EUROPEAN SCIENCE FOUNDATION

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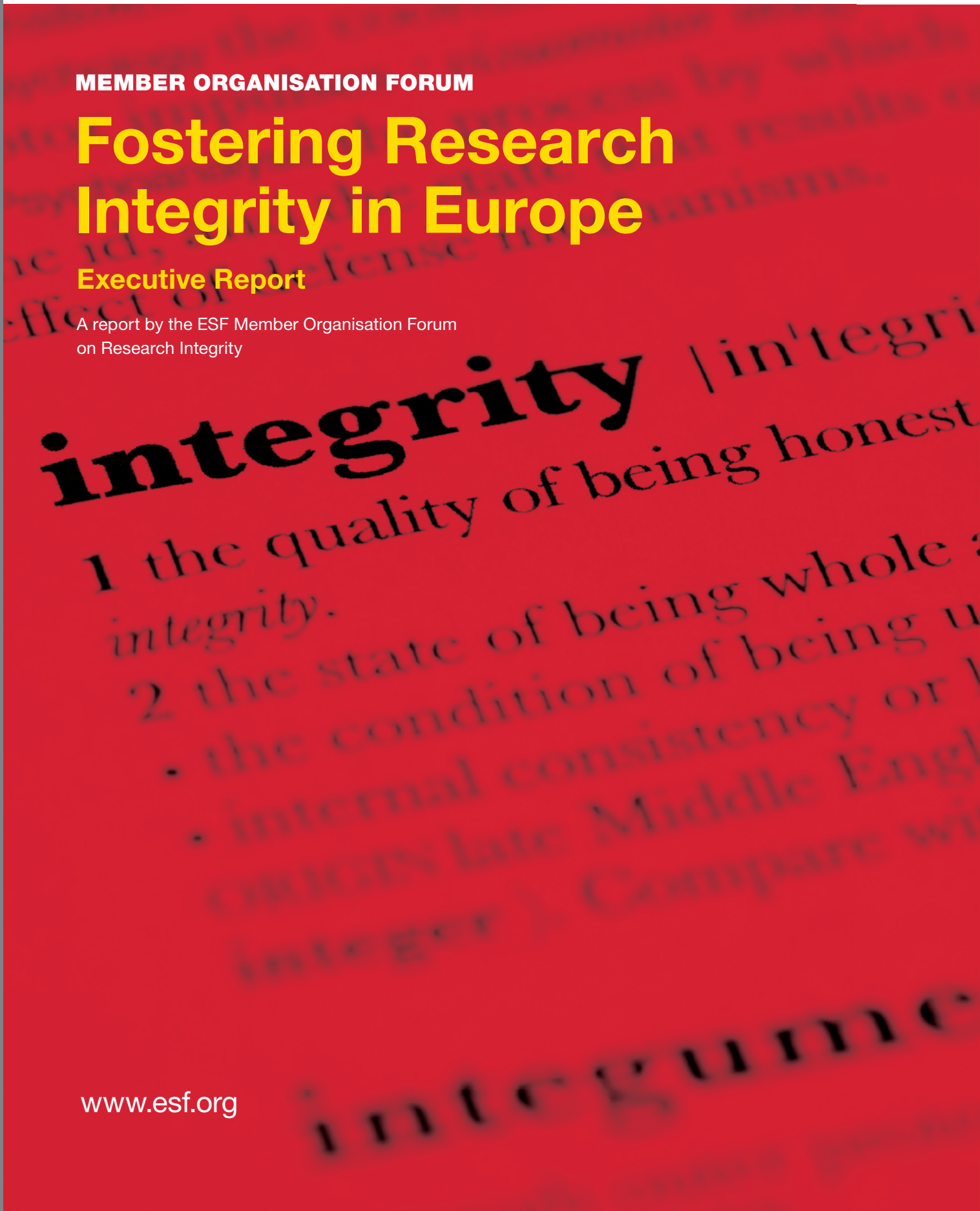
MEMBER ORGANISATION FORUM

Fostering Research Integrity in Europe

Executive Report

A report by the ESF Member Organisation Forum on Research Integrity



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- Development of best practices and exchange of practices on science management, to benefit all European organisations and especially newly established research organisations.
- Harmonisation of coordination by MOs of national programmes and policies in a European context.

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More information:
More information on and full details of all the documentation and work developed by this Forum can be found at:
www.esf.org/activities/mo-fora/research-integrity.html

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Preface

At a time when the need to build trust between science, society and policy makers is becoming more and more important, it is essential that the culture of best practice is established as the foundation for research integrity. Research activities should be undertaken within the highest ethical considerations, and misconduct should be identified and dealt with in an open and transparent manner. The quality of research is entirely based on the highest level of integrity.

Though the national research organisations, funding systems and traditions in Europe are diverse, the organisations and researchers themselves are collaborating and building partnerships on a continent-wide scale. Therefore, in addition to mutual respect for national diversity, there must be a common understanding of the demands of research integrity.

ESF has been committed to the promotion of research integrity since 2000, when it published the Science Policy Briefing *Good Scientific Practice in Research and Scholarship*. In September 2007, the ESF, together with the US Office of Research Integrity (ORI), organised the first World Conference on Research Integrity in Lisbon. This was followed by an ESF survey on research integrity structures in European countries, *Stewards of Integrity. Institutional Approaches to Promote and Safeguard Good Research Practice in Europe*. In 2008 an ESF Member Organisation Forum on Research Integrity was set up, the objectives of which were to serve as a platform for the exchange of information on good practice, to support and encourage those organisations which did not yet have the appropriate support to develop such structures, to learn from others and initiate debates in their respective communities. The outcomes of this Forum were to be channelled as the European input to the second World Conference on Research Integrity in Singapore in July 2010.

It was envisaged that the ESF Member Organisation Forum would integrate its conclusions into a comprehensive strategy for safeguarding integrity in scientific research and practice at the national and European levels. The results of the work of the ESF Member Organisation Forum are the basis of this report, *Fostering Research Integrity in Europe.* It takes the format of a *European Code of Conduct for Research Integrity*, which can be used as a reference point for all aspects of research activities, complementing existing codes of ethics and complying with national and European legislative frameworks.

The European Code of Conduct, together with further recommendations on the promotion of research integrity and the implementation of structures, developed by the ESF Member Organisation Forum and in workshops together with the All European Academies (ALLEA), addresses conduct and good practice in all scientific disciplines as a canon for self-regulation. It is not intended to replace existing national or academic guidelines, but to represent a Europe-wide agreement on a set of principles and priorities for the research community. ESF's aspiration is that the European Code can contribute to the development of a global code of conduct for research integrity.

ESF wishes to acknowledge the key contributions of its Member Organisations and of ALLEA to the development of the European Code of Conduct for Research Integrity and to this overarching Report.

Professor Marja Makarow
ESF Chief Executive

June 2010

1. Background and Rationale

Scientific and scholarly research is a shared enterprise, aimed at the discovery and dissemination of new knowledge. Any doubt or distrust about the ethical standards employed in this pursuit can materially put into question the basis of our scientific understanding. The present document draws attention to the necessary self-regulatory mechanisms of scientists and their institutions (employers, funders, etc.) to prevent such detrimental developments.

Research is highly competitive, because of peer pressure and the high stakes involved in the outcomes of the successful quest for new knowledge. Acknowledging possible shortcomings in the behaviour of researchers is necessary, but foregoing the principles of research integrity risks undermining the entire chain linking the creation of new knowledge in science to the creation of wealth and welfare in society.

Scientists and scholars may be in error, research may be incomplete, data may mislead, but the shared enterprise rests on a presumption of honest effort, of fair reporting, of collegiate integrity. There have been flagrant cases of deliberate dishonesty, but most researchers have tended to think of these as rare events. That is because it is believed that peer review and collegiate ethos, the process of challenge and the practice of questioning, sooner or later reveal the truth. As Arthur C. Clarke once said, "In the long run, there are no secrets in science. The universe will not cooperate in a cover-up." This report aims at strengthening this ethos.

But there are uncomfortable facts to be faced. The world's researchers now number in the millions. According to Nicholas H. Steneck[1], consultant at the US Office of Research Integrity, the numbers of cases of research misconduct could number in the tens of thousands. "Studies suggest that as many as one in every 100 researchers engages in serious misconduct over the course of a three to five year period."

In addition to fabrication, falsification and plagiarism, many other objectionable practices deserve attention. Some may have serious legal or moral consequences; others may create nuisance, discontent or procedural discord. Many of them may risk undermining public trust in research and science.

The term 'research misconduct' is meant to embrace many things, including insufficient care for the people, animals or objects that are the subject of or participants in research; breaches of confidentiality, violation of protocols, carelessness of the kind that leads to gross error and improprieties of publication involving conflict of interest or appropriation of ideas. Many of these unacceptable research practices are addressed in the European Code of Conduct for Research Integrity (section 2). Sadly, many of these can be found in all aspects of research. Some represent failures of training for research that has become professionally more challenging and complex. "New researchers are not today routinely trained to deal with the challenges and complexities they face as professionals", says Stenech. "This situation needs to be addressed."

The situation needs to be addressed in Europe, where national research structures, funding systems and traditions may be diverse but where, increasingly, researchers have begun to collaborate, to coordinate initiatives and to build partnerships on a continent-wide scale. Therefore, beyond mutual respect for national diversity, there must be a common understanding of the demands of research integrity. The European Code of Conduct for Research Integrity, presented here, should serve as a reference point for all parts of the research spectrum. It could be the basis for developing national regulations where none exist, could complement existing codes of ethics and may be fit, in some cases, to enhance or supersede those already in operation. It is sufficiently inclusive to allow easy compliance with national and European legislative frameworks. A concern for research integrity begins first of all with the responsibilities of the individual, but places obligations on research institutions, research funders, learned societies, academies, editors and research efforts supported by the private sector.

In Europe, comparatively early efforts in awareness-raising and in offering guidelines to the research community and their institutions can be traced to the European Science Foundation's (ESF) Science Policy Briefing on *Good Scientific Practice in Research and Scholarship* (2000), and to the All European Academies's (ALLEA) *Memorandum on Scientific Integrity* (2003). Global efforts include the work of OECD's Global Science Forum on *Best Practices for Ensuring Scientific Integrity and Preventing Misconduct* which focuses on issues related to international collaboration. The First World Conference on Research Integrity was held in Lisbon in 2007. It was initiated by the ESF and the US Office of Research Integrity, with backing from the EU Presidency and the European Commission. An ESF Member Organisation Forum was then established to take the issues forward and this report is the outcome of the investigations and debates in this context. It builds on an ESF survey issued in 2008 (*Stewards of Integrity – Institutional Approaches to Promote and Safeguard Good Research Practice in Europe*) which highlighted key problems and the need for education and training to better equip the research community to deal with the issue raised.

The document will be presented at the Second World Conference on Research Integrity, which will be held in Singapore from 21 to 24 July 2010. It aims, fundamentally, at achieving an agreement on principles, and an understanding that compatibility of procedures is necessary for the European Research Area to develop and to play its part in global research collaboration.

1. Address at the First World Conference on Research Integrity, *Fostering Responsible Research,* Lisbon, 16-19 Sept. 2007.

2. European Code of Conduct for Research Integrity

This code – developed through a series of workshops involving the ESF (European Science Foundation) and ALLEA (All European Academies) – addresses the proper conduct and principled practice of systematic research in the natural and social sciences and the humanities. It is a canon for self-regulation, not a body of law. It is not intended to replace existing national or academic guidelines, but to represent Europe-wide agreement on a set of principles and priorities for the research community.

The Code

Researchers, public and private research organisations, universities and funding organisations must observe and promote the principles of integrity in scientific and scholarly research.
These principles include:

- honesty in communication;
- reliability in performing research;
- objectivity;
- impartiality and independence;
- openness and accessibility;
- duty of care;
- fairness in providing references and giving credit; and
- responsibility for the scientists and researchers of the future.

Universities, institutes and all others who employ researchers, as well as agencies and organisations funding their scientific work, have a duty to ensure a prevailing culture of research integrity. This involves clear policies and procedures, training and mentoring of researchers, and robust management methods that ensure awareness and application of high standards as well as early identification and, wherever possible, prevention of any transgression.

Fabrication, falsification and the deliberate omission of unwelcome data are all serious violations of the ethos of research. Plagiarism is a violation of the rules of responsible conduct vis-à-vis other researchers and, indirectly, harmful for science as well. Institutions that fail to deal properly with such wrongdoing are also guilty. Credible allegations should always be investigated. Minor misdemeanours should always be reprimanded and corrected.

Investigation of allegations should be consistent with national law and natural justice. It should be fair, and speedy, and lead to proper outcomes and sanctions. Confidentiality should be observed where possible, and proportionate action taken where necessary. Investigations should be carried through to a conclusion, even when the alleged defaulter has left the institution.

Partners (both individual and institutional) in international collaborations should agree beforehand to cooperate to investigate suspected deviation from research integrity, while respecting the laws and sovereignty of the states of participants. In a world of increasing transnational, cross-sectional and interdisciplinary science, the work of OECD's Global Science Forum on *Best Practices for Ensuring Scientific Integrity and Preventing Misconduct* can provide useful guidance in this respect.

The principles of research integrity

These require *honesty* in presenting goals and intentions, in reporting methods and procedures and in conveying interpretations. Research must be *reliable* and its communication fair and full. *Objectivity* requires facts capable of proof, and transparency in the handling of data. Researchers should be *independent* and *impartial* and communication with other researchers and with the public should be *open* and honest. All researchers have a *duty of care* for the humans, animals, the environment or the objects that they study. They must show *fairness* in providing references and giving credit for the work of others and must show *responsibility for future generations* in their supervision of young scientists and scholars.

Misconduct

Research *misconduct* is harmful for knowledge. It could mislead other researchers, it may threaten individuals or society – for instance if it becomes the basis for unsafe drugs or unwise legislation – and, by subverting the public's *trust,* it could lead to a disregard for or undesirable restrictions being imposed on research.
Research misconduct can appear in many guises:

- *Fabrication* involves making up results and recording them as if they were real;
- *Falsification* involves manipulating research processes or changing or omitting data;
- *Plagiarism* is the appropriation of other people's material without giving proper credit;
- Other forms of misconduct include *failure to meet clear ethical and legal requirements* such as misrepresentation of interests, breach of confidentiality, lack of informed consent and abuse of research subjects or materials. Misconduct also includes *improper dealing* with infringements, such as attempts to cover up misconduct and reprisals on whistleblowers;
- *Minor misdemeanours* may not lead to formal investigations, but are just as damaging given their probable frequency, and should be corrected by teachers and mentors.

The response must be proportionate to the seriousness of the misconduct: as a rule it must be demonstrated that the misconduct was committed intentionally, knowingly or recklessly. Proof must be based on the preponderance of evidence. Research misconduct should not include

honest errors or differences of opinion. Misbehaviour such as intimidation of students, misuse of funds and other behaviour that is already subject to universal legal and social penalties is unacceptable as well, but is not 'research misconduct' since it does not affect the integrity of the research record itself.

Good research practices

There are other failures to adhere to good practices – incorrect procedures, faulty data management, etc. – that may affect the public's trust in science. These should be taken seriously by the research community as well. Accordingly, *data practices* should preserve original data and make it accessible to colleagues. Deviations from *research procedures* include insufficient care for human subjects, animals or cultural objects; violation of protocols; failure to obtain informed consent; breach of confidentiality, etc. It is unacceptable to claim or grant undeserved authorship or deny deserved authorship. Other *publication-related* lapses could include repeated publication, salami-slicing or insufficient acknowledgement of contributors or sponsors. Reviewers and editors too should maintain their independence, declare any conflicts of interest, and be wary of personal bias and rivalry. Unjustified claims of authorship and ghost authorship are forms of falsification. An editor or reviewer who purloins ideas commits plagiarism. It is ethically unacceptable to cause pain or stress to those who take part in research, or to expose them to hazards without informed consent.

While principles of integrity, and the violation thereof, have a universal character, some rules for good practice may be subject to cultural differences, and should be part of a set of national or institutional guidelines. These cannot easily be incorporated into a universal code of conduct. National guidelines for good research practice should, however, consider the following:

1. **Data**: All primary and secondary data should be stored in secure and accessible form, documented and archived for a substantial period. It should be placed at the disposal of colleagues. The freedom of researchers to work with and talk to others should be guaranteed.
2. **Procedures**: All research should be designed and conducted in ways that avoid negligence, haste, carelessness and inattention. Researchers should try to fulfil the promises made when they applied for funding. They should minimise impact on the environment and use resources efficiently. Clients or sponsors should be made aware of the legal and ethical obligations of the researcher, and of the importance of publication. Where legitimately required, researchers should respect the confidentiality of data. Researchers should properly account for grants or funding received.
3. **Responsibility:** All research subjects – human, animal or non-living – should be handled with respect and care. The health, safety or welfare of a community or collaborators should not be compromised. Researchers should be sensitive to their research subjects. Protocols that govern research into human subjects must not be violated. Animals should be used in research only after alternative approaches have proved inadequate. The expected benefits of such research must outweigh the harm or distress inflicted on an animal.
4. **Publication**: Results should be published in an open, transparent and accurate manner, at the earliest possible time, unless intellectual property considerations justify delay. All authors, unless otherwise specified, should be fully responsible for the content of publication. Guest authorship and ghost authorship are not acceptable. The criteria for establishing the sequence of authors should be agreed by all, ideally at the start of the project. Contributions by collaborators and assistants should be acknowledged, with their permission. All authors should declare any conflict of interest. Intellectual contributions of others should be acknowledged and correctly cited. Honesty and accuracy should be maintained in communication with the public and the popular media. Financial and other support for research should be acknowledged.
5. **Editorial responsibility**: An editor or reviewer with a potential conflict of interest should withdraw from involvement with a given publication or disclose the conflict to the readership. Reviewers should provide accurate, objective, substantiated and justifiable assessments, and maintain confidentiality. Reviewers should not, without permission, make use of material in submitted manuscripts. Reviewers who consider applications for funding, or applications by individuals for appointment or promotion or other recognition, should observe the same guidelines.

The primary responsibility for handling research misconduct is in the hands of those who employ the researchers. Such institutions should have a standing or *ad hoc* committee(s) to deal with allegations of misconduct. Academies of Sciences and other such bodies should adopt a code of conduct, with rules for handling alleged cases of misconduct, and expect members to abide by it. Researchers involved in international collaboration should agree to standards of research integrity as developed in this document and, where appropriate, adopt a formal collaboration protocol either *ab initio* or by using one drafted by the OECD Global Science Forum.

3. Defining and Implementing Awareness and Structures for Research Integrity

3.1 Promoting Research Integrity

All institutions defined above have an obligation to raise awareness and share information on Good Research Practice (GRP) to promote research integrity, and it is in everybody's interests to do so. Research conducted rigorously, respectfully and responsibly is integral to excellence. So research integrity and research excellence are complementary objectives.

ACADEMIES promote quality and interest in science and scholarship. As an institution, a National Academy is independent and authoritative, and is among those able to promote and develop, possibly also to implement, measures aimed at ensuring scientific integrity in a given national science system.

UNIVERSITIES and RESEARCH PERFORMING ORGANISATIONS have a role in encouraging good research practices and preventing unacceptable behaviour, and in dealing with allegations of research misconduct against their staff. They have a special responsibility for training young researchers and students in good research citizenship.

FUNDING ORGANISATIONS have the obligation to promote good research practices and to ensure research integrity. They have the power to insist on these principles with researchers and research employers, and the policies to deal with malpractice. The fundamental principles of scientific practice and peer review safeguard the mutual trust indispensable for research.

SCIENCE JOURNALS and magazine editors have an interest in detecting plagiarism, fabrication, falsification and other fraudulent behaviour before publication. So they too must promote best practices and help detect misconduct.

The situation in countries around Europe with respect to research integrity varies widely as demonstrated in the ESF survey 'Stewards of Integrity'. For this document, a variety of institutions (funding agencies, academies, universities and faculties, journals, professional organisations, etc.) reported on their experiences and concerns.

Successful approaches

The ESF MO Forum undertook in 2010 a survey of attempts to promote GRP that found a number of successful approaches:

- Producing and disseminating articles, books, brochures on research integrity;
- Producing and promoting guidelines on good research practice and on investigations of allegations of research misconduct;
- Establishing websites and portals as resources for further study and teaching;
- Holding workshops, conferences, seminars, etc. on research integrity at the national or institutional level in order to launch debates;
- Establishing an adequate institutional framework, including ethical committees, research integrity bureaus (at the institutional and national level);
- Introducing training programmes for advanced PhD students and other staff;
- Gathering of evidence on best practice elsewhere (surveys, etc.);
- Surveys to monitor the implementation of GRP and training programmes.

Monitoring procedures

Institutions participating in the exercise also reported on a number of useful measures that can be taken to monitor compliance with the basic rules of research integrity and good research practice. These include:

- Checks on infrastructure and policies in universities and institutes (ombudsman, committee on research integrity, procedures for handling allegations, protection of whistleblowers, mentoring, ethos of research groups, etc.);
- Requiring universities and institutes to include research integrity, including numbers of allegations received and resolved, in their annual reports;
- Asking scientific journals to report yearly on misconduct or alleged misconduct;
- Analysing cases reported in general media, asking employers of accused researchers for further information;
- Occasional surveys of awareness in samples of students, scientists and scientific administrators;
- Measures of the number of hits on research integrity web pages and online resources;
- Checks of the numbers of participants who complete online training and numbers of training courses run in research integrity areas;
- Checks on the availability of mentoring programmes.

Difficulties

Even where the subject matter has been identified as being relevant, individuals and institutions report consistently on a number of difficulties in approaching the topic of research integrity. They include:

- Absence of clear definitions, especially in terms of unacceptable research practices;
- Misunderstanding of the difference and relationship between research integrity and general science ethics;
- Preconceived idea that cases of misconduct are rare and exceptional;
- Belief that the peer review process itself can identify misconduct;
- Uncertainty about the priorities between the need to

deal with allegations of research misconduct and the danger of reducing academic freedom;
- Claims that a proactive attitude towards good research practice and research integrity would add up to a higher administrative burden for researchers.

At a more general level, it was reported that there is concern with a lack of resources for establishing effective national frameworks for dealing with research misconduct, and that the wide variety of different stakeholders (national and regional government, universities and research organisations, etc.), with approaches which are not always congruent and yet overlapping responsibilities, makes it difficult to achieve overall, nation-wide approaches.

3.2 Developing a framework for research integrity governance

Core elements of a framework for research integrity governance

Globally-recognised guidelines, such as those developed by the ESF, ALLEA and OECD's Global Science Forum, can set out strong fundamental principles. The challenge in developing a nationally relevant framework for research integrity governance is to ensure that global principles can be translated into national policy and practice. The starting point in each country will be different but there is scope to enhance all existing systems. All systems need:

- A mandate: a clear and authoritative national statement, charter or legislative support to underpin research integrity governance structures. In devising such a mandate countries can draw on the experiences of others;
- Fair and transparent processes at both local and national level and a balance between prevention and sanction, with the emphasis on prevention, in whatever processes are adopted;
- Clearly-assigned roles and responsibilities for prevention, investigation and imposition of sanctions at local and national level.

In addition, there are a number of core requirements that should apply at an operational or functional level including:

a) Core requirements for embedding principles of good research practice and research integrity into research culture include:
- Mechanisms for prevention, education and awareness at all levels. These include, but are not confined to, training in GRP from the start of a career in science or scholarship and making research integrity an integral component of supervision and mentoring;
- Robust procedures for data management, training in good practices in relation to data collection and centralised storage;
- Guidance for researchers and other stakeholders and tools for information sharing on training materials, guidelines and misconduct scenarios;
- Agreed procedures for sharing case information to establish a body of data on research misconduct locally, nationally and across Europe and to improve current procedures.

b) Core requirements for individuals and institutions where allegations of malpractice or poor research conduct have been made include:
- Procedures for investigation that are legally robust and enshrine minimum legal standards for the protection of the individual;
- Clear procedures for allegations, including agreement about who can raise a concern and how they can do this (anonymous, named), the form in which it should be raised (verbal, written) and the authority to whom concerns should be addressed;
- Agreement at the outset on the transparency and/or confidentiality of misconduct investigations and clarity about when to reveal outcomes to third parties (press, national oversight bodies, funders) and under what circumstances;
- Decisions on procedures for appeal, and the types of appeal, for example, concerning either the scientific or the procedural elements of an investigation;
- Decisions on sanctions that can be imposed, appropriate to the level of departure from codes of GRP;
- Protection for whistleblowers, in law if necessary, since the success of research integrity governance structures depends on their willingness to step forward.

Models of research integrity governance

Broad approaches to research integrity governance in Europe and elsewhere include self-regulation and reliance on peer review; governance at an institutional level; provision of oversight by research funding agencies, professional associations and learned societies; and national oversight or more formal governance structures. The situation in most European countries is complex, with more than one approach being adopted across institutions and national bodies at the same time.

The challenge for each institution, agency, society or country is to balance individual and local responsibility and structures on the one hand and national research integrity coordination or governance on the other. Such challenges are acute where there is no research integrity governance or oversight in place, or where governance happens at a strictly institutional or local level with no national coordination. Conversely, it can be observed that as a coordinated and nationwide agreed system emerges, the robustness of the governance structure increases.

3. Defining and Implementing Awareness and Structures for Research Integrity

Research integrity governance driven by national bodies

Oversight by research funding agencies, professional associations and learned societies is likely to be accepted by the research community as providing harmonised guidelines and independence and credibility in procedures. Such oversight can also facilitate an appeals mechanism and make it harder to hide cases. However, there are a number of difficulties. Many of these national bodies will not have the resources to monitor compliance. Institutions may resist external oversight. Such oversight may not cover both public and commercial activity. Regardless of who provides regional or national oversight, responsibility for implementation will still reside locally, with the attendant challenges and risks described above.

National research integrity governance structures

Properly constituted national research integrity governance structures can resolve many of the issues with self-regulation or oversight/regulation by research funding agencies, professional associations or learned societies. National offices can provide consistent advice, support and guidelines across both the public and private research sectors. They can also provide true independence for investigative processes and equality in access and treatment of cases, making conflicts of interest less likely. Importantly, national standing committees can develop professional competence. Moreover, their authority for dealing with GRP and investigations is clear to everyone. Such research integrity governance can also facilitate international cooperation and mutual learning. The emerging framework should make the best use of opportunities to establish links with other national offices: currently, ENRIO (European Network of Research Intergity Offices) offers such a platform.

Steps in adopting a research integrity governance structure

The good name of science and scholarship needs to be a priority for all nations and institutions, although in some instances this does not occur. The research community has to be prepared to deal with suspicions of misconduct. At an international level, organisations such as the ESF, ALLEA, the OECD and others play an important role in promoting research integrity and identifying universally acceptable guidelines on which national institutions and governments can build robust research integrity governance structures. These guidelines should also be linked to COPE and other professional editorial body guidelines to bring external pressure to bear on the academic system to initiate change. The aim is to ensure that the entire academic system, from knowledge production to publication, adheres to the same high standards, and has a clear point of reference for initiating change wherever necessary. In addition, the role of national champions who are willing and able to drive change in their own country cannot be underestimated.

The deliberations of the ESF Member Organisation Forum suggest that no “one size fits all” framework of research integrity governance can be applied across all European countries. There is national and institutional diversity in the definition of misconduct and in the preventive measures applied to ensure the integrity of a country’s national research system.

The US, Denmark, Norway, Finland, Australia, Canada and Germany are among the small number of countries with established national research integrity procedures or guidelines and national offices to oversee their application. These offices vary in size and authority, with the most developed structures found in the US and the Nordic Countries.

Each country must develop its own research integrity governance structures, suited to its size, resources and research infrastructure. Nonetheless, there are core requirements that must be incorporated in order to create a workable research integrity governance structure. Such commonality may help integrate national and local systems and spread the doctrine of ‘good science’. Shared experience is extremely important locally, nationally and internationally. Pooled national and international experience will build up a body of data on research misconduct across Europe. Networks such as the European Network of Research Integrity Offices (ENRIO) provide an important forum for sharing experience and identifying issues around research integrity governance.

In summary, there is a balance to be struck between promoting GRP on the one hand, and investigating and punishing misconduct on the other. There is no single framework that will have pan-European application but this section has attempted to identify the elements that should be present in a workable research integrity governance structure.

4. Need for Further Evidence on Research Integrity

Little is known about the causes and significance of practices that lead to research misconduct or about successful methods to ensure high standards of integrity in research. There is a lack of data about the incidence of research misconduct worldwide and in Europe. A variety of approaches should be encouraged.

Working session, meeting in Split, Croatia, March 2010

Promotion of research on research integrity

Prevention of research misconduct is the ultimate goal. Scholarly research is the tool for understanding misconduct and improper research practices and the reasons behind them. Coupled with this is the need to encourage the publication of such studies of both policy issues and scientific behaviour. Both research and its literature will facilitate greater attention from relevant stakeholders. To prevent research misconduct, we need to know more about research integrity. Funding bodies, politicians, academies, universities, ESF, ENRIO, journal editors and researchers themselves should all be involved in promoting studies of research integrity. Many European countries share common values, but local culture and values should also be respected when providing recommendations.

At a European level, the European Commission could include such research in the area of 'Science and Society' and ESF could also promote studies on research systems, including integrity, within its networking programmes. Continuing support of the World Conference on Research Integrity is especially important.

5. Next Steps: Recommendations for the Future

- Promoting **European standards - ESF international guidelines**. These should cover not just fabrication, falsification and plagiarism but also GRP and the more difficult areas of conflict of interest, misrepresentation, duty of care and informed consent. The Code and Guidelines are a fundamental part of such an approach and should be endorsed by both ESF and its Member Organisations.
- Leaders of **ESF projects** should agree to comply with **ESF guidelines.** This would be a constituent part of the funding agreement. This will help to introduce the European standard especially to countries that do not yet have their own national guidelines. **ESF recommendations** should also be adopted by its **Member Organisations,** and discussions with the European Commission should aim at seeing them adopted equally for its research activities including the FP, the ERC and the EIT.
- Consideration should be given to **ESF** to act as a **European clearing house** to provide information about available resources. It should provide a **European database** (web pages, online training, case-study material, etc.) relating to components of research integrity such as publication and authorship practices, mentoring, data management, etc. A common approach could be adapted to national circumstances.
- Repeat a **quinquennial survey** and analysis for revised editions of 'Stewards of Integrity'. Many aspects of research integrity improvement need to be compared (see section above). ESF, which represents academies, funding and performing institutions of research in a large number of countries, is a natural place for future discussion.
- The possibility of **limited funding** for collaborative work on research integrity and the encouragement of Member Organisations to introduce grants on the subject of research integrity might also be considered.
- The **coordination** of **national procedures** in Europe for preventing misconduct and coping with fraudulent publications is an issue which will require further consideration.

Continuing support for the World Conference on Research Integrity

The first World Conference on Research Integrity was very successful in raising awareness about this issue. ESF should support the continuation of the World Conferences on Research Integrity. They are important fora for exchange of good practice and experiences and help carry the message beyond the circle of the institutions and individuals already involved with such work. An important part of future conferences should be presentations on new research on integrity and misconduct.

Full Report: Fostering Research Integrity in Europe

Following the publication of this Executive Report, the full version of the Code of Conduct and its implementation models will be available on the Forum web page in autumn 2010.
www.esf.org/activities/mo-fora/research-integrity.html

Annexes

Annex 1: References

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Annex 2: Acronyms

ALLEA: All European Academies
COPE: Committee on Publication Ethics
EIT: European Institute of Technology
ENRIO: European Network of Research Integrity Offices
ERC: European Research Council
ESF: European Science Foundation
FP: Framework Programme
GRP: Good Research Practice
OECD: The Organisation for Economic Co-operation and Development
ORI: the US Office of Research Integrity

Annex 3: List of ESF MO Forum Members and Chairs

WG 1: Raising awareness and sharing information

Member	Organisation	Country
Sonia Ftacnikova (Chair)	**Slovak Research and Development Agency (APVV)**	**SK**
Thomas Dantes	Max Planck Society (MPG)	DE
Rüdiger Klein	All European Academies (ALLEA)	
Milda Naujokaite	Lithuanian State Science and Studies Foundation	LT
Claire Ribrault	École Normale Supérieure (ENS)	FR
Evie Vereecke	Research Foundation Flanders (FWO)	BE

WG 2: Code of conduct

Member	Organisation	Country
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Pilar Goya & Pere Puigdomènech	Council for Scientific Research (CSIC)	ES
Michelle Hadchouel	Institut National de la Santé et de la Recherche Médicale (Inserm)	FR
Kirsten Hüttemann	German Research Foundation (DFG)	DE
Pavel Kratochvil	Academy of Sciences of the Czech Republic (ASCR)	CZ
Aki Salo	Academy of Finland	FI

WG 3: Check list for setting up national structures

Member	Organisation	Country
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Jean-Pierre Alix	National Centre for Scientific Research (CNRS)	FR
Dirk de Hen	Royal Netherlands Academy of Arts and Sciences (KNAW)	NL
Alan Donnelly	European University Association (EUA)	
Markus Roethlisberger	Swiss National Science Foundation (SNF)	CH
Jan Stålhammar	Swedish Research Council (VR)	SE
Torkild Vinther	National Commission for the Investigation of Scientific Misconduct/The Research Council of Norway	NO

WG 4: Research on research integrity

Member	Organisation	Country
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Emilio Bossi	Swiss Academies of Arts and Sciences	CH
Sebastião J. Formosinho	University of Coimbra	PT
Michèle Salathé	Swiss Academies of Arts and Sciences	CH

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Other Forum members

Member	Organisation	Country
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Wim de Haas	Royal Netherlands Academy of Arts and Sciences (KNAW)	NL
Umberto Dosselli	National Institute for Nuclear Physics (INFN)	IT
Charlotte Elverdam & Frej Sorento Dichmann	Danish Agency for Science, Technology and Innovation (FIST)	DK
Saulius Grybkauskas	Research Council of Lithuania	LT
Gro Elisabeth Maehle Helgesen	Research Council of Norway	NO
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Elisabeth Kokkelkoren	Fund for Scientific Research (F.R.S.-FNRS)	BE
Tomas Kopriva	Czech Science Foundation (GAČR)	CZ
Tony Mayer	Nanyang Technological University Singapore (NTU)	SG, UK
Asael Rouby & Frank Bingen	Fonds National de la Recherche (FNR)	LU
Krista Varantola & Eero Vuorio	Delegation of the Finnish Academies of Science and Letters	FI
Ulrike Varga	Austrian Science Fund (FWF)	AT

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