

Reviewing the Reviewer's Role



Philippine Council for Health Research and Development
Philippine Association of Medical Journal Editors
Asia Pacific Association of Medical Journal Editors
**National Peer Review, Editing and Train the Trainers
(Part 2) Workshop**

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JF Lapeña Jr. M.A., M.D., F.P.C.S.
lapenajf@upm.edu.ph



University of the Philippines Manila
THE HEALTH SCIENCES CENTER

Reviewing the Reviewer's Role



At the end of this session, you will learn:

- Issues concerning peer review
- How a manuscript is reviewed
- The reviewers' role



OBJECTIVES

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Reviewing the Reviewer's Role

WHY do you Publish?

- To **document** or **claim priority** for a discovery
- To **share** what you have learned and how you have learned it, so that others can build on that knowledge

HOW do you Publish?

- Through **peer reviewed journals** of the highest possible stature

Siegel, 2008.





Reviewing the Reviewer's Role

WHY do journals use Peer Review?

- To determine whether conclusions drawn by the research are **justified** and “**new**”
- To get some gauge as to the **significance** or potential significance of the work
- Adds a “**human judgment**” **element** to the academic process and **assists/lessens workload** of the Editor
- Ideally, this is then turned into a **decision** that is **constructive, transparent, timely,** and **fair** and will **enhance the final writing product**

Rosenfeld 2010; Eklof, 2009; Siegel, 2008.





Reviewing the Reviewer's Role

WHY do journals use Peer Review?

- **Quality control for scholarly information; Filter**
More papers submitted than could be “printed”
Weeds out fraud and eliminates “bad” science, pseudo-science, harmful science; **upholds ethical standards**
- **Promotes originality, academic rigour and improves critical thinking/writing skills** of editors, reviewers, authors (mechanism for improvement of manuscripts)
- **Reduce bias and improve quality** of published articles
- **Collegial stamp of approval**
- **Professional obligation** to the principles of one's discipline

Rosenfeld 2010; Eklof, 2009; Dominy & Bhatt, 2006



Reviewing the Reviewer's Role

“Medieval” Peer Review

Some would say that “Peer Review” goes back as far as the 17th century, when it was known as “The Inquisition of the Holy Roman and Catholic Church”.

Scholars' works were examined for any hints of “heresy”.



Dominy & Bhatt, 2006. From Wikipedia
http://en.wikipedia.org/wiki/Peer_review



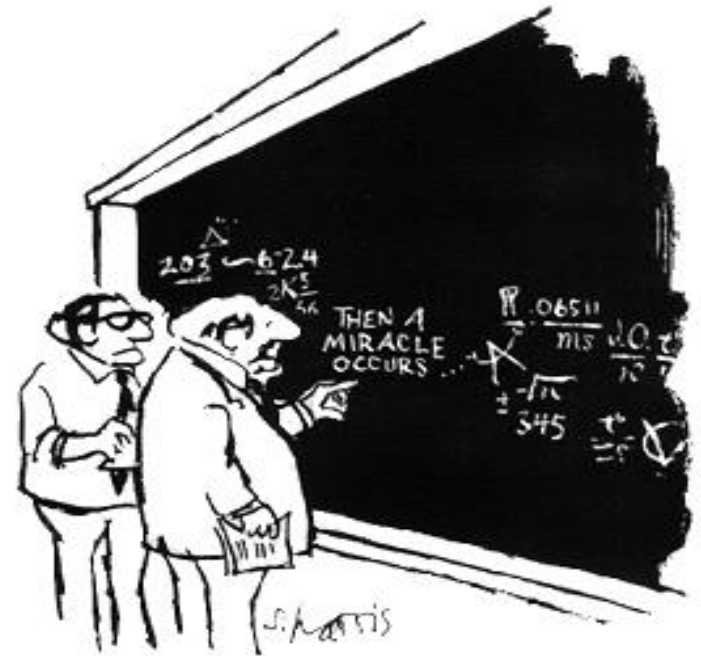
Reviewing the Reviewer's Role

“Modern” Peer Review

Peer review (“refereeing” in some academic fields) is used in:

1. Ethics / Institutional Approval & Publication Process
2. Awarding of Research Funding
3. Patents and IP Deliberations
4. Standards and Guidelines

Each involves slightly different practices, but ultimately colleagues are evaluating each other.



"I think you should be more explicit here in step two."

Dominy & Bhatt, 2006



Reviewing the Reviewer's Role



From Start to Finish:

Typical Linear Flow of the Scholarly Publishing Process

Author submits manuscript* to academic journal editor

Editor determines whether manuscript has sufficient merit to be **reviewed by editorial board or selected external reviewers**

Manuscript sent back to the author with a rejection letter **or on to reviewers (typically, a double-blind process)**

*after complying with institutional /ethical review boards, etc

Publish, Not Perish: The Art and Craft of Publishing in Scholarly Journals.
University of Colorado 2006. Available from <http://www.publishnotperish.org>



Reviewing the Reviewer's Role



From Start to Finish:

Typical Linear Flow of the Scholarly Publishing Process

Reviewers return the manuscript to the editor with comments and recommendations (depending on peer review model)

Editor sends manuscript back to the author with either a rejection letter or a request for revisions in compliance with reviews

Author revises manuscript and resubmits to editor

Editor (sometimes) sends revised manuscript back to external reviewers

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University of Colorado 2006. Available from <http://www.publishnotperish.org>



Reviewing the Reviewer's Role



From Start to Finish:

Typical Linear Flow of the Scholarly Publishing Process

Editor accepts or rejects manuscript

Copy Editor edits the manuscript and galley proofs are laid out (in journals with long queues, this may involve updating revisions)

Author provides editing or proofing of final copy before publication

Paper is eventually published in journal

Journal is disseminated in print and electronic forms



Publish, Not Perish: The Art and Craft of Publishing in Scholarly Journals. University of Colorado 2006. Available from <http://www.publishnotperish.org>



Reviewing the Reviewer's Role

SO, WHAT'S THE PROBLEM?

Famous papers that were **published and did NOT get peer reviewed:**

Watson & Crick's 1951 paper on the structure of DNA in Nature

Abdus Salam's paper "Weak and electromagnetic interactions" (1968). Led to Nobel Prize

Alan Sokal's "Transgressing the Boundaries..." in 1996 turned out to be a hoax. Now known as the Sokal Affair.

Eklof, 2009; Siegel, 2008; Dominy & Bhatt, 2006.



Reviewing the Reviewer's Role



Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity

Alan D. Sokal
Department of Physics
New York University
4 Washington Place
New York, NY 10003 USA
Internet: SOKAL@NYU.EDU
Telephone: (212) 998-7729
Fax: (212) 995-4016

November 28, 1994
revised May 13, 1995

Note: This article was published in *Social Text* #46/47, pp. 217-252 (spring/summer 1996).

Biographical Information: The author is a Professor of Physics at New York University. He has lectured widely in Europe and Latin America, including at the Università di Roma "La Sapienza" and, during the Sandinista government, at the Universidad Nacional Autónoma de Nicaragua. He is co-author with Roberto Fernández and Jürg Fröhlich of *Random Walks, Critical Phenomena, and Triviality in Quantum Field Theory* (Springer, 1992).

Transgressing disciplinary boundaries ... [is] a subversive undertaking since it is likely to violate the sanctuaries of accepted ways of perceiving. Among the most fortified boundaries have been those between the natural sciences and the humanities.



Reviewing the Reviewer's Role

SO, WHAT'S THE PROBLEM?

Famous papers that were **published and passed peer review that later proved to be fraudulent:**

Jan Hendrik Schon of Bell Labs submitted and passed peer review 15 papers published in Science and Nature (1998-2001) found to be fraudulent.

Igor and Grichka Bogdanov 1999 & 2002 published papers in theoretical physics believed by many to be jargon-rich nonsense.

Siegel, 2008. Dominy & Bhatt, 2006





Reviewing the Reviewer's Role

SO, WHAT'S THE PROBLEM?

Famous papers that were **published and passed peer review that later proved to be fraudulent:**

Yoshitaka Fujii fabricated data in 172/249 papers. Beginning his career in falsification in 1993 while at the Tokyo Medical and Dental University, he continued it at the University of Tsukuba, and at Toho University in Tokyo, where he was finally dismissed in February 2012.

Diederik Stapel was found to have published fabricated data in 30 peer-reviewed social psychology papers from his posts in the University of Groningen and Tilburg University.





Reviewing the Reviewer's Role

SO, WHAT'S THE PROBLEM?

Famous papers that were **published and passed peer review that later proved to be fraudulent:**

Woo Suk Hwang of Seoul National University was the center of one of the biggest investigations of scientific fraud, with the retractions of two landmark papers in stem cell research:

- Patient-Specific Embryonic Stem Cells Derived from Human SCNT Blastocysts. W. S. Hwang et al. *Science* 308,1777-1783; 2005
- Evidence of a Pluripotent Human Embryonic Stem Cell Line Derived from a Cloned Blastocyst. W. S. Hwang et al. *Science* 303, 1669-1674; 2004





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SO, WHAT'S THE PROBLEM?

Famous papers that **got rejected that later turned out to be seminal works:**

Krebs & Johnson's 1937 paper on the role of citric acid on metabolism, rejected by Nature as being of “insufficient importance”, was eventually published in the Dutch journal Enzymologia. This discovery, now known as the Krebs Cycle, was recognized with a Nobel prize in 1953.

Black & Scholes 1973 paper on “the pricing of options and corporate liabilities”, rejected many times, was eventually published at the intercession of Merton Miller to get it accepted by the Journal of Political Economy. This work led to the Nobel Prize

Siegel, 2008. Dominy & Bhatt, 2006



Reviewing the Reviewer's Role



DOES PEER REVIEW WORK?

- Reviews often **fail to address technical quality** of the work
- Reviews are often **dismissive**
- Reviewers often seem to ask for **additional work** just because they can or they think they should
- Editors often insist on **additional experiments** that won't change the paper
- If a paper is rejected, the whole process has to be **started over again**, because (in general) the reviews can't be used at another journal

Siegel, 2008



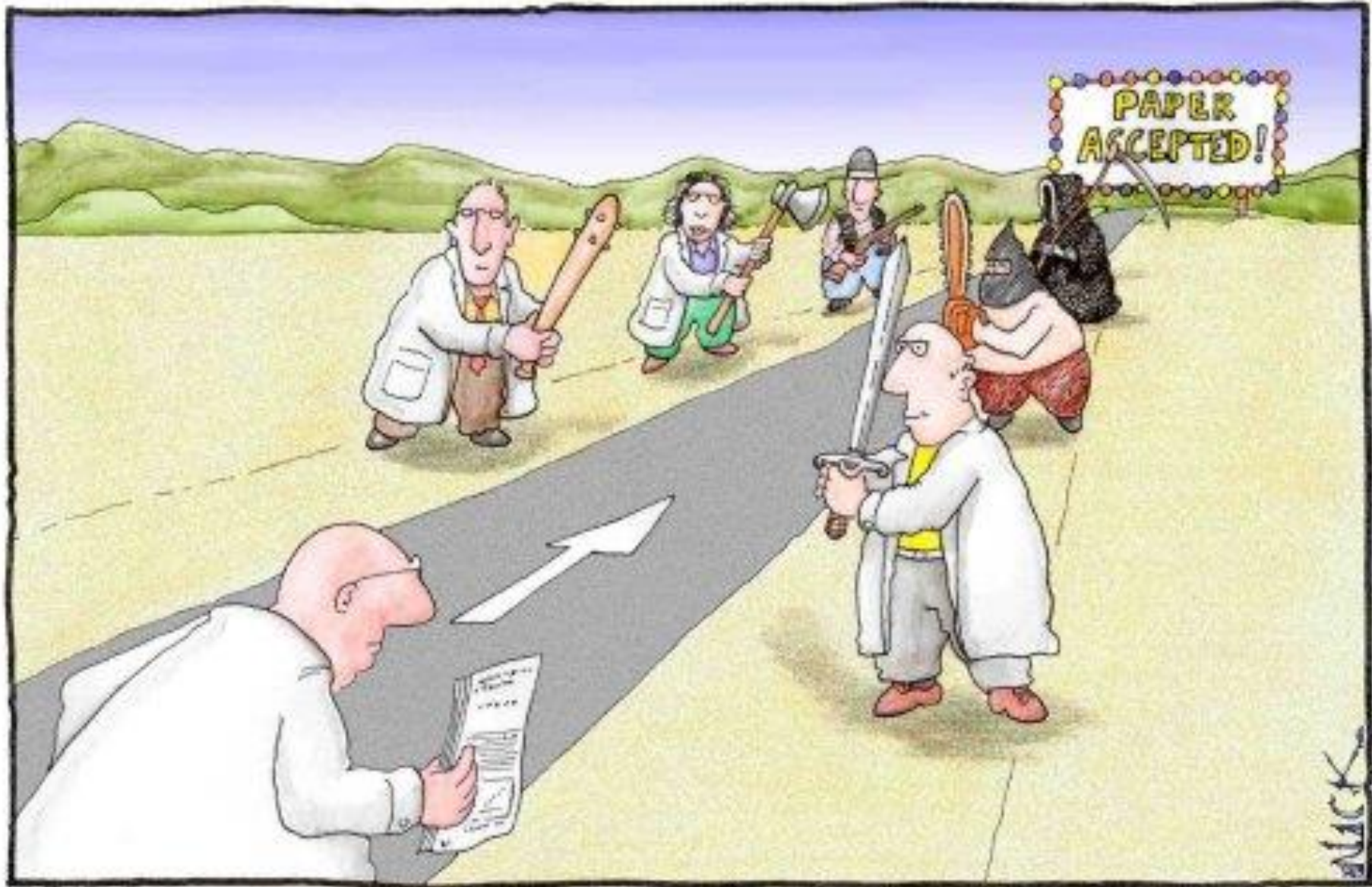
Reviewing the Reviewer's Role



It is ironic that, in an era known for the great speed and availability of information -- where we could choose to blog our results rather than submit them to journals -- publishing papers seems slower and more painful than ever before.



Siegel, "The Promise of Peer Review", DMM, 2008



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

Reviewing the Reviewer's Role



The Reviewer's Role

Job Description

- Expert in his or her chosen field
- Provides unbiased opinion on quality, timeliness and relevance of submitted manuscript
- Integral part of whole system

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



Reviewing the Reviewer's Role



The Reviewer's Role

Four Responsibilities

- To the editor and journal
- To his/her specialty or subspecialty
- To patients and study subjects
- To the author

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



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The Reviewer's Role

Job Description

Responsible for protecting

- reputation of journal
- integrity of specialty/ subspecialty/
- area of expertise/ profession

i.e. Make sure rubbish does not get published!

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



Reviewing the Reviewer's Role



The Reviewer's Role

Job Description

- Responsible for protecting welfare of subjects
 - both human & animal
- Responsibility to authors
 - fair treatment of manuscript

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



Reviewing the Reviewer's Role



The Reviewer's Role

Job Description

- Responsibility to authors
 - remember that all manuscripts are
 - the private property of authors
 - highly privileged communications

This trust must not be abused!

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



Reviewing the Reviewer's Role



The Reviewer's Role

Job Description

- Responsibility to authors
 - always respect the authors' rights
 - never publicly discuss their work
 - do not steal their ideas before publication
 - do not keep any copies of manuscripts sent for review

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



Reviewing the Reviewer's Role



The Reviewer's Role

Job Description

- Try to
 - make the manuscript better
 - provide helpful suggestions for improvement

Even if the manuscript is rejected!

Peh WCG, Ng KH. Effective medical writing (Pointers to getting your article published): Role of the Manuscript Reviewer. *Singapore Med J* 2009; 50(10): 931-933.



Reviewing the Reviewer's Role



The Reviewer's Role

Job Description

- Should be familiar with journal requirements
 - instructions to authors
 - types of papers published
 - journal style
 - standard of journal

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The Reviewer's Role

Job Description

- Reviewers should declare recognition of any aspect of
 - manuscript origin (ideally, blinded or sanitized)
 - Conflict of interest
- If in doubt- inform editor

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Take home points:

1. Peer review is an essential component of the scientific process and medical publishing.
2. Manuscript reviewers have certain important responsibilities.
3. Manuscript reviews should aim at improving the manuscript and aid editorial decision.
4. It is very useful for authors to understand the peer review process and the role of the reviewer.

