



Editorial Peer Review

Part of the Solution, or Part of the Problem?

Irving E. Rockwood, Editor & Publisher

CHOICE
CURRENT REVIEWS FOR ACADEMIC LIBRARIES



- 100 Riverview Center, Middletown, CT 06457
- A publishing unit of the Association of College & Research Libraries, a division of the American Library Association
- Founded 1964

Peer Review: What Is It?

- One of the “checks and balances” whereby scientific communities achieve quality. (Jaron Lanier, Digital Maoism)
- ...a critical, judicious, evaluation performed by one’s equals. (Manuscript Peer Review, Pharmacotherapy 21(4): 395-404)
- ...a process used by journal editors to help select (and improve) manuscripts for publication...aka “Editorial Peer Review”

“Traditional” Peer Review

- One or more reviews by subject matter experts
- Reviewers selected by editor
- Reviewer identity not disclosed to author (=“blind” review)
- Author identity may (or may not) be disclosed to reviewer
- If not =“double-blind” review
- Editor has final decision

Variations on a Theme



- “Open peer review”—reviewer identity is disclosed to author
- Allow author to select, or at least nominate, his or her reviewers
- Numerous other variations...

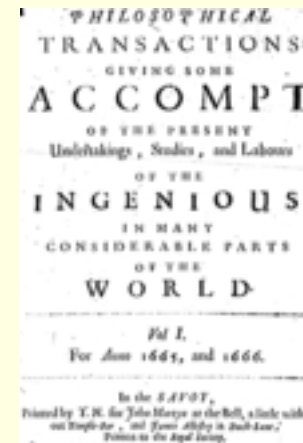
Common Ground—the Process

- Step 1. Editor examines manuscript to determine if it warrants further consideration.
- Step 2. If yes, editor commissions one or more reviews—simultaneously or seriatim
- Step 3. Editor determines whether to:
 - Accept the article for publication
 - Return it with invitation to revise and resubmit
 - Reject the article
- Note: This process applies to books too.

The Origins of Peer Review

- More than three centuries old
- Attributed to Henry Oldenburg, Secretary of the Royal Society of London, and founder of *Philosophical Transactions* (1665), the “world’s oldest scientific journal in continuous existence,” who introduced the practice of soliciting opinions on manuscripts from colleagues who were more knowledgeable in the area in question.

First, Find the Culprits!



- Henry Oldenburg and Philosophical Abstractions, (1665)
- Journal content now available through JSTOR
- Oldenburg's availability unknown

A Notable Exception to Peer Review

- Einstein's "Annus Mirabilis" papers
- Published in 1905 issue of *Annalen der Physik*, Max Planck (father of quantum theory and Nobel prize winner) and Wilhelm Wien (also a Nobel prize recipient)
- Publication process:
 - Planck reads papers
 - Planck publishes them

That Was Then, and This Is Now

- Editorial peer review essentially synonymous with scholarly journal
- Peer review norm adopted at different times in different fields, and in different locations
- In medicine dates from the post WWII era
- Has itself become an object of study, e.g. five International Congresses on Peer Review and Biomedical Publication—1989-2005

Is Everybody Happy?



■ Perhaps not...

What's Wrong? The Critique(s)

- Peer review is:
 - Unreliable
 - Unfair
 - Fails to validate or authenticate
- Peer review is:
 - Unstandardized
 - Idiosyncratic
 - Open to every sort of bias

But Wait, There's More...

- Peer review
 - Stifles innovation
 - Perpetuates the status quo
 - Rewards the prominent
- Peer review
 - Causes unnecessary delay in publication
 - Is very expensive
 - Is insufficiently tested

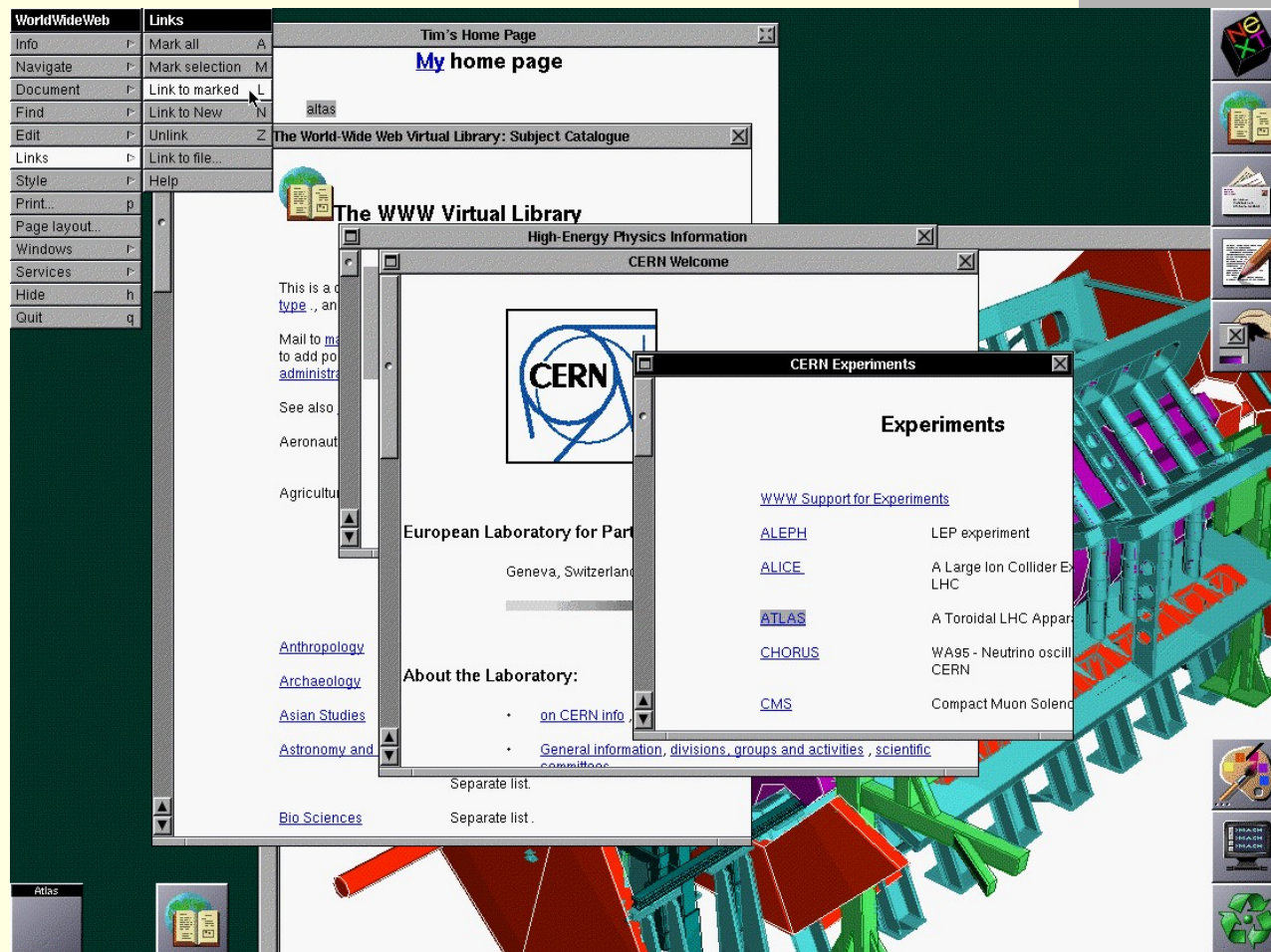
We Could Go On, But We Won't

- Instead, see the now extensive literature on peer review, e.g. the proceedings of the five International Congresses on Peer Review in Biomedical Publication (JAMA)
- Drummond Rennie, “Editorial Peer Review: its development and rationale”
<http://resources.bmj.com/pdfs/rennie.pdf> is a particularly useful introductory source

The Response: Yes, But...

- Winston Churchill on democracy, “it has been said that democracy is the worst form of government except all those other forms that have been tried from time to time.”
- Matt Hodgkinson, BioMedCentral editor, “It’s easy to criticize peer review, but it’s harder to come up with a better system.”

And Then Came...the Web!



New Proposals, New Possibilities...

- Open peer review
 - Reviewers forego anonymity
- Author selection of reviewers
 - Author picks for his or her own list
 - Or from a list provided by publisher
- Post-publication review
 - Skip the entrance exam
 - Let the marketplace of ideas decide
 - A Web 2.0 idea...?

New Models: Case 1



- All submitted articles within scope are immediately posted on the Web for a 90 day discussion period
- At end of “review” period, authors given option to revise; revised article sent out for “pass-fail” review”
- If “pass,” article is published

New Models: Case 2



BIOLOGY DIRECT

- Authors select reviewers from among BD editorial board members
- Reviews published alongside author's responses as part of article
- Three reviews required

New Models: Case 3



- Pre-publication review focuses on technical rather than subjective issues
- All published papers made available for community-based open peer review including online annotation, discussion, and rating
- Managing Editor, Chris Surridge

The Question of the Day

Is editorial peer review broken, and if so, what should we do about it?