Peer review – Why does it matter for your academic career?

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Structure

• History of Peer review
• Peer review from 2 perspectives
• How to conduct a peer review?
• Issues with peer review
History of peer review

- Spier (2002) mentions the bible as early peer review example
- Royal Society of London created peer review in 1665
- First peer-reviewed journal: Philosophical Transactions
- Target: Improve papers
I'm disappointed because my particular matrix of experiences and expertise did not mesh well with the criteria of a research chair in innovative learning. I was, in the language of an interviewing panel (who were excellent hosts and extremely courteous) not “SSHRC-able” because my profile doesn’t include sufficient traditional peer-review journal publications. I have over the years resisted and largely ignored recommendations and pleas from colleagues to increase my publication activity. I find conference presentations, blogging, open courses, and interactions online much more satisfying.
Peer-review as quality assurance

• Submit primarily to peer-reviewed (and SSCI/SCI indexed) journals
• Impact counts (however calculated)
• Grow your citation networks
Acting as a peer-reviewer

- Part of an academic job
- Service to the academic community
- Staying up-to-date & learning from others
- Establishing relations to journal editors
How to conduct a peer-review?

2007-01-08

Reviewing reflections

From time to time I am getting review requests for conferences or journal publications. Reviewing other work and getting your work sufficiently reviewed is an important function for the scientific system. The task to review a paper is not an easy task and it needs not only a reflection about the content of the papers that have been assigned to you but also a reflection about the method of reviewing: Michael Bieber simply puts it like that in his short guide "How to review": "Do the quality of review that you wish others would do for you". In his paper he mentions several questions that are very helpful for me while I am doing my reviews. I also like the method to read every paper three times before the final decision and comments. Especially the comments section is very important to appreciate the work you read and to give the authors an idea of the reasons of your review results. Boi V. Fallings mentions (pdf) some examples of helpful comments and not so helpful comments.

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Strive for a quality standards

Do the quality of review that you wish others would do for you.

Bieber (1995)
Structure of a review

- Review (sent to authors)
- Remarks for editors (not sent to authors)
- Overall evaluation
- Confidence level
- Relevance
- Novelty
- Significance
- Soundness/Technical quality
The review process

• Read a paper 3 times:
  – 1. Getting an impression
  – 2. In depth analysis
  – 3. Judge the paper

• 3 types of comments:
  • Review form
  • Comments
  • Comments in the paper itself
How to handle paper load?

Faltings (2004) recommends

- Apply filtering
- Don’t spend time on papers which are not acceptable anyway
Every paper must state (Faltings 2004):

- The problem addressed
- Solution or insight proposed
- An example showing that it works
- An evaluation, ideally in comparison with existing techniques
Common problems

- Assumptions not explicitly discussed
- Potential bias not identified
- Unrealistic examples
- Treatment & Effect exchanged
- Fuzzy method section
- Paper not well structured
Comment guidelines

Be constructive, honest and neutral

• Find at least one positive comment
• Back up your decision by an explanation
• Keep always a professional style
• Recognize hard work
• Limit harm by lowering your confidence level
Example comments I

“The paper is building on an outdated state-of-the art and its findings are therefor not solid”.

“The state-of-the art covers only partially important related work. Especially the work by X (2004) and Y (2009) should be included in the analysis”. 
“The presented solution is only applicable in the presented context but I don’t think it can work in a different one”.

“The external validity has not been controlled in the method section of the papers. Therefore the transferability of the presented approach is unsure”.
Peer-reviewers as pimps?


Photo by technokitten
Peer-reviewers as pimps?

Figure 1. The Journal Publication Game
Issues with peer review

Blind review (Reviewer stays anonymous)

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Potentially open for bias of a reviewer due to

- a competitive relation to the authors
- personal preferences/problems
- Hiding in anonymity
Issues with peer review

Double-blind review (reviewer & author anonymous)

+++ No direct bias problems
+++ “Objective”

--- No chance for communication
--- Problem of dishonest reviews
Issues with peer review

• Speed of communication

• A new paradigm is ignored (Kuhn, 1970)

• Reward of peer-reviewers
New approaches for peer review

Open Peer Review

- Introduced by BMJ in 1999, speeding up review process, no differences in quality (van Rooyen et al., 1999)
- Other, hybrid models
- Post-publication reviews
- Social Media
New approaches for peer review

Opening up the peer review process

Here at PaperCritic, we find that science should be as open as possible and that everyone should be able to review each other’s work, not just the elected few. This is why PaperCritic now offers researchers a way of obtaining and providing feedback for each other’s work in a fully open and transparent environment. Join now and experience new heights of scientific collaboration straight away or take a tour!

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


