GLOBAL RESEARCH COUNCIL

BACKGROUND PAPER ON THE REVISION OF GLOBAL RESEARCH COUNCIL STATEMENT OF PRINCIPLES ON SCIENTIFIC MERIT REVIEW

Introduction

In simple terms peer/merit review involves the assessment of a research proposal or the research outcomes by researchers or others who have the requisite knowledge, training and experience to judge the subject matter. Its success relies on those engaged in the scientific system believing peer review to be fair and equitable.

Assessment of the research excellence of a proposal, as judged by scientific peers, has long been the primary criterion by which research proposals and outputs have been assessed in almost all peer/merit review systems, and especially in those operated by Global Research Council (GRC) participants.

As custodians of public funds, research councils have a duty to maintain trust and demonstrate excellence in the assessment of proposed research and that systems of peer/merit continue to be both as effective and as efficient as possible. Peer/merit review remains the dominant method used by research councils worldwide to ensure that public funds are expended on the projects with the greatest potential to advance the progress of science and/or to address societal challenges.

In 2012, the GRC endorsed its first statement of principles on merit review, also referred to as 'peer review', following a Global Summit on Merit Review hosted by the U.S. National Science Foundation[1].

The Statement was developed with two primary objectives. First, to provide agreement on high-level principles to foster international cooperation among research funding agencies. Secondly, for those countries developing new funding agencies, to provide a global census on the key elements of a rigorous and transparent review system.

Revision of the Statement of Principles

Since then, participation has expanded beyond the original fifty countries represented at the 2012 Global Summit, and the GRC has held 6 Annual Meetings and agreed to statements of principles on a wide range of subjects, many of which relate to the topic of peer/merit review.

The global scientific landscape is also rapidly evolving. Science produces new and unanticipated knowledge, brings new solutions to societal challenges and provides new possibilities for technological innovation. This brings both challenges and new opportunities to funding agencies. Increasingly, the innovation ecosystem – including public funding agencies – are called on to be agents and facilitators of change, within increasing expectations for publicly funded research to demonstrate societal impact, such as economic growth and job creation. In resource-constrained contexts, the drive for research that demonstrates impact is particularly strong.

GRC participants recognise the need to demonstrate that the research they fund contributes to the quality of life and well-being of the citizens who have ultimately paid for it. Where appropriate, research councils are increasingly considering additional criteria such as the relevance and potential impact of the research in their decision making processes. Alongside this, frontier research still also represents the investment of a society in a knowledge base for solutions to yet unknown societal challenges in the future; without centuries of frontier research building such a knowledge base, society would be defenceless to the known challenges we are facing today. Consequently, any system evaluating impact must be sufficiently long-term to not limit research to applications of or innovations based on the already known.

[1] Statement of Principles for Scientific Merit Review, Global Research Council, 2012
https://www.globalresearchcouncil.org/fileadmin//documents/GRC_Publications/gs_principles-English.pdf

This changing research context includes an increased focus on inter-, trans- and multi-disciplinary, or convergent research which calls for improved peer/merit review processes to eliminate biases, promote measured risk taking, and overcome limitations that emerge from single-discipline review processes. As new fields of study with initially small numbers of experts emerge, they face challenges in the traditional review system, and the availability and capacities of reviewers at the nexus of discipline and geographic location are uneven.

International collaboration is crucial to addressing global challenges. Therefore, an increasing number of cross-border collaborations are being initiated. Such agreements arise as a result of and for the desire to establish strategic scientific alliances and to leverage knowledge and resources. Such cross-border collaborations require agreements involving several basic principles. In addition, a common lexicon, to which collaborating partners can refer, are important prerequisites for mutual trust, review efficiency, and legal certainty.

At the same time almost all research councils are confronted with an increase in the number of applications and a decrease in success rates, challenging the effectiveness of existing peer/merit review systems[2]. This problem is compounded by increasing reluctance of the best scientists to engage in review processes given the increasing, and often competing, demands placed upon reviewers by multiple agencies.

Therefore, several organisations are exploring and experimenting with new approaches to peer/merit review, as well as looking at ways to work with applicant organisations to improve the quality of applications, limit demand and manage the burden placed on the peer review system. Many are introducing unconscious bias training for both staff and peer/merit reviewers to ensure equality of opportunity. Others are looking to make the peer review process more transparent, with greater feedback and the opportunity for applicant rebuttal of peer reviewer comments.

Advances in technology also present opportunities for innovation and greater efficiency in peer/merit review systems, as well as challenges to it. The GRC will continue to provide a forum for participant organisations to exchange information and debate the potential use of such alternatives.

The Global Research Council therefore decided to revisit the topic of peer/merit review in 2018, to examine the applicability of the principles from 2012 and ensure they remain relevant to the changing strategic context and evolving nature of the global scientific enterprise.

While the principles endorsed by the Global Research Council in 2012 were deemed still to be largely relevant by participants, they have been revised and updated to ensure they reflect the changing context and evolving nature of the Global Research Council. As well as the Statements of Principles the Global Research Council has published since 2012 on other related topics.

[2] NWO International peer-review conference – Main Outcomes, Amsterdam 29-30th June 2017, Netherlands Organisation for Scientific Research https://www.nwo.nl/en/policies/nwo+conferences+2017/international+conference/report