

WORKSHOP REPORT

Advancing Research Integrity Practices
and Policies: From Recommendation to
Implementation

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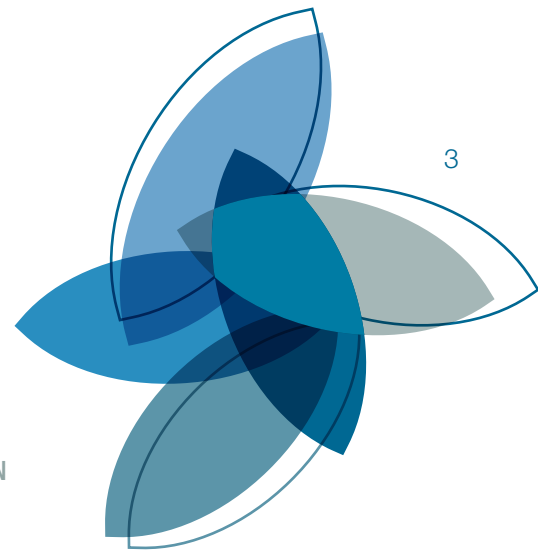
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Advancing Research Integrity Practices and Policies: From Recommendation to Implementation

WORKSHOP ORGANISED BY THE SCIENCE EUROPE WORKING GROUP ON RESEARCH INTEGRITY



Introduction

Science Europe published its Survey Report 'Research Integrity Practices in Science Europe Member Organisations' in July 2016 (<http://scieur.org/integrityreport>). This report maps existing policies, procedures and practices for promoting research integrity and makes a number of key recommendations for improving it. The report encompasses a set of 18 recommendations which fall into four groups: Policies and Procedures; Raising Awareness; Training; and Collaboration and Mobility.

To advance implementation of these recommendations among Science Europe Member Organisations and research organisations in general, the Science Europe Working Group on Research Integrity organised a workshop on 22 February 2017 in Brussels.

Many of the recommendations in the Survey Report were deemed to be quite straightforward to implement, but some were considered more challenging. The aim of this workshop was to explore the challenges in taking forward the recommendations, for instance through discussion of case studies presented by representatives of organisations that have already tackled some of the more difficult recommendations.

It was an exploratory workshop that led to numerous observations and suggestions of possible ways forward. The key points discussed during the workshop are summarised in this report.

Policies and Procedures

Presentation

Mathias Willumsen (Danish Agency for Science and Higher Education) gave a presentation on the legislative approach adopted in Denmark with regards to research misconduct, questionable research practices, and a more volunteer-based approach to integrity in research. He first flagged the reasons that had led to the initial development of a Danish Code of Conduct for Research Integrity¹ (November 2014). These were:

- Helping researchers and research institutions in Denmark by providing:
 - a practical tool for researchers in support to their daily work;
 - cross-disciplinary standards for good research practice; and
 - a common reference framework for research institutions.
- Responding to an increasing international focus/demand with regard to integrity in publicly funded research – from bodies such as the European Commission in the context of its Research and Innovation Framework Programme (Horizon 2020) or from foreign research organisations such as the National Science Foundation in the USA;
- Maintaining high standards for research integrity held in Denmark in spite of prominent misconduct cases.

The Danish research misconduct system was reviewed in 2015. The main recommendations resulting from this review were:

- Adopt a clearer definition of research misconduct and limit it to Fabrication, Falsification and Plagiarism (FFP).
- Establish a clear division of responsibilities where (i) a central body (currently the Danish Committees on Scientific Dishonesty, created in 1992) is legally required to handle all research misconduct in cases of FFP, and (ii) the research institutions are legally obliged to handle questionable research practices.

Definitions and Processes

The break-out and plenary discussions that followed this presentation addressed the difficulties of adopting clear definitions, ensuring that processes are consistent across organisations, and that researchers are aware of them.

Workshop participants observed/suggested that:

- ▶ all stakeholders do need to be clear about their own responsibilities and agree on general principles (based on global statements), and published cases of misconduct should explicitly refer to these;
- ▶ institutions should take the lead in developing their processes, rather than leaving it up to Principal Investigators and their teams;
- ▶ in developing procedures within countries, the different disciplinary cultures and their different approaches should be taken into account; and
- ▶ research funders' routine financial audits could be extended to non-financial risks, where this is not already being done. This could be a way of ensuring that research-integrity-related policies and procedures are not considered as token/shallow agreements.

Whistle-blowers

Some challenges with regards to whistle-blowers were flagged by participants during the workshop: their protection; the negative connotation of the very word; and the collateral damages of proven misconduct in a research team or department. Observations and suggestions made by participants included the need to explore the relevance and feasibility of:

- ▶ using the word ‘witness’ instead of whistle-blower;
- ▶ appointing an external ombudsman with whom individuals can discuss cases at a very initial stage and establish whether the issue is one of misconduct or related to another issue (such as bullying or harassment);
- ▶ providing extra support for PhD students who are either whistle-blowers or are being supervised by someone found guilty of research misconduct (new supervisor, and so on); and
- ▶ ensuring that there are processes that enable those associated with someone found guilty of misconduct (such as a co-author), if innocent themselves, to be publicly absolved of guilt by association.

Making Misconduct Data Available

The break-out and plenary discussions also touched upon the challenges of making misconduct data available to relevant parties. The underlying questions were the following:

- What does it mean to collect data on misconduct and how should they be released – either to interested parties, or publicly?
- Who needs these data?
- How can we make sure that Research Performing Organisations communicate with funding agencies, and also with journals about cases?

Workshop participants observed/suggested that:

- ▶ openness is very important in order to protect those surrounding the accused (and the research environment in general), and to clear the name of any innocent/acquitted parties, if already public;
- ▶ research that is compromised should be made public, including the reasons why it has been compromised: the research community needs to know what has happened. It is about protecting the researchers and the research record itself. Journals should identify the reasons for retraction (as some retractions are the result of genuine mistakes and not because of misconduct);
- ▶ the ‘naming and shaming’ approach should be avoided, especially when an allegation is in the investigation phase; sometimes names are made public/leaked before the investigation is completed;
- ▶ once a case is proven, funders, publishers, and institutions would benefit from being informed so that they may implement their own processes; and
- ▶ national Research Integrity Offices or committees could/should maintain a database of proven cases, since there is a lot of learning about failures in the system from investigated cases and this knowledge should be shared (anonymously if necessary) to feed into improvements.

Training and Raising Awareness

Presentation

Nicole Föger (Austrian Agency for Research Integrity, OeAWI) presented the work of the agency and a sample of its activities with regards to training and raising awareness on integrity in research.

The Austrian Agency for Research Integrity was set up in 2008 as an independent membership-based association (it is not part of any ministry). OeAWI members join the association voluntarily. Members include: all Austrian public universities (22); applied universities (4); private universities (1 umbrella organisation as an associate member); non-university research institutions (6); and Austrian research funding agencies (4). The core mission of OeAWI is to:

- raise awareness on integrity in research through, for example, seminars, lectures, workshops;
- provide a 'service facility': guaranteeing independent investigation in cases of alleged research misconduct; advising members in all matters related to research integrity; and offering mediation in case of conflict; and
- ensure national and international networking.

Föger presented some initiatives developed for/by research institutes or universities relating to research integrity which include PhD programmes including retreats; post-doctoral training consisting of a full-day seminar about good scientific practice; and training for teachers, supervisors and senior scientists.

She concluded by stressing how important it was to:

- ▶ communicate standards of good research practice, and related policies and procedures;
- ▶ develop, ensure, and offer training on research integrity for both researchers and for trainers on research integrity themselves;
- ▶ clearly assign supervisory duties;
- ▶ make the persons in charge of research integrity at an organisation level easy to find/contact (visible on the organisation's website for instance);
- ▶ provide positive incentives; and
- ▶ protect whistle-blowers.

Discussion

The sample questions that were provided to participants to guide the break-out discussions were:

- For awareness-raising, what, beyond statements on websites and so on, is effective?
- Should peer reviewers play a role in the oversight/monitoring of research integrity within applications for funding and projects that are up and running? If so, how?
- What are the best approaches to training? Should it be mandatory? How best to ensure senior researchers are included?
- How is 'train the trainer' best organised? Who does it?

When discussing raising awareness, workshop participants observed/suggested that:

- ▶ researchers need to be aware that they serve society: integrity is not a box to be ticked, it is an integral part of their career;
- ▶ poor quality research, while an important issue in itself, should not be mistaken for misconduct;
- ▶ institutional accreditation on good practice (like Athena Swan Charter and Awards²) may be developed and could possibly count towards research or core funding;
- ▶ reviewers of grant applications or paper submissions to journals can be asked to judge proposals on aspects of questionable research practice, where they are not already being asked to do so. Peer review cannot be realistically used as a means of identifying FFP;
- ▶ profile template for positions such as PhD candidates, post-docs, and professors could be developed and include values and expectations related to research integrity;
- ▶ the submission of a 'Research Integrity Declaration' could be requested to accompany any paper submission to a journal (similar to a conflict of interest form);
- ▶ both success stories related to integrity and possible consequences of breaches of integrity should be clearly communicated; and
- ▶ doctoral retreats (at a research department level for instance) can be organised to review each other's work – this may not focus on research integrity per se but it could have related positive side-effects and contribute to a culture of good research practice.

When discussing training, workshop participants observed/suggested that:

- ▶ the costs of training in good research practice could potentially be considered eligible in grant allocations;
- ▶ training needs to be followed by implementation. This could require providing adequate and active support to institutions in such matters including; identifying proven topic experts (such as statisticians or data curators) in grant proposals to deal with reproducibility matters; and making grant rejections educational by providing detailed and informative feedback;
- ▶ evidence on the effectiveness of training/'train the trainer' models is still missing;
- ▶ a set of adequate incentives should accompany the training in order for it to be efficient. The sole incentive provided by an institution cannot be the need for their researchers to publish more than their competitors;
- ▶ it is important to engage with both early-stage researchers and supervisors at the same time through interactive sessions (not lectures) where cases are discussed and where the relevance of research integrity training for their respective work is highlighted;
- ▶ methods developed in clinical ethics teaching (Moral Case Deliberation) could be assessed to identify aspects that are transferable/relevant to a broader training on integrity;
- ▶ consideration should be given as to whether the training is designed for a specific field or is more general; and
- ▶ 'train the trainer' approaches are crucial to bridge the gap between research integrity teachers and researchers.

Collaboration and Mobility

Presentation

Michèle Leduc (CNRS Ethics Committee – COMETS) described the case of Professor Olivier Voinnet, a plant biologist at the CNRS laboratory in Strasbourg. He moved in 2010, on leave of absence, to work at the Swiss Federal Institute of Technology (ETH) in Zurich, where he was supported by substantial ERC and Swiss funding. In 2014, through PubPeer, Professor Vicki Vance alleged the misuse and mislabelling of images in a paper in *Plant Cell* co-authored by Professor Voinnet. This allegation was widely publicised in the press in April 2015. CNRS immediately set up a committee of high-level scientific experts. The committee concluded that misconduct had taken place, and in June 2015 CNRS announced that Professor Voinnet would be barred from CNRS for two years, starting from the end of his secondment to ETH.

ETH undertook its own investigation in parallel. The ETH commission of inquiry examined potential misconduct in 31 publications provided by Professor Voinnet, and criticised on PubPeer. In June 2017, the commission concluded that Professor Voinnet and collaborators had indeed manipulated images. ETH advised that the relevant papers should be retracted at Professor Voinnet's request (so far eight papers have been retracted), and ETH undertook an internal restructuring whereby Professor Voinnet's lab was integrated into neighbouring laboratories. Professor Voinnet was reprimanded and his funding from the Swiss National Science Foundation was stopped; but his ERC funding was maintained. His EMBO medal⁹ (2009) was withdrawn.

This case had identified the different ways that the different funders approached their investigations. For example:

- The investigations at ETH and CNRS were managed independently, using very different procedures.
- The names of those on the expert committees were published in Switzerland, but not in France.
- The report of the expert committee was made public in Switzerland, but not in France (where publication was illegal).
- Sanctions were applied independently by the funders – they were more severe in France than in Switzerland.
- At the European level, the response was variable - Professor Voinnet's EMBO medal was withdrawn, but his ERC funding continued.

This case had a severe impact in both France and Switzerland. In France, for example, it led to:

1. the setting up of a national committee by the French Minister for Research and Higher Education to deal with research integrity in all French institutions;
2. a new law to force ethics and integrity teaching to PhD candidates; and
3. the upcoming creation of a National Office for Scientific Integrity (OFIS).

New allegations involving both CNRS and ETH arose in September 2016, and the two organisations agreed this time to perform a joint inquiry, with an up-front agreement on transparency, publication and possible joint sanctions.

Discussion

In discussion of this case, the following points were made:

- ▶ Retractions of papers where the findings are in doubt because of research misconduct are essential in order to correct the scientific record. However, not all retractions are the

consequence of proven misconduct (some are due to genuine error), so it is important that the reason(s) for retraction are given.

- ▶ Journals have begun to be clear about which authors' behaviours have led to the retraction, and which are blameless; this should be encouraged. This is helped by journals requiring, at the time of submission, clear statements on which authors are responsible for which aspects of the research.
- ▶ In the Olivier Voinnet case, the whistle-blower did not come forward until 12 years after she first suspected the misconduct, after she had retired from her faculty position. This was perhaps understandable, but it highlights the importance of protecting whistle-blowers so that allegations can be investigated in a timely manner.
- ▶ While transparency is generally a good thing, there may be good reasons why the names of investigating committee members are not made public while an investigation is ongoing.
- ▶ Where possible (and where not illegal), the outcome of proven cases of misconduct should be made public.
- ▶ While different organisations and countries have different approaches to sanctions, some convergence/consistency would be desirable.
- ▶ There is a strong case, depending on the severity of the misconduct, for guilty persons to be 'rehabilitated' after a certain period, though of course the published record (such as retractions) can never be erased.
- ▶ Some guidelines on what sanctions might be applied according to different degrees of severity might be helpful.
- ▶ Persons found guilty of research misconduct, if suitably honest with themselves, could serve as trainers.
- ▶ When a person applies for a research position (including from another country), it is the responsibility of the hiring institution to satisfy itself that the candidate has not been found guilty of research misconduct, nor is the subject of an ongoing investigation – for example by asking the candidate or their current employer. Research Integrity Offices might also be useful sources of information.
- ▶ The Olivier Voinnet case highlights the value of having up-front agreements in collaborative projects between institutions, in case allegations of misconduct arise. However, the OECD 'boilerplate' text⁴ (2009) is not widely known about or used. It need not be used verbatim: it may be modified for particular collaborations. Nevertheless, it might be timely to review the boilerplate and make more efforts to publicise it among the research community.
- ▶ There could be types of agreements, similar to the OECD boilerplate, between the Research Integrity Offices in different countries.



Notes and References

1. See <http://ufm.dk/publikationer/2014/the-danish-code-of-conduct-for-research-integrity> (in Danish, English summary available)
2. The Athena Swan Charter encourages and recognises commitment to advancing the careers of women in science, technology, engineering, maths and medicine (STEMM) and in arts, humanities, social sciences, business and law (AHSSBL): <http://www.ecu.ac.uk/equality-charters/athena-swan/>
3. The EMBO Gold Medal is awarded annually to young scientists for outstanding contributions to the life sciences in Europe: <http://www.embo.org/funding-awards/gold-medal>
4. The boilerplate text from the OECD Global Science Forum 'Investigating Research Misconduct Allegations in International Collaborative Research Projects – A Practical Guide' (2009): <https://www.oecd.org/sti/sci-tech/42770261.pdf>



Wednesday 22 February 2017 // Thon Hotel EU, Brussels

09.00–09.15

Introduction

Welcome

Maud Evrard, Science Europe

Formal Opening

Marc Schiltz, Member of the Science Europe Governing Board and Chair of the Luxembourg Agency for Research Integrity

About the Science Europe Working Group on Research Integrity

Maura Hiney, Chair of the Science Europe Working Group on Research Integrity, Health Research Board, Ireland

Workshop Objectives

Tony Peatfield, Medical Research Council/Research Councils UK

09.15–11.30

Policies and Procedures

Moderator

Maura Hiney

Research Integrity in Denmark: the Legislative Approach

Mathias Willumsen, Danish Agency for Science and Higher Education

Discussion in break-out groups on topics such as whistle-blowing policies, collection of data on research integrity, communicating proven cases of misconduct, and so on

Plenary feedback from break-out groups and discussion

11.30–14.20

Raising Awareness and Training

Moderator

Asaël Rouby, National Research Fund, Luxembourg

Approaches to Awareness-raising and Training in Austria

Nicole Föger, National Agency for Research Integrity (OeAWI), Austria

Discussion in break-out groups on topics such as effectiveness of raising awareness and training, peer reviewers' roles, training models, and so on

Plenary feedback from break-out groups and discussion

14.20–16.35

Collaboration and Mobility

Moderator

Tony Peatfield

Handling an Allegation of Misconduct across Two Countries: the Olivier Voinnet Case

Michèle Leduc, CNRS Ethics Committee (COMETS), France

Discussion in break-out groups on topics such as dealing with misconduct in the context of cross-border or cross-institution collaboration, and so on

Plenary feedback from break-out groups and discussion

16.35–17.00

Conclusions

Science Europe is a non-profit organisation based in Brussels representing major Research Funding and Research Performing Organisations across Europe.

More information on its mission and activities is provided at www.scienceeurope.org.

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