HIVE Seminar

Personal musings on ‘Publication Quality Under Pressure: Strategies for When, Where and How to Publish’

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Agendas of **disciplines, funders**, government, and others seeking to influence the types of research that get published and where

Disciplines cover the full spectrum from Basic (Pure) Research to Applied Research.
Influence of government/Institution – Research Assessment Exercises

OUTPUTS (Top 4 Research Publications)

IMPACTS (Case Study of Impact)

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<thead>
<tr>
<th>Faculty</th>
<th>Outputs</th>
<th>% total score for outputs</th>
<th>% of score per output</th>
</tr>
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<tbody>
<tr>
<td>50</td>
<td>200</td>
<td>65</td>
<td>0.33</td>
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<tr>
<th>Faculty</th>
<th>Cases</th>
<th>% score</th>
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<tr>
<td>50</td>
<td>6</td>
<td>16</td>
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Case Study worth 8.2 Papers!
Conflicting definitions and perceptions of publication quality

‘...is it better to submit a paper in a

• high IF journal,

• a paper that has been highly cited, even if it appears in a low IF journal,

• or a paper that the submitter believes is their best work?’ [1]

The assessment of science: the relative merits of post-publication review, the impact factor, and the number of citations

Eyre-Walker & Stoletzki (2013) investigated 3 methods of assessing the merit of a scientific publication:

• subjective post-publication peer review (as per REF 2014)
• the number of citations a paper accrues
• Impact factor of Journal

Datasets investigated
• Wellcome Trust (WT)
• Faculty of 1000 (F1000) database
Results: Subjective Assessment of Merit (i.e. REF 2014)

• Correlations between assessor scores low (40% by chance alone)

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<tr>
<th>Correlation btw assessors</th>
<th>r</th>
<th>p</th>
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<tr>
<td>Welcome Trust dataset</td>
<td>47%</td>
<td>0.36</td>
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<tr>
<td>Faculty 1000 dataset</td>
<td>50%</td>
<td>0.26</td>
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• Strong correlation between assessor score and Impact Factor of Journal.

• **SO** either high IF journals publish papers of greater merit OR assessors biased by high IF journals

• Using number of citations to define merit STILL found positive partial correlations between assessor and Impact Factor of journal

‘Overall it seems that subjective assessments of science are poor, they do not correlate strongly with each other and they appear to be strongly influenced by the journal in which the paper was published, with papers in high ranking journals being afforded a higher score that their intrinsic merit warrants.’

Conclusions

• ‘...none of the measures of scientific merit that we have investigated are reliable. In particular subjective peer review is error prone, biased, and expensive; we must therefore question whether using peer review in exercises such as the RAE and the REF is worth the huge amount of resources spent on them.’ [2008 RAE cost £12 Million to Gov and £47 to Universities]

• Ultimately the only way to obtain (a largely) unbiased estimate of merit is to have pre-publication assessment, by several independent assessors, of manuscripts devoid of author’s names and addresses. Nevertheless this will be a noisy estimate of merit unless we are

So, what should the pragmatic researcher do?

• If potential for an IMPACTS CASE STUDY then prioritise

• high Impact Factor journals ‘influence’ assessments – AIM FOR HIGHEST IMPACT JOURNAL POSSIBLE?

• Need for open source part of next assessment – PROMOTE EMERGING MODELS OF PUBLICATION (i.e. PEERJ) – the more ‘good research’ [Highly cited] published there the higher the Impact Factor.... RISKY?