

The Editor's Bookshelf

A reminder that we are still looking for volunteers to find new items for inclusion in the bookshelf and to regularly search just one or two journals of relevance to science editors. Please write to paola.decastro@iss.it or pennyhubbard@gmail.com if you wish to send new items or become a member of the EASE journal blog (<http://ese-bookshelf.blogspot.com/>) and see your postings published in the journal.

ECONOMICS AND FUNDING

Van Orsdel LC, Born K. **Reality bites: periodicals price survey 2009. In the face of the downturn, libraries and publishers brace for big cuts.** *Library Journal* 2009;4:15.

Libraries of all types and sizes are facing dramatic budget cuts. This discussion of journal prices provides data for the average 2009 price per title in different scientific disciplines (chemistry ranking first at \$3,690) and the average price per ISI title by country (Russia ranking first at \$3,712). The article also includes cost history per groups of disciplines since 2005 and projection prices for 2010. Wide commentary is provided on the possible making of open access mandatory.

<http://www.libraryjournal.com/article/CA6651248.html>

EDITORIAL PROCESS

Neill US. **All data are not created equal.** *Journal of Clinical Investigation* 2009;119(3):424.

Journal editors continue to screen all figures from accepted manuscripts, and they continue to find irregularities. In several cases, the alterations in the figures led to the discovery of some fundamental problems with the data. Many of the papers suffered from the same

problems, and this led the editors to consider whether it was time to revisit some experimental basics.
doi:10.1172/JCI38802.

ETHICAL ISSUES

Brumback RA. **Impact factor wars: Episode V-The Empire Strikes Back.** *Journal of Child Neurology* 2009;24(3):260–262.

A really amazing piece on the war of authors and editors to get to the empire of impact factor; cheating and tricks, cutely told in a short story, supported by sound references.
<http://jcn.sagepub.com/cgi/content/refs/24/3/260>

Gallagher R. **Citation violations.** *The Scientist* 2009;23(5):13.

The authors of scientific articles do not always properly cite previous research works. This “bibliographic negligence” or “citation amnesia” is due to the fact that actually there is no best practice for citing prior work. Moreover, this behaviour is reinforced by the hard competition in the scientific environment that pushes authors to omit mention of competitors’ results. Journals should adopt a code of practice for citation. Many years ago Eugene Garfield suggested that authors declare and sign that they have done a minimal search of the literature and that to the best of their knowledge there is no other relevant work. However, the question still remains open...

Greenhalgh T. **Sharing medical research data: whose rights and who's right?** *BMJ* 2009;338:b1499.

Objections to Groves’ article “Managing UK research data for future use” (see Science section below) include issues with data interpretation when data is “cleaved” from the context in which it was collected or the people who supplied it and interpreted it, and the breakdown of the trust between researchers and research participants.

http://www.bmj.com/cgi/content/full/338/apr14_2/b1499

Landis GA. **APS copyright policy still no good.** *APS News* 2009;18(4):5.

Letter querying why the American Physical Society’s “improved” copyright policy (*APS News* 2009;18(2):8) still demands transfer of copyright on the grounds that “we must have this to continue to provide quality publication” when commercial publishers do not make such a demand.

<http://www.aps.org/apsnews/>

Reich ES. **The rise and fall of a physics fraudster.** *Physics World* 2009;22(5):24–29.

Article based on the author’s 2009 book: *Plastic fantastic: how the biggest fraud in physics shook the scientific world*. The author traces the history of Jan Hendrik Schön’s career and what led him to fabricate data, how this affected the work of others who tried to replicate his results, and how eventually the fraud was detected.
<http://physicsworld.com/cws/article/print/38903>

LANGUAGE AND WRITING

Fraser VJ, Martin JG. **Marketing data: has the rise of impact factor led to the fall of objective language in the scientific article?** *Respiratory Research* 2009;10(35).

The use of value-laden terms in clinical and biomedical journals has increased in the past 25 years, and this is particularly valid for important research journals of high impact factors. The recent trends in the use of biased words in a scientific manuscript show an exaggeration of the importance of findings and a loss of scientific objectivity. This may fuel skepticism and alienate the reader. It is better to encourage more modest claims and a return to objectivity: “The numbers and not their interpretation, must speak for themselves”.

<http://respiratory-research.com/content/10/1/35>

PUBLISHING

NFAIS best practices for journal article publishing. National Federation of Advanced Information Services, 2009.

This association wishes to disseminate the document widely throughout the information community in order to generate discussion and get additional input. http://www.nfais.org/Best_Practices_Final_Public.pdf

Houghton J, Rasmussen B, Sheehan P, Oppenheim C, Morris A, Creaser C, Greenwood H, Summers M, Gourlay A. **Economic implications of alternative scholarly publishing models: exploring the costs and benefits.** JISC EI-ASPM Project. **A report to the Joint Information Systems Committee.** JISC, 2009 (Document 510 Version 1.1).

A detailed report on the ongoing debate on the economics of scholarly publishing and alternative publishing models; it focuses mainly on costs, pointing at the most cost-effective system, but not necessarily the cheapest. The report will help stakeholders understand the institutional, budgetary, and wider economic implications of three of the major emerging models for scholarly publishing: subscription publishing, open access publishing, and self-archiving.

<http://www.jisc.ac.uk/media/documents/publications/rpteconomicoapublishing.pdf>

Research Councils in UK. **Report on open access study.** May 2009.

The purpose of RCUK's independent study was to identify the effects and impacts of open access on publishing models and institutional repositories in light of national and international trends. This included the impact of open access on the quality and efficiency of scholarly outputs, specifically journal articles. In response to the study, the Chief Executives of the Research Councils have agreed that over time the UK

Research Councils will support increased open access, by building on their mandates on grant-holders to deposit research papers in suitable repositories within an agreed time period, and extending their support for publishing in open access journals, including through the pay-to-publish model. www.rcuk.ac.uk/cmsweb/downloads/rcuk/news/oareport.pdf

Sandweiss J. **Essay: the future of scientific publishing.** *Physical Review Letters* 2009; May 11.

Last in a series of nine essays written to celebrate last year's 50th anniversary of *Physical Review Letters*. Both physicists and editors contributed to the series. This particular offering looks ahead to the future of scientific publishing and suggests that most difficult problems that it faces are a result of the ever-increasing volume of published scientific research. Aids to the individual physicist in wading through the mine of information include virtual journals and artificial intelligence programs. <http://prl.aps.org/edannounce/PhysRevLett.102.190001>

RESEARCH EVALUATION

Bornmann L, Mutz R, Daniel HD.

Do we need the h index and its variants in addition to standard bibliometric measures? *JASIS&T* 2009;60(6):1286–1289.

Investigates whether there is a need for the h index and its variants in addition to standard bibliometric measures (SBMs). One type of index (eg, h-index) describes the most productive core of a scientist's output and tells of the number of papers in the core; the other (eg, a-index) depicts the impact of the papers in the core. In evaluative bibliometric studies, quantity and quality of output are usually assessed using the SBMs "number of publications" (for quantity) and "total citation counts" (for the impact dimension). The authors included the SBMs into the factor analysis. The results of the newly calculated analysis indicate

that there is a high intercorrelation between "number of publications" and the indices that load substantially on the factor Quantity of the Productive Core as well as between "total citation counts" and the indices that load substantially on the factor Impact of the Productive Core. The authors propose the use of any pair of indicators (one relating to the number of papers in a researcher's productive core and one relating to the impact of these core papers) as a meaningful approach for comparing scientists.

Bourne PE, Fink JL. **I am not a scientist, I am a number.** *PLoS Computational Biology* 2008;4(12): e1000247.

Having scholarly output properly characterized is not out of reach, since articles are already identified uniquely by a Digital Object Identifier, books or journals by an ISBN, citations by PubMed identifiers. The ideas discussed here take this identification process for individual publications and citations to the point of providing unique descriptors for each author and uniquely identifying all of each author's scholarly work.

<http://www.ploscompbiol.org/article/info:doi/10.1371/journal.pcbi.1000247>

Fanelli D. **How many scientists fabricate and falsify research? A systematic review and meta-analysis of survey data.** *PLoS ONE* 2009;4(5):e5738.

Many surveys have asked scientists directly whether they have committed or know of a colleague who fabricated and falsified data or committed other forms of research misconduct, but their results appeared difficult to compare and synthesize. This is the first meta-analysis of these surveys. Considering that these surveys ask sensitive questions and have other limitations, it appears likely that this is a conservative estimate of the true prevalence of scientific misconduct. <http://www.plosone.org/article/info:doi%3A10.1371%2Fjournal.pone.0005738>

Fersht A. **The most influential journals: impact factor and eigenfactor.** *Proceedings of the National Academy of Sciences* 2009;106(17):6883–6884.

To rate the influence of journals a new bibliometric parameter, the Eigenfactor (www.eigenfactor.org), has recently been created and is now listed by Journal Citation Reports. The Eigenfactor ranks journals in a manner similar to that used by Google for ranking the importance of websites in a search. Practically, there is a strong correlation between Eigenfactors and the total number of citations received by a journal. New and emerging measures of scientific impact are continuously developed and improved. However, scientists should not rely solely on one standard measure. After all, science is about progress, which is ultimately assessed by human judgment.

doi: 10.1073/pnas.0903307106
<http://www.pnas.org/content/106/17/6883.full>

Iribarren-Maestro I, Lascurain-Sánchez ML, Sanz-Casado E. **Are multi-authorship and visibility related? Study of ten research areas at Carlos III University of Madrid.** *Scientometrics* 2009;79(1):191–200.

Opinions on the possible relationship between co-authorship and number of citations vary. This study shows that while multi-institutional and multi-national authorship raise the number of citations, co-authorship and number of citations are unrelated. Correspondence analysis failed to show any correlation between the quartile of the citing journal and multi-institutional or multinational authorship, but did reveal a relationship between citing journal quartile and departmental area.

doi: 10.1007/s11192-009-0412-4

Johnston R. **The extent of influence: an alternative approach to identifying dominant contributors to a discipline's literature.** *Scientometrics* 2009;78(3):409–420.

Most studies of scholarly influence within disciplines using citation

data do not investigate the extent of an individual's influence. Using bibliographic data from a series of quadrennial reports into developments in UK geography, this paper finds that few authors are cited on more than one occasion.

doi: 10.1007/s11192-007-2015-2

Sypsa V, Hatzakis A. **Assessing the impact of biomedical research in academic institutions of disparate sizes.** *BMC Medical Research Methodology* 2009;9:33.

A valid and transparent evaluation of universities is increasingly needed but continues to be a controversial issue. In particular, as regards the assessment of biomedical research, peer-review is not adequate for large-scale evaluations and the authors propose, beyond the usual bibliometric indicators, a new impact measure: the Modified Impact Index (MII). This indicator is suitable for large as well as for small field specific publication sets in biomedicine and should be used together with the h-index when research output of institutions of disparate sizes is compared.

doi:10.1186/1471-2288-9-33
<http://www.biomedcentral.com/1471-2288/9/33>

Van den Besselaar P, Leydesdorff L. **Past performance, peer review, and project selection: A case study in the social and behavioral sciences.** *Sigmetrics* 2009.

Do grant allocation decisions correlate with past performance of the applicants in terms of publications and citations? The findings of the Netherlands Research Council for the Economic and Social Sciences distinguish grant applicants with above-average performance from those with below-average performance, but within the former group no correlation could be found between past performance and receiving a grant. Researchers who were denied funding significantly outperformed those who were funded, and the best rejected proposals scored as high on the outcomes of the peer review process as the accepted proposals.

(SIGMETRICS is a listserv that covers bibliometrics, scientometrics, informetrics, and metrics as related to the design and operation of digital libraries and other information systems. It is a Virtual Special Interest Group of the American Society for Information Science and Technology.)
<http://home.medewerker.uva.nl/p.a.a.vandenbesselaar/bestanden/20090327%20magw.pdf>

Williamson JR. **My h-index turns 40: My midlife crisis of impact.** *ACS Chemical Biology* 2009;4(5):311–313.

The h-index, or Hirsch index, is a sort of personal impact factor, based on citations of published work. In this letter the author tells about his recent discover in the web of science on how to “Create Citation Report” through the “Author Finder”. Then he goes on to advise how to boost the h-index.
<http://pubs.acs.org/doi/full/10.1021/cb9001014?cookieSet=1>

SCIENCE

Groves T. **Managing UK research data for future use.** *BMJ* 2009;338:b1252.

The *BMJ* has recently joined a host of other journals in encouraging authors to make raw research data available to others. Authors are being asked to include a data sharing statement at the end of their original research articles. This will explain what additional data are available, to whom, and where they can be found. Sharing clinical research data has ethical implications for medical journals; maintaining patient confidentiality is a major challenge. A list of proposed solutions is given.

doi:10.1136/bmj.b1252
http://www.bmj.com/cgi/content/full/338/mar25_1/b1252

Paola De Castro, Penny Hubbard
 (compilers)
paola.decastro@iss.it

Thanks to Enrico Alleva, Margaret Cooter, John Glen, James Hartley, Joan Marsh, Eleonora Lacorte, Courtney Phillips, Françoise Salager-Meyer, and Renata Solimini.