



Reviewers' Update

Information on Elsevier and Scholarly Publishing

Issue 4, March 2010

Welcome to the fourth issue of Reviewers' Update.

In this issue, Dr. Elena Paoletti and Dr. Pedro Cintas, share their views on the possibility of measuring individual reviewer contributions to the peer review process using proposed bibliometrics.

We report on how we are working to ensure that Elsevier-published journals will have their reference style template available in EndNote, and we also take a look to the future and how Elsevier is working with the scientific community to redefine how an article is presented online, with our "Article of the Future" initiative.

We hope you enjoy this issue and welcome any feedback you may have.

Kind regards,

Rachel Perry - Communications Manager, Elsevier editorialcommunications@elsevier.com

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Rewarding reviewers

Could a Reviewer Factor be a solution?

by Elena Paoletti - National Council of Research, Italy

The peer review process has become a source of endless discussion within the scientific community. Hochberg et al. (2009) have recently addressed the so-called "Tragedy of the Reviewer Commons", i.e. the need to reduce onerous demands placed on reviewers by the continual increase in manuscript submission rates. The problem is, not just finding timely reviewers, but finding individuals who are competent and willing to ensure a fair and adequate assessment of research.

Suggested Approaches

Authors explain why their article is important - an approach that saves reviewers' time is used by the journal Environmental Pollution. Potential authors are required to send the abstract of their manuscript and an accompanying paragraph that explains why the work is important and should be published, to either the Editor-in-Chief or an

Associate Editor. Authors can submit the complete manuscript only when their work is considered relevant to the journal and scientifically important by the Editor-in-Chief or Associate Editor.

Rewarding reviewers rather than punishing them - Kirby (2009) has suggested several steps to help editors find and retain good reviewers and has mentioned the lack of satisfaction felt by anonymous reviewers who receive no tangible reward. To "incentivize" reviewers, Hauser & Fehr (2007) propose delaying the reviewers' next submission to the journal, according to the number of days that their review was turned in late (with a one-week delay in case s/he had refused to review). This sarcastic contribution stimulated a general consensus around rewarding reviewers rather than punishing them.

Financial Awards - many have proposed a financial reward for every completed review,

the fee to be paid by the authors themselves or regulated by a contract to review with the publishers. Others have advocated absolute transparency of the manuscript submission process and have promoted public peer review and interactive public discussion.

A Reviewer Factor - a solution?

In my opinion, there is a simple way to recognise this work and to give practical value to reviewers' activity. Electronic publishing has allowed the calculation of several quality indices including the impact factor and the h-index.

The best known is the impact factor (IF), that is a measure of the citations to journals. The journal IFs are calculated annually, and are the ratio of the number of times papers are cited to the total number of papers published in the same period. The establishment of IF has changed the job of the editors,

who now seek papers with the potential for frequent citation.

The recent Hirsch index (h-index; Hirsch, 2005) quantifies both the actual scientific productivity and the apparent scientific impact of a scientist. An h-index of 10 means that the author has 10 published papers that each have 10 citations or more. The h-index is in some fields changing the publication strategies of authors, who now target not only high-IF journals but also focus on potentially high-citation papers (such as review articles).

As all the main journals have electronic databases of reviewers, a **reviewer factor (RF)** is proposed. This would measure the annual importance of reviewers to their field. Although the RF will be just an additional line in the reviewer's CV, it is nonetheless a concrete way to provide public recognition of their attitude to evaluation and importance in the field, and a succinct measure of the researcher's experience in peer review.

A simple formulation is suggested, i.e. summation of the numbers of reviews in Web-of-Science or Scopus journals times the journal IF in a year. Late reviews may be not included in the calculation (but editors should accept requests of deadline postponement!).

RF would enhance the reviewer commons, stimulate reluctant scientists to contribute to the peer review process, and provide editors with an excellent data-base.

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Reproduced for Reviewers' Update with permission from Elsevier Editors' Update: Dr. Elena Paoletti, "A Reviewer Factor (RF) for finding and retaining good reviewers", Issue 28, November 2009



Elena Paoletti

Elena Paoletti, senior scientist at the Institute of Plant Protection, National Council of Research of Italy. As a compulsive reviewer and a guest editor who has worked with reviewers, Elena values the importance of recognising the work that responsible reviewers do.



Pedro Cintas

Pedro Cintas, an organic chemist by training (Ph.D 1987), has been affiliated with the University of Extremadura (Spain) since 1990. As a regular author and reviewer of chemistry journals, he has invariably felt the minuses of our currently accepted peer review system: lack of motivation, recognition, and improvement.

Increasing visibility and recognition of reviewers

Is a Peer Review Index a possible solution?

by Pedro Cintas, University of Extremadura, Spain

Increasing visibility and recognition of reviewers

The practice of reviewing manuscripts dates back to the mid-18th century when the Royal Societies of Edinburgh and London began seeking the advice of their members to help them select papers for publication. Today, we all recognise peer review as an essential ingredient of scientific publishing, and many scientists agree to invest time in the thankless and often unrecognised enterprise of examining manuscripts, patents, national projects and so on.

While peer review should presumably maintain its basic guidelines, including its character of non-profit activity, editors equally experience that reviewers' reports (and therefore their usefulness) vary considerably. Some time ago, I contacted a number of editors to discuss the possibility of introducing a peer review index (in close analogy to factors or indices to assess the quality of scientific publishing). To my surprise, there was little or no echo. I realise that, with such a bibliometric index, it could be extremely complicated to control accuracy. For example, what kind of

things should actually be measured?

The current problem

It is recognised that high-profile publications and papers could not be maintained without an efficient (yet imperfect and often controversial) peer-review system. But the latter has become a daunting mission for editorial offices. Editors of specialised journals complain that usually several tries are required to find competent referees who will agree to review a paper. Even worse, ill-conceived and last-minute reports, lacking critical analysis and careful scrutiny of data and references, are not unusual and may lead to serious conceptual errors and inaccurate treatments. Clearly, peer review would require both recognition and reward, though preserving its reputation and maintaining its pillars of confidentiality and anonymity.

A peer review index - a possible solution?

A peer review index could be, in any case, useful in terms of promotion and recognition, especially for young people. Ruling out the ideas of competition, production and



excellence, which are usually associated to impact factors, eigenfactors, or h-indices; a peer review index must simply identify quality and utility. Such an index (or indices) could certainly stimulate the practice of reviewing manuscripts (or at least show the benefit of investing the same time, patience, and care as in writing). Some ideas and reflections have been summarised in the following paragraphs.

Since peer review should still be an altruistic choice, it is expected that the most prolific and influential authors would be receiving more papers for revision than the rest. Accordingly, an index of peer review capability would be the quotient between the number of papers evaluated (q) and the number of papers published (p) within a given period. Editors could also introduce a quality factor to measure the relevance and usefulness of reviewers' reports. . But, in principle, a peer-review index (let us say $r = q/p$, for $q, p \neq 0$) could be a potential parameter to assess this indispensable task. Such an index (or variations thereof) should be recognised as valuable as publication indices for professional promotion, grant applications or academic tenure.

At present, most journals have websites for their reviewers, and can even certificate the number, including successive revisions, of papers evaluated. Thus, it would not be difficult to introduce this information in current databases and make it publicly available.

Your comments are welcome

I hope these initial thoughts have sparked your curiosity and stimulus. Any further feedback would be greatly welcome, unless you think we need no additional bibliometric indices. However, as Albert Einstein once remarked: "it is crazy to repeat the same behaviour and hope for different results". Please contact me via

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Cell Article Prototype #1
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A Dynamic Pathway for Calcium-Independent Activation of CaMKII by Methionine Oxidation
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Article Highlights

- Oxidation of methionine residues activates CaMKII
- Angiotensin II induces CaMKII oxidation leading to cardiomyocyte death
- CaMKII methionine oxidation is reversed by thiols
- Oxidized CaMKII oxidation impairs heart function and worsens ischemic injury

Author Interview

Abstract
Calcium/calmodulin (Ca²⁺/CaM)-dependent protein kinase II (CaMKII) complex increases its cellular Ca²⁺-independent responses in atherosclerotic cells. CaMKII was identified over 30 years ago by activation dependence on Ca²⁺-CaM, but recent evidence shows that CaMKII activity is also enhanced by pro-oxidant conditions. Here we show that oxidation of paired regulatory domain methionine residues sustains CaMKII activity in the absence of Ca²⁺-CaM. CaMKII is activated by angiotensin II (AngII)-induced oxidation, leading to responses in cardiomyocytes both in vitro and in vivo. CaMKII oxidations is reversed by methionine sulfonide reductase A (SsrA), and SsrA^{-/-} mice show exaggerated CaMKII oxidation and myocardial apoptosis, impaired cardiac function, and increased mortality after myocardial infarction. Our data demonstrate a dynamic mechanism for CaMKII activation by oxidation and highlight the critical importance of oxidation-dependent CaMKII activation to AngII and ischemic myocardial apoptosis.

> Screenshot of a prototype for Elsevier's Article of the Future project.

Experience the Article of the Future

by Ylann Schemm, Elsevier

What is Elsevier's "Article of the Future"?

Elsevier's "Article of the Future" project is part of an ongoing collaboration with the scientific community to redefine how a scientific article is presented online. In January 2010, Cell Press began publishing all online research articles in the new Article of the Future format, a linked navigation scheme allowing readers to create a personalized path through the article's content, based on their needs and interests. The format is available exclusively on www.cell.com

After launching the prototypes, in July 2009, we sought user feedback and adapted and enhanced the prototypes based on the comments received. For example, supplementary information, including multimedia content, is now fully integrated into the article, facilitating more fluid navigation between the two.

Emilie Marcus, Editor-in-Chief of Cell Press, said: "The genesis of the 'Article of the Future' project came from a challenge to redesign from scratch how to most effectively structure and present the content of a traditional scientific article in an online environment. The rapid pace of technological advancements means this will undoubtedly

be an evolving design, but we're happy to be able to address some key reader and author pain points, such as the integration of supplemental data with these initial prototypes."

Content Innovation

"Together with the Elsevier Grand Challenge, the 'Article of the Future' project forms part of Elsevier's commitment to collaborating with our scientific community on content innovation. We're confident these tools will enhance the presentation of scientific results and improve the interpretation and speed of results analysis," said External link IJsbrand Jan Aalbersberg External link , VP of Content Innovation for S&T Journal Publishing.

"These initiatives are central to driving innovation in scientific publishing," he added. "They represent our investment in the future of research, enabling scientists all over the world to access and interpret results more efficiently and create better science."

What users think

In a reader response survey about the Article of the Future on cell.com, more than two-thirds of respondents reported that the



project's new presentation of a scientific article is "a significant improvement."

KEY FEATURES

* A hierarchical presentation of text and figures so readers can elect to drill down through the layers based on their current task in the scientific workflow and their level of expertise and interest. This organizational structure is a significant departure from the linear-based organization of a traditional print-based article in incorporating the core text and supplemental material within a single unified structure.

* Bulleted article highlights and a graphical abstract. This allows readers to quickly gain an understanding of the paper's main "take away" message and serves as a navigation mechanism to directly access specific sub-sections of the results and figures. The graphical abstract is intended to encourage browsing, promote interdisciplinary scholarship and help readers identify more quickly which papers are most relevant to their research interests.

Adapted from Ylann Schemm, "Experience the 'Article of the Future'", Elsevier Editors' Update 28, November 2009. (Reprinted with permission from Publishing Connect, Issue 658, 29 July 2009) for publication in Reviewers' Update Issue 4



Ylann Schemm

Ylann Schemm, Corporate Relations Manager develops Elsevier's science communications partnerships with nonprofits such as Sense About Science, helping to raise the public, policymakers', and journalists' understanding of "sound science" through peer review discussions, panels, articles and science festivals. Ylann also manages Elsevier's corporate responsibility programs including the Elsevier Foundation, Research4Life, BookAid International and Sabre

Elsevier-published journal reference styles available in EndNote

by Egbert van Wezenbeek, Elsevier

In response to consistent feedback from authors and editors, Elsevier has been collaborating with Thomson to ensure that the majority of our journals will have their reference style template available in EndNote.

What is EndNote?

EndNote is a bibliographic reference management program with a plug-in option to MS Word. It is possible for journals to have a reference style template describing how refer-

ences should be formatted for that journal. The style template also provides a link to the journal's Guide for Authors.

The Benefits of EndNote

Using EndNote enables authors to use the correct reference style for a particular journal into their submission from the start. This includes citing references in the text, and also in the list of references. This is a great time saver for our authors, and will also offer a convenient way to format their papers according to each journal's specific guidelines. In addition, if authors need to resubmit the manuscript to another journal, the reference style can be adapted by a single mouse click.

For some journals, the use of EndNote will also reduce editorial time, as the manuscript will not need to be returned to the author for correction of the reference style before the review process. It will also reduce the amount of copy editing at the typesetter (hence potentially reducing production times), and the number of author queries at author proof stage.

Current Status

As of March 2010 the total number of Elsevier journals with EndNote is well over 1100. This number will increase as the process of adding new templates continues throughout 2010. Thomson will also ensure that all of the participating journals have a Reference Manager Style template available.

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