The value and importance of the peer review process for the quality of research

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Outline

• Peer Review: Dispelling the Myths
• The ARC Grant Process
• The ERA Process
• Research Integrity
Nullius in verba

THE ROYAL SOCIETY.
"Not compelled to swear to any master's words."

Research papers... could be considered by the society
The Grants Peer Review Process

- Information flow

Applicant → Application → External Assessors

Funding result → ARC

ARC → 1st ranking

Minister → Final ranking

College of Experts
The Grants Peer Review Process

External Reviewer

Internal Reviewer

Rank

Committee Review

Ratings to CEO

Minister Approval

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The Grants Peer Review Process

All Disciplines

- Biological Sciences and Biotechnology (BSB)
- Engineering, Mathematics and Informatics (EMI)
- Humanities and Creative Arts (HCA)
- Physics, Chemistry and Earth Sciences (PCE)
- Social, Behavioural and Economic Sciences (SBE)
Discovery Projects Grants rankings 2013

Discovery
Network = Go8

Each symbol represents up to 2 observations.
Outline

- Peer Review: Dispelling the Myths
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The ERA Peer Review Process

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<th>Evaluation Stages</th>
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<td>Citation Analysis and/or Peer Review</td>
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<td>Volume and Activity</td>
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<td>Applied Measures</td>
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Note - There are no weightings

The *ERA 2012 National Report* presents data submitted as part of a comprehensive assessment by discipline of the research quality and research activity within Australia’s higher education institutions.
The ERA Peer Review Process

External Reviews

Indicator Data

Committee Review

Rating

Committee Review (Meeting)

Final Rating
Peer review ‘ratings’

- Peer reviewers do not rate a unit of evaluation against the ERA rating scale – that is the role of the Committee, taking account of all indicators and reviewer reports.

It is proposed for ERA 2015 to:

- require that all ERA reviewers in peer review disciplines to report on the ‘proportions’ peer reviewed outputs broad scale ‘quality’ rating from ‘lowest’ to ‘highest’ quality and
- report these quality judgments to universities with the dashboard for each assessed UoE, together with a discipline average.
Outline

• Peer Review: Dispelling the Myths
• The ARC Grant Process
• The ERA Process

• Research Integrity
Research Integrity

- Landscape
- National Standards
- ARIC
Australia’s Research Integrity Framework: Landscape

The Australian Code for the Responsible Conduct of Research

NHMRC and ARC funding rules

Universities, policies and RI Officers

Australian Research Integrity Committee
The three National Research Standards

Australian Research Council

National Health and Medical Research Council

Universities Australia
The Australian Code for the Responsible Conduct of Research (the Code)

Part A – Good behaviour and practices:
- responsibilities of institutions
- responsibilities of researchers
- data management
- supervision
- publication
- authorship
- peer review
- conflicts of interest
- collaborative research

Part B – Processes and considerations:
- handling breaches of the code, research misconduct and framework for resolving allegations
Strengths of the Australian System

• Joint ownership and responsibility by national bodies:
  1. ARC
  2. NHMRC
  3. Universities Australia

• Simple principles and language
• Clear responsibilities
• Encourages dealing with allegations at a local level
• Describes an external and independent process for considering serious research misconduct
Potential Areas of Research Misconduct

- Authorship
- Unauthorised use of data
- Questionable research practices (not otherwise described)
- Process issues
- * Plagiarism
- CV irregularities
- Institution, colleagues and members of public
- Peer review
- * Fraud
- Falsification
- * Fabrication
- * Unethical or unapproved use of animals or involving humans

* Where misconduct has been found in at least one case
Conclusions

• Peer review has many flavours

• Effective peer review is at the core of the integrity of the ARC grants process and of ERA

• Checks and balances must remain – internal and external
Discussion/questions