safety of power plants and protection from radiation. Scientific expert appraisals are also required for a multitude of national councils such as those on digital technology, economic analysis and national education. They are also needed occasionally by Parliament in the context of information or investigation missions, or by the Court of Auditors.

The issue of interests and conflicts of interest has long been addressed in the case of expert appraisals for the courts. To our knowledge, the number of HE&R staff on court expert lists is small, but judges quite frequently call upon researchers for very specialised expert reports in all kinds of fields (from the authentication of a work of art to the explosive nature of a smartphone battery in the cockpit of an aircraft). Court experts are sworn in and it has long been considered good practice to have them sign a declaration of independence⁴⁰. Conflicts of interest in this sector are well defined.

More recently, following health scandals, declarations of interests have become widespread in health agencies. As they are made public, they are known as public declarations of interests (PDI). The French Act No. 2011-2012 of 29 December 2011 on the strengthening of health protection with respect to medicinal and

³⁸ See COMETS Opinion 2013-27 of 30 September 2013: "Natural Risks, Assessment and Crisis Situations".

³⁹ Available on the COMETS website: http://www.cnrs.fr/comets/IMG/pdf/chartenationaledelexpertise_139106.pdf

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https://www.courdecassation.fr/venements_23/colloques_4/2007_2254/recommandations_bonnes_pratiques_juridictionnelles_11103.html#I_q6x1

healthcare products and its implementing regulations⁴¹ standardised the PDI in a single form that is binding on all health agencies and competent authorities in matters of public health. All the PDIs are collected and made public on one website in France: [DPI-Santé](#). No experts can join groups until they have completed their PDI. Any omissions or partial declarations must be considered as ethical breaches. The agencies then analyse, independently of each other, the expert's interests with regard to the subjects addressed. A particular expert will not be selected if the interests arising from his/her relationships are liable to automatically lead to a conflict of interest concerning the subjects addressed by the collective appraisal. Once the expert has been selected, the agency assesses for each meeting the nature of his/her interests with regard to the topics on the agenda. If necessary, the agency must withdraw the expert in application of Article L. 1451-1 of the French Public Health Code. Some agencies have actually set up committees to inform them on these practices. ANSES, for example, has a committee for ethical standards and prevention of conflicts of interest that regularly issues opinions to improve the identification and handling of conflicts.

Compared to health agencies' highly standardised systems, government agencies or councils operating in other fields often handle the issue of interests arising from relationships (and *a fortiori* conflicts of interest) inconsistently, when they handle it at all.

Whatever the case, the handling of conflicts of interest is underpinned by the agency or institution's need to protect itself against the risk of losing the legitimacy or credibility of its work. This is why it is so important to have a systematic, standard form for declaring interests.

2. Protecting researchers as experts and limiting the risk of disqualification

The question of how to protect the person asked to play an expert role for public third parties needs to be addressed. One of the principles behind any expert appraisal is that the most competent are *a priori* those who have the most accurate and relevant knowledge. "The label 'expert' is closely linked to a person's experience, leading to the assimilation of the terms 'specialist' and 'expert'" (M. Huguet)⁴². This also means, though, that they are bound to have their own interests and relationships, and are therefore also the most likely to be suspected of bias during an expert appraisal⁴³. HE&R staff individually face increasing exposure and possible accusations. The media, colleagues, associations and bloggers, among others, immediately scrutinise an expert's CV, and more generally comb the Internet to identify interests arising from relationships or the researcher's host structure, and question the appraisal's neutrality. The disqualification of experts is a growing phenomenon of concern⁴⁴. The expert appraisal of a physicist at the French nuclear safety authority, ASN, was rejected on the pretext that he/she had held a position at the Alternative Energies and Atomic Energy Commission (CEA), for example, and that of a biochemist at ANSES because certain teams in his/her laboratory had contracts with industry. Conspiracy theories against scientific expert appraisals are developed through social networks, especially since proven scandals offer easy arguments. According to the 2010 special Eurobarometer module on science and technology, the vast majority of Europeans considered that scientists can no longer be trusted to tell the truth in controversies or on technological issues because they also depend on industry for their funding. The support for this assertion was 51% in the United Kingdom, 65% in France⁴⁵ and 70% in Germany; it is of concern that the same survey conducted today would be likely to reveal even more critical assessments. This mistrust of experts can damage the development and image of science and, more generally, democratic institutions if known facts resulting from research are reduced to partisan views or opinions.

It is often argued that the collegiality of expert groups protects individual members as it guarantees the neutrality of opinions, to the extent that the various interests balance each other out. However, excessive

⁴¹ French Decree No. 2012-745 of 9 May 2012 on the public declaration of interests and transparency with regard to public health and safety, then the Ministerial Order of 31 March 2017 laying down the standard document for the public declaration of interests mentioned in Article L. 1451-1 of the French Public Health Code.

⁴² See the analysis posted online on 28 June 2018 by the French National Academy of Medicine (*Bulletin de l'Académie Nationale de Médecine*)

⁴³ One possibility for a researcher highly qualified on an issue submitted for expert appraisal but with strong vested interests in the subject, is for the group of experts to hear his/her testimonial in full knowledge of the facts.

⁴⁴ See, for example, Yves Bréchet: "[La disqualification des experts, un risque grave...](#)"

⁴⁵ The surveys of international marketing group IFOP, "Recherche" magazine and "Le Monde" newspaper among the French population give a much higher rate of confidence in researchers overall, which nonetheless varies widely depending on the sector. However, the question asked by the IFOP opinion polls does not specifically mention industrial ties.

collegiality can, on the contrary, adversely affect this guarantee by over-diluting responsibilities, which may then result in a delay in issuing an opinion, or in a systematic call for more research, which would ultimately conflict with the principle of prevention and public information. In the name of efficiency, expert appraisals must comply with a strict schedule so that decision-makers cannot hide behind the argument of “waiting for the experts’ opinion”, which they sometimes use to justify their very great caution with regard to health or food issues.

Researchers’ expert appraisal activity calls for their institution’s recognition and protection. Above all, it is the institution’s responsibility to ensure that the time-consuming and complex nature of expert appraisals does not hinder the employee’s main mandate, especially the pursuit of his or her own research. In addition, the employer must clearly explain to all employees the transparent and clear processes for declaring interests and handling possible conflicts of interest, and give them exhaustive information on the supporting organisation’s own interests. This would avoid staff unwittingly not declaring interests that could be considered by third parties to generate conflicts. The research institution must also protect its employees against the accusation of *a posteriori* retention of information from the expert appraisal: it is responsible for notifying the publication of opinions, or at least for indicating clear rules as to how the report is disseminated, whether or not it is restricted. Indeed, the entire group of experts can sometimes be designated as “guilty”, whereas they are victims on the one hand of the conflicts of interest of just a number of them, and on the other, of a decision that is not theirs. This was the case, for example, of Mediator — a medicine that was distributed despite the warnings by some experts of how dangerous it was a good decade before its final withdrawal. It is therefore desirable for the decision-making mechanism that follows on from expert opinions to be transparent too.

Finally, if the conditions for a trouble-free appraisal are not met, staff may also consider it preferable to withdraw, or to intervene only as a witness at hearings by an expert group, after having declared their own interests (see note 43).

3. The vigilance of expert researchers in response to social demand

The researcher must also take into account the social dimension of the problems analysed and listen to the general public’s opinions and information. A comparison with the assessments of citizens through associations and NGOs is often constructive. However, their role as experts requires HE&R staff to question the biases induced by their personal commitments to a particular cause, their activist work or their support for a particular school of thought. In order to preserve freedom of expression, declarations of interests should only concern activist work for which experts have an associative responsibility, for example in an NGO. It appears unrealistic to expect an expert not to have any opinions; a citizen activity does not automatically imply a suspicion of bias. Nevertheless, researchers must be able to clearly separate what is scientific fact or their own uncertainties on the one hand from personal convictions⁴⁶ on the other. There should be discussion on whether, when requesting an expert appraisal, it is appropriate to ask experts to sign a commitment that would morally impose intellectual neutrality. In most cases, we have to appeal to the expert’s sense of civic responsibility.

In addition, a researcher’s expertise can be used to reform HE&R organisation and define scientific or educational priorities (including those affecting secondary education). Researchers also need to be aware of potential bias induced by their particular discipline or their own experience of how research in their field of knowledge is organised.

Vigilance is also necessary in a context where the use of expert appraisals by public decision-makers is expanding and where researchers do not only give an opinion but actually take part in the public decision-making process: this is what we may call “embedding” researchers⁴⁷. Initially confined to observation, with or without participation, accompanied by the production of directives within an administration, this kind of involvement can now push the researcher to centre stage. Furthermore, it is often collegial. It does not generally result in declarations or, *a fortiori*, in the handling of conflicts of interest. It occurs at key stages of

⁴⁶ The COMETS Opinion of September 2005 on “Ethics and Expert Assessments” already underlined this.

⁴⁷ See, for example, the video of the session “Le chercheur embarqué et l’administration” [Embedded researchers and public administration], ENA-ENS symposium on 23 February 2017: <https://vimeo.com/210924015>

public action, in the drafting of a policy or its social experimentation. Researchers are involved in participatory democracy procedures, for example: a researcher was one of the five guarantors of the French “*Grand Débat National*” [great national debate] in early 2019. On a permanent basis this time, the government’s decision to increase the minimum wage in France was based on a public (non-binding) recommendation by a “group of five independent experts” appointed by the Prime Minister, including HE&R staff. Another example is that of social experiments within the framework of the Youth Experimentation Fund⁴⁸, which associate a research team with a local or national public decision-maker: researchers are directly involved in the principle and implementation of this public action on the pretext of ensuring the conditions for its assessment. Such direct involvement creates ties that could expose the researcher to new situations where a conflict of interest could arise: for example, if the same person or team were to assume both the role of participant in the development of a public policy and that of assessor of the same policy, without *ex ante* verification of the methodology by a collegial third party.

4. Researchers as experts for the media⁴⁹

Researchers and experts are increasingly asked to comment for the media. By media we mean here the audiovisual means of broad dissemination of information, including the press and evermore diversified scientific blogs available on the Web. However, challenged and discredited by social media using “point-to-point” broadcasting, the mass media no longer have the time or the means to systematically investigate and compare sources of information. They are thus tempted to resort more and more frequently to researchers whose expertise is free of charge and who still have some credibility with the public. Time constraints are imposed on all media, as is the need to produce fresh news for the public, even if not necessarily spectacular exclusives. In such a context it becomes difficult to guarantee neutrality, stick to the facts, present the limits of one’s knowledge and to declare personal interests, etc. The media often ask the researcher to give an “expert’s opinion”. When called upon to react “on the spot” to a current event, researchers are often pushed to go beyond their own area of knowledge, instead of simply expressing a detailed opinion based on their own experience and analyses.

During a live interview, researchers may be confronted with political players or personalities presented as “researchers”⁵⁰ who are in fact acting on behalf of lobbies. They may then find themselves in difficulty or led to endorse interests other than those of research. Furthermore, there is the exhilaration of media successes to which some researchers succumb, no longer defending scientific truth but a singular and atypical personal position that grants them success and satisfies their ego, but that can have a negative social impact⁵¹.

Yet researchers must not shirk this social role. They are regularly encouraged to use the media to deliver messages that their institutions compile and relay⁵², including some of their forums or columns, which by definition express an opinion of which subjectivity forms a part.

Most HE&R employers, including the CNRS, do not have a clear policy for their staff when dealing with the media. Depending on the questions, the employer may encourage researchers not to disclose their affiliation with their host institution, or conversely, require them to disclose it. The use of resources such as the researcher’s time spent preparing an interview, for example, or bibliographical resources made available to satisfy a media request is also unclear. When staff having declared that they work for a given institution

⁴⁸ Established by Article 25 of Act No. 2008-1249 of 1 December 2008, the purpose of the Youth Experimentation Fund is to finance experimental programmes aimed at fostering the academic success of pupils, contributing to equal opportunities and improving the sustainable social and professional integration of young people under the age of 25.

⁴⁹ The analyses in this paragraph do not concern staff responses concerning the organisation of teaching and research.

⁵⁰ As the profession of “researcher” is not regulated, opportunistic lobbying organisations attribute themselves high-flying titles such as Centre, Research Institute or Foundation; they pay “researchers” whose main activity consists in writing “reports” and being active in the media, not as lobbyists but as “researchers” or directors of the aforementioned Institute.

⁵¹ Bolstered by his Nobel laureate status, Luc Montagnier spoke publicly in 2017 about the harmful nature of vaccines, forcing members of the Academy of Medicine to publish the following statement: “As scientific and/or medical academics, we cannot accept that one of our colleagues uses his Nobel Prize to disseminate messages that are dangerous to health and outside the scope of his own competence, in defiance of the ethical standards that must govern science and medicine” (https://www.lemonde.fr/series-d-ete-2018-long-format/article/2018/08/17/luc-montagnier-le-virus-de-la-controverse_5343587_5325928.html)

⁵² The same applies to articles and debates. For the CNRS, these publications have to be mentioned in the CRAC/RIBAC files that detail the researcher’s production prior to assessment by the National Committee.

without any warning express opinions or relay knowledge that they know is not approved of by their peers, the employer's reactions can sometimes appear difficult to anticipate.

As with public-interest expert appraisals, public awareness of topical scientific issues is increasing. This would be welcome news were it not associated with a form of systematic suspicion. In letters sent to media editors, or directly to researchers interviewed, or in comments by Internet users, researchers are increasingly accused of expressing themselves in the media as "activists" or "ideologues", and of hiding their conflicts of interest while claiming their academic affiliation. It is true that rarely do the media and researchers who express themselves through the media mention their interests. This should therefore be done systematically.

Moreover, in such a context of suspicion, the case of "associate professors" becomes problematic when they use their title of professor in public interviews without pointing out that their main activity lies outside the academic system.

It could be useful for both HE&R employers and their staff if the scope of a charter for individual expert appraisals were to be extended to include appraisals for the media. However, this would only provide a general framework of limited practical scope.

IV. RECOMMENDATIONS

While the importance of problems due to interests arising from relationships and to conflicts of interest within HE&R is not new, the development of methods and procedures to handle them is much more recent. The current period is still marked by a certain amount of trial and error in addition to blind spots. COMETS recommendations now call for progress in order to move beyond this phase and ultimately make the practices relating to declarations of interests and avoidance of conflicts of interest a matter of routine.

A. Interests in institutional assessments and expert appraisals

The following recommendations are addressed not only to research players but also to research organisations and funding agencies.

*In general, and in order not to discredit the scientific community as a whole, it is urgent to take measures to avoid conflicts of interest, both in institutional expert appraisal procedures and in the assessment of staff, articles, projects or breaches of research integrity. For practical reasons, it would be preferable for these measures to be standardised at national and possibly European level. This requires the declaration of interests. This can be done *a priori*, regardless of the context, and for all staff, but HE&R institutions must be aware of how complex it is to collect, update and exploit these declarations. We prefer an alternative solution consisting, before engaging a researcher in an expert appraisal, in collecting the interests that refer to it. To reduce the burden on the expert and facilitate the processing of declarations, we propose that they be standardised. It will then be necessary to set up secure storage facilities for these declarations in accordance with the General Data Protection Regulation (GDPR).*

1. Declarations of interests should be a prerequisite for any institutional assessment or expert appraisal

HE&R employers should make it mandatory for their staff to declare their interests when they are called upon to bring their expertise to bear for assessments or scientific appraisals. HE&R staff should furthermore comply with the charters and reporting obligations of their employer and those of third parties for whom they act as experts or assessors. Incomplete, incorrect or outdated declarations constitute a breach of ethics.

As the interests to be declared depend on the context, it is important that the declaration form be supported by a guide provided by the research institutions that explains how to decide which interests to declare depending on the particular case. Institutions should give unambiguous instructions for characterising and dealing with conflicts of interest, and support researchers in their efforts when necessary.

Transparency about declarations of interests is desirable in principle but may conflict with the protection of personal data. If it does not appear appropriate, the declared interests should at least be known to the superiors of the employees concerned and to colleagues directly involved in collective expert appraisals and assessments.

COMETS suggests that the CNRS initiate a debate with other research institutions in order to generalise and harmonise the principles and rules for avoiding conflicts of interest by, for example, disseminating the abovementioned guide and possibly standardising a common core of the declaration form.

Like the INSERM Ethics Committee, COMETS considers it essential that, in addition to general principles and rules, researchers be provided with precise information on the procedures for managing interests and conflicts of interest, in particular on who collects declarations, who proposes a characterisation of interests arising from relationships, and who takes decisions on possible remedial actions.

The CNRS should also examine the procedures for declaring interests in relation to the handling by institutions of scientific integrity violations, and make these procedures transparent.

Special case of CoNRS sections. In addition to the legal instructions provided by the CNRS's HRD for competitive selection panels, the CoNRS could thus adopt an operational guide on declarations of interests and the characterisation of conflicts of interest for its communities, which would also include the practices to be adopted in the event of a conflict. It would thus formalise the practices of its various sections for recruitment and career assessments.

To protect staff involved in assessments or expert appraisals from accusations of conflicts of interest due to the interests of their research unit, an updated statement of the research unit's tangible interests (whether direct or indirect, for example via foundations or chairs) should be made available to staff. The CNRS should provide a template for its Institutes that could possibly be tailored to each discipline.

Raising awareness among research staff of conflicts of interest. For research players to become aware of situations in which they could be confronted with conflicts of interest, they need to be better informed of the laws and regulations that govern them. To this end, we suggest that the CNRS legal services provide them with a *vade-mecum* containing the main texts concerned, accompanied by a glossary.

Missions of the CNRS ethics and scientific integrity officers. The ethics officer can respond to requests for advice from staff and counsel them on various issues, including those relating to conflicts of interest. However, the ethics officer is not mandated to receive reports of conflicts of interest or of incomplete or inaccurate declarations of interests. COMETS would like the CNRS to initiate a reflection on how to handle such ethical breaches and consider that they may, in some cases, fall within the "grey zone" of misconduct with respect to scientific integrity. In this case, it would be necessary to define the scope of the tasks that could be carried out by the institution's integrity adviser.

2. Constitution of institutional assessor and expert groups

In a context of increasing national or international collaboration between researchers, it is becoming ever more difficult to eliminate interests, which must be assessed on an *ad hoc* basis and not lead to the systematic disqualification of the assessor or expert.

The principle of collegiality should generally be applied to assessments and expert appraisals. The dilution of interests is particularly beneficial when human and financial resources are rationed, as it reduces the risk of serious conflicts of interest.

The prevention of conflicts of interest should not lead to the disqualification of the best experts in the discipline, who alone can judge the merits of a research project or job application. If no assessor without any interests can be found, assessors with proven but declared conflicts of interest could be used as observers.

The use of foreign assessors may be desirable in certain situations, but this does not guarantee that no interests arising from relationships are involved. Their participation implies that they have been informed beforehand about how our institutions function so as to avoid errors of judgement. The presence of observers not directly involved in the assessments, as is the practice in ERC panels, could help avoid any biased judgements.

3. Updating the institutional charter on expert appraisals

The CNRS's expert appraisal charter, derived from the national charter of scientific expert appraisal, was drafted in 2012. It should be updated and, above all, supplemented by an individual expert appraisal charter that lays down rules applicable when a public employee participates in a personal capacity in expert appraisals or assessments for public or private third parties. This charter would clarify the conditions under

which experts should claim (or not) their affiliation with their host organisation(s). It would also explain when or how CNRS resources can be used for this task.

Transparency should be ensured on the non-academic expert appraisals carried out by CNRS staff outside the organisation, whether or not they are remunerated. Rules on the acceptable sharing of time between research and external expert appraisals should be specified and enforced.

B. Interests and conflicts of interest in the context of laboratory contracts

Managers of research units and associated structures (foundations, chairs, etc.) need to be very vigilant about the nature of commitments signed under private or public research or expert appraisal contracts. The priority should be to enable staff to assume their responsibilities and preserve their freedom of research, in particular that relating to the dissemination of results through academic channels (theses, publications, etc.).

Anyone disclosing a conflict of interest must be able to report it confidentially to his or her institution and benefit from its protection.

In the case of CNRS contracts, this vigilance extends to the signatory regional delegations and concerns the knowledge exploitation department. Like the formal signatories of contracts, laboratory management must be very attentive to the terms of the contracts signed by their teams and be fully aware of what the laboratory and its staff is committed to. A team must negotiate maximum transparency for its work when it has a contract with a private or public third party.

Special attention should be paid by research unit directors to doctoral students whose thesis is funded (for example, a CIFRE) by a private player, particularly those from industry. The tie thus created, or even the prospect of being hired by the industrial player, may lead to a change in the design of a study, prevent its publication or bias the results in the interest of the funding body.

C. Interests and conflicts of interest outside HE&R

The multiple provisions opened up by the PACTE legislation modify the conditions under which it is possible to hold more than one position and, in some cases, no longer require the person concerned to go before an ethics committee. In order to protect their institution and staff, HE&R employers should quickly produce a policy on the new types of conflicts of interest that are likely to arise as a result. This law also raises new ethical issues that COMETS considers it necessary to address. The same responsiveness will be required for future legislative developments, in particular those expected to be introduced rapidly by legislation on the transformation of the civil service.

Institutions — including the CNRS — should have a clear policy for their staff when facing the media, a policy that preserves their freedom of expression while protecting them from any attacks to which they may be subjected. In their role as experts for the media, researchers should insist that they be allowed to state any vested interests they may have, especially if they mention the institution for which they work. The extension of a future charter on individual expert appraisals to include appraisals for the media appears increasingly vital for both HE&R employers and their staff.

In their role as experts for regulatory agencies or as government advisers, researchers should clearly indicate the limits of their knowledge. They should be careful not to confuse scientific expert appraisals with an activist position for a cause, and are responsible for ensuring that they present their personal position as just that. The same applies to any reactions they may have when facing the media in their role as expert, even when the reactions are requested on the spot about an event.

To avoid unnecessary exposure, public employees are entitled to withdraw from or refuse to participate in a private or public expert appraisal or assessment that does not include a procedure for declaring interests and for identifying and handling conflicts of interest.

V. ANNEX

Criminal offences related to conflicts of interest in France

Taking unlawful advantage of an a business Art. 432-12 of the French Penal Code	Defined as <i>the taking, receiving or keeping of any interest in a person in a position of public authority or discharging a public service mission, or by a person holding a public electoral mandate</i> five years of imprisonment and a fine of €500,000
The “revolving doors” offence Art. 432-13 of the French Penal Code	Defined as <i>the taking or receiving of equity interest by work, consultancy or capital in one of the companies mentioned below before the end of a period of three years following the termination of a person’s functions</i> when that person is a member of the Government, independent administrative authority or independent public authority, a holder of a local executive function, a civil servant, or either a military or public administration agent who, in the course of the duties he/she has actually performed, had either to supervise or control a private company, or to conclude contracts of any kind with a private company or to formulate an opinion on such contracts, or to directly propose to the competent authority decisions relating to operations carried out by a private company or to formulate an opinion on such decisions.
Favouritism Art. 432-14 of the French Penal Code	Defined as <i>procuring or attempting to procure an unjustified advantage for others by an act contrary to laws or regulations intended to guarantee freedom of access and equality of candidates in public procurement and concession contracts</i> by a person in a position of public authority or discharging a public service mission or by a person holding a public electoral mandate or exercising the functions of representative, administrator or agent of the State, local authorities, public institutions, semi-public companies of national interest entrusted with a public service mission and local semi-public companies or by any person acting on behalf of one of the aforementioned.
Corruption Art. 433-1 of the French Penal Code	Defined as <i>proposing without right, at any time, directly or indirectly, offers, promises, donations, gifts, presents or advantages of any kind</i> to a person in a position of public authority, discharging a public service mission or holding a public electoral mandate, whether intended for that person or for others.

VI. LIST OF ACRONYMS

AERES	<i>Agence d'évaluation de la recherche et de l'enseignement supérieur</i> , the French assessment agency for research and higher education
ANR	<i>Agence Nationale de la Recherche</i> , the French research agency
ANSES	<i>Agence Nationale de Sécurité sanitaire de l'alimentation, de l'Environnement et du Travail</i> [French Agency for Food, Environmental and Occupational Health & Safety]
ANSM	<i>Agence Nationale de Sécurité du Médicament et des produits de santé</i> , the French agency for the safety of medicinal and healthcare products
AP-HP	<i>Assistance Publique-Hôpitaux de Paris</i> , the Paris public hospitals organisation
ASN	<i>Autorité de sûreté nucléaire</i> , the French nuclear safety authority
CIFRE	<i>Convention Industrielle de Formation par la Recherche</i> , an industrial agreement on training through research
CNU	<i>Conseil National des Universités</i> , the French national council of universities
COMETS	CNRS Ethics Committee
COMUE	<i>Contrats de sites des communautés d'universités et établissements</i> , site contracts for university and institutional communities
CoNRS	<i>Comité National de la Recherche Scientifique</i> , the French committee for scientific research
CPCN	<i>Conférence des Présidents du Comité National</i> , the conference for national committee chairs
DFG	<i>Deutsche Forschungsgemeinschaft</i> , German research funding agency
ERC	European Research Council
GDPR	General Data Protection Regulation
HAS	<i>Haute Autorité de Santé</i> , the French health authority
HDR	<i>Habilitation à Diriger des Recherches</i> , a French authorisation to supervise research
HE&R	Higher Education and Research
HRD	Human Resources Department
MESRI	<i>Ministère de l'Enseignement supérieur, de la Recherche et de l'Innovation</i> [French Ministry for Higher Education, Research and Innovation]
NGO	Non-Governmental Organisation
PDI	Public Declaration of Interests
UMR	<i>Unité Mixe de Recherche</i> , joint research unit

VII. QUALIFIED PERSONS CONSULTED

Robert Barouki (member of the ANSM's Scientific Board)

Marie-Caroline Beer (member of ANSES's Committee for Ethical Standards and Prevention of Conflicts of Interest)

Michel Cosnard (chair of the HCERES)

Olivier Coutard (chair of the CNRS's CPCN)

Thierry Damerval (chair of the ANR)

Laurence Guyard (the ANR's integrity officer)

Joël Moret-Bailly (the CNRS's ethics officer)