

Lord Stern's review of the Research Excellence Framework - response form

Name: Catherine Joynson, Programme Manager
Email: cjoynson@nuffieldbioethics.org
Address: 28 Bedford Square, London WC1B 3JS
Name of Organisation (if applicable): Nuffield Council on Bioethics

Please check the box that best describes you as a respondent to this consultation

	Respondent type
<input type="checkbox"/>	Alternative higher education provider (with designated courses)
<input type="checkbox"/>	Alternative higher education provider (no designated courses)
<input type="checkbox"/>	Awarding organisation
<input type="checkbox"/>	Business/Employer
<input type="checkbox"/>	Central government
<input checked="" type="checkbox"/>	Charity or social enterprise
<input type="checkbox"/>	Further Education College
<input type="checkbox"/>	Higher Education Institution
<input type="checkbox"/>	Individual (Please describe any particular relevant interest; teaching staff, student, etc.)
<input type="checkbox"/>	Legal representative
<input type="checkbox"/>	Local Government
<input type="checkbox"/>	Professional Body
<input type="checkbox"/>	Representative Body
<input type="checkbox"/>	Research Council
<input type="checkbox"/>	Trade union or staff association
<input type="checkbox"/>	Other (please describe)

Questions addressed:

1. What changes to existing processes could more efficiently or more accurately assess the outputs, impacts and contexts of research in order to allocate QR? Should the definition of impact be broadened or refined? Is there scope for more or different use of metrics in any areas?
5. How might the REF be further refined or used by Government to incentivise constructive and creative behaviours such as promoting interdisciplinary research, collaboration between universities, and/or collaboration between universities and other public or private sector bodies?
6. In your view how does the REF process influence, positively or negatively, the choices of individual researchers and / or higher education institutions? What are the reasons for this and what are the effects? How do such effects of the REF compare with effects of other drivers in the system (e.g. success for individuals in international career markets, or for universities in global rankings)? What suggestions would you have to restrict gaming the system?

Background

The Nuffield Council on Bioethics carried out a project in 2014 that explored the effects of the culture of scientific research in UK higher education institutions in terms of encouraging good research practice and the production of high quality science. The activities of the project included an online survey that received 970 responses, 15 discussion events co-hosted with universities around the UK involving 740 speakers and participants, and evidence-gathering meetings with funding bodies, publishers and editors of scientific research, and academics from the social sciences. The findings were published in the report *The culture of scientific research: findings from a series of engagement activities* in December 2014. Although the focus of the project was scientific research, the issues considered are likely to be relevant to many other areas of academic research.

For more information about the project and to download the report see: www.nuffieldbioethics.org/research-culture

Overarching findings

Given public investment in UK research and the potential benefits it can bring, it is vital that the culture of academic research supports and encourages research that is high quality, ethical and valuable. Our project found that:

- In some cases, the culture of research does not support or encourage researchers' goals and the activities that they believe to be important for the production of high quality research. For example, aspects of current methods of assessing research may be creating incentives for poor research practices, discouraging collaboration and multidisciplinary research, creating authorship issues and publication bias, and hampering creativity. Fifty-eight per cent of respondents to our survey reported that they were aware of scientists feeling tempted or under pressure to compromise on research integrity and standards. The perceived need to publish in high impact factor journals in order to gain jobs, promotions and funding is thought to be a primary cause.
- There seem to be widespread misperceptions or mistrust among scientists about the policies of those responsible for the assessment of research. For example, while there was general agreement that journal impact factors should not be used in the assessment of researchers by funding bodies, researchers still report a strong pressure to publish in high impact journals.
- Among all the relevant stakeholders, concerns about the culture of research are often on matters that they think are outside their control or are someone else's responsibility.

Findings and suggestions for action relevant for the REF

In a competitive system, the criteria used to assess the quality and value of research influences what research is pursued and how researchers behave. The REF is a strong driver of how universities value research. When asked for their views on the REF, 25 per cent of the survey respondents said they believe it is having a positive or very positive effect overall on scientists in terms of encouraging the production of high quality science. However, almost 40 per cent think the REF is having a negative or very negative effect. Considering this, and the findings of our project listed above, we suggest those designing the next REF process should take into account the following factors.

1 Peer review is highly valued

Peer review, i.e. the assessment of academic work by other experts such as that carried out by REF expert panels, is highly valued by researchers. Seventy-one per cent of the survey respondents believe the peer review system in the UK is having a positive or very positive effect overall on scientists in terms of encouraging the production of high quality science. It was emphasised by the project participants that peer reviewers need careful training and guidance in order to ensure the policies of funding bodies for which they work are being enacted, and that high quality peer review and committee service should be recognised and rewarded.

2 Use a diverse range of measures of research quality

It is widely agreed that the perceived or real focus on journal articles in the assessment of research and researchers is creating perverse incentives.¹ Many survey respondents expressed a desire for a more diverse set of factors or indicators of research quality and reach to be used in assessments. This might include:

- Consideration of a wider range of research outputs, including journal articles, datasets, software, patents and films.
- Wide interpretation of research impact and reach, with due attention given to the risk of encouraging a culture of short-termism and discouraging basic research that has no particular application in mind.
- Giving higher value to the professional activities carried out by researchers that form a vital part of the research system, such as mentoring, training, teaching, peer review, public engagement and committee work.

Peer review should remain the primary way in which these elements are weighed up in assessments of research quality. Metrics or indicators of research quality may be helpful in supporting this assessment, but it is important that the focus is moved away from a very limited set of article-related metrics. We agree with the statement in the HEFCE-commissioned review of metrics in research assessment that: “One size is unlikely to fit all: a mature research system needs a variable geometry of expert judgement, quantitative and qualitative indicators”. The report makes a number of recommendations for the responsible use of metrics or indicators of research quality, including the establishment of a Forum for Responsible Metrics.²

3 Improve rewards for collaborative and multidisciplinary research

The potential for collaborative and multidisciplinary research to address some of the major questions facing society was highlighted at several of the discussion events, and increased collaboration was the most common answer given when survey respondents were asked what feature of the UK research environment is having the most positive effect on science. Support by funding providers for multidisciplinary and collaborative work was praised by survey respondents.

¹ See The San Francisco Declaration on Research Assessment <http://www.ascb.org/dora/>

² Wilsdon J et al. (2015). *The Metric Tide: Report of the Independent Review of the Role of Metrics in Research Assessment and Management*. Available at: <http://www.hefce.ac.uk/pubs/rereports/Year/2015/metrictide/Title,104463,en.html>

However, it was raised in several of the discussion events that the REF may be disadvantaging multidisciplinary work, with some participants believing that the panel set-up is deterring researchers from submitting multidisciplinary work. A recent inquiry of the Academy of Medical Sciences explored in more depth the incentives and disincentives for team science, and found that the likely lack of recognition for researchers' contributions is the main challenge for participating in team science. The Academy makes a number of recommendations towards ensuring team science is encouraged and rewarded, including the improved provision of information about the contributions of individual team members, and the use and valuing of this information in assessment processes.³

4 Improve communication with researchers

REF2014 accepted a variety of research outputs for assessment, but it appeared from our discussions that very few researchers are aware of this or do not believe that anything other than peer-reviewed journal articles will be judged favourably. Staff development, PhD awards and research collaboration were also recognised by the REF in the 'Environment of research' category, but there was a clear perception among the event participants that they are undervalued.

Even if some of the perceptions and concerns of researchers we identified are inaccurate, they highlight a problem of communication. This may stem from the way in which funding bodies communicate to universities, and/or the way information filters down from the top levels within universities and passes from researcher to researcher. Recognising this problem could lead to small but effective changes. For example, when funding bodies write to vice-chancellors, including a separate letter aimed at other university staff could help widen dissemination.

5 The research community should take a collective approach

The REF is one assessment among many that academic research and researchers are subject to, and research assessment is one factor among many influencing the culture of academic research in the UK. We believe that it is important that every actor in the system recognises their role and that there is a collective obligation for those actors to do everything they can to ensure the culture of research supports good research practice and the production of high quality research. Figure 1 summarises the suggestions for action set out in our report for funding bodies, research institutions, publishers and editors, professional bodies and individual researchers.

Many of the issues raised here have already been identified and steps are being taken to address them. We present our suggestions, and the evidence that supports them, as

³ Academy of Medical Sciences (2015) *Improving recognition of team science contributions in biomedical research careers*. Available at: <http://www.acmedsci.ac.uk/policy/policy-projects/team-science/>

encouragement for this work to continue, but also to emphasise that a collective and coordinated approach is likely to be the most effective.

Figure 1. Suggestions for action to support good research practice and the production of high quality science

