Horizon 2020 Policy Support Facility

Peer Review in PRFS
Topics in the Challenge Paper

Mutual Learning Exercise on Performance Based Funding Systems
Meeting in London 28 April 2017
Dorothea Sturn
Agenda for this session

1. What is Peer Review?
2. Limitations ... but
3. New Challenges
4. Peer Review in PRFS and Research Assessments
   1. Common features
   2. Overview participating countries
5. Coping with Challenges
   1. Panels´ Architecture
   2. Social Dynamic and Management
   3. Informed Peer Review
6. Discussion
1. What is Peer Review?

- judgement of scholarly / scientific merit by other scientists working in the field in question
- Quality Signal, "Gold Standard"
- First (and still dominant) use: Scholarly publishing

"If you can't say anything peer reviewed about your work, don't say anything at all."
### Uses of Peer Review today

<table>
<thead>
<tr>
<th>Field</th>
<th>Written Reviews</th>
<th>Peer Panels</th>
<th>Expert Panels</th>
<th>Other Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarly Publishing</td>
<td>Dominant</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Proposal Evaluation</td>
<td>Dominant</td>
<td>Dominant</td>
<td>Little use</td>
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<tr>
<td>Programme Evaluation</td>
<td></td>
<td>Little use</td>
<td>Little use</td>
<td>Dominant</td>
</tr>
<tr>
<td>System Evaluation (national, regional, institutional)</td>
<td>Little use</td>
<td>Panels (different stages) combined with other methods</td>
<td>Panels (different stages) combined with other methods and indicators (bibliometrics)</td>
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</table>
2. Limitations

- Conservative
- Insufficient with interdisciplinary research
- Affected by Conflicts of interest
- Overusing the scientific community
- Poor at detecting misconduct
- Slow and expensive
2. ... the least worst form

- “Peer review is to the running of the scientific enterprise what democracy is to the running of the country. It may not be the most efficient system but it is the least susceptible to corruption.” (Royal Society 1995)

- “Peer review, despite its flaws and limitations, continues to command widespread support across disciplines. Metrics should support, not supplant, expert judgement. Peer review is not perfect, but it is the least worst form of academic governance we have, and should remain the primary basis for assessing research papers, proposals and individuals, and for national assessment exercises like the REF.” (The Metric Tide 2015)
2. Measures to overcome

- Conservative
  - Open Peer Review

- Insufficient with interdisciplinary research
  - Positive discrimination Heterodoxy
  - Positive discrimination Interdisciplinarity

- Affected by Conflicts of interest
  - Open Peer Review
  - Quality Assurance measures

- Overusing the scientific community
  - Open Peer Review
  - Quality Assurance measures

- Poor at detecting misconduct
  - Open Peer Review

- Slow and expensive
  - Open Peer Review

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3. New Challenges

Peer review was adapted to new needs:

- New criteria: wider socio-economic criteria (relevance, impact)
- New players: Industry, users, civil society

Extended Peer Review
Extended Peer Review

- Research Quality
- Relevance and Impact
- Other Criteria
- Scientific Impact (bibliometrics)
- Industrial Innovation (patents, spin-offs, etc.)
- Societal impact (?, impact statements)
4. Peer Review in PRFS and Research Assessments

- Systems (participating countries and others) vary in many aspects
- All use Expert Panel Evaluation
  - Research is assessed at different levels (need for aggregation)
  - Peers/Experts are informed by different sources (bibliometrics!)
- Impacts outside academia are important

Work in progress!
Overview participating countries

Use of Peer Review in systematic and comprehensive Research Assessment

<table>
<thead>
<tr>
<th>Integrated in the PRFS</th>
<th>Outside PRFS</th>
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<tbody>
<tr>
<td><strong>Informed Peer Review:</strong></td>
<td><strong>Subject-specific evaluations and other assessments:</strong></td>
</tr>
<tr>
<td>Portugal (no bibliometrics?) Slovenia</td>
<td>Mixed models (use of peer review and metrics):</td>
</tr>
<tr>
<td></td>
<td>Czech Republic, Italy Armenia</td>
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</table>

- **Red:** Question mark
- **Blue:** Will be included
- **Green:** No respond yet, Cyprus and Turkey

**All countries responded so far combine PR with bibliometrics**
5. Coping with Challenges

- Panels’ Architecture
- Social Dynamic and Management
- Informed Peer Review
## Panels’ Architecture

### Composition and qualifications

<table>
<thead>
<tr>
<th>Deep and subject specific knowledge</th>
<th>Broad multidisciplinary knowledge</th>
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<tbody>
<tr>
<td>Respected by the scientific community</td>
<td>Time and energy</td>
</tr>
<tr>
<td>International peers</td>
<td>Regional background knowledge</td>
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<tr>
<td>Non-academic panel members (industry, users, NGOs)</td>
<td>Common language</td>
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### Costs and coordination tasks

- **Multi-stage**
- **Remote Panel Evaluation**
Panels’ Architecture

Supported by
1. well-prepared bibliometrics (and other data)
2. Clear Criteria
3. Management

Calibration and mutual exchange

Work partly remote

Scientific referees (working remote)

Broad expert knowledge

Specific scientific knowledge
Social Dynamic and Management

- Complex social situations
- Mutual social exchange - common judgement
  - Tacit negotiations, compromises
  - Few panel members dominate
- Panel members are poorly prepared

- Procedures
  - Clear criteria, clear definition of roles
  - Preparation and structuring
  - Awareness and training
Informed Peer Review offers ‘the best of both worlds’, a degree of ‘triangulation’ across methods.

Pros:
- Make Peer Review more transparent, evidence-based, offer additional insight
- Better than a quickly googled h-Index

Cons:
- Prone to the same distortions
- Strengthen the „Matthew Effect“
6. Discussion points

- Overcoming Limitations
- Mitigating High costs
- Combinating Peer Review with bibliometrics (or other methods and indicators)
- Panels’ composition and design