

Scientific quality assurance II: Peer review – technical and organizational issues

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CERN workshop on Innovations in Scholarly Communication (OAI5)

Breakout Group 6

19th April 2007



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Who am I?

Managing Director, Medicine Reports Ltd
(producer of Faculty of 1000 Medicine)

Council Member
Committee on Publication Ethics (COPE)

Secretary
World Association of Medical Editors
(WAME)



**Who are you and what shall
we discuss?**



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What's peer review? (ICMJE)

“the critical assessment of manuscripts submitted to journals by experts who are not part of the editorial staff.”

“The number and kind of manuscripts sent for review, the number of reviewers, the reviewing procedures, and the use made of the reviewers' opinions may vary.”

Who's a peer?

An expert in the same field?

An expert methodologist?

A competitor? Is that a problem?

A collaborator? Is that a problem?

Can it be an outsider, a 'mere' reader?

Someone you trust?

What does 'review' mean?

An unstructured comment on an article?

A structured, detailed comment?

Mere 'selection'?

A ranking?

All of the above?

Some of the above?



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But why does peer review exist?

Weed out poor research?

Improve good-enough research?

To decide how best to use limited pages?

To know where to direct funding?

To know what's worth reading?

All of the above?

Some of the above?

When does peer review happen?

Pre-publication according to ICMJE

Only there?

Do peers not select and review after publication?

“The water-cooler conversation”

Journal clubs?

Should it happen at all?



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What is peer review, really?

"expensive, slow, prone to bias, open to abuse, possibly anti-innovatory, and unable to detect fraud ... We also know that the published papers that emerge from the process are often grossly deficient." (Smith)

"it's a lousy system but it's the best one we have." (Wager)

Is there a connection between open access and peer review?

Yes and No

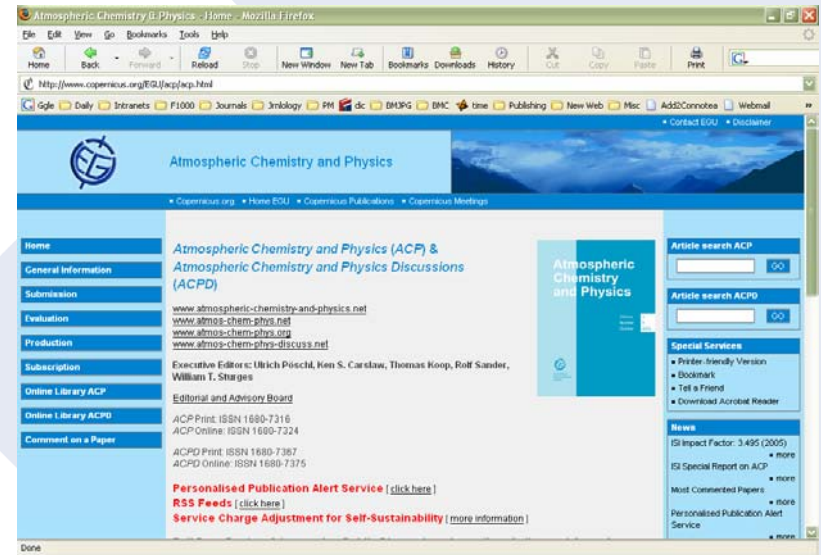
Yes – most innovators in peer review are experimental publishers, incl open access

No – any publisher could do it

Some experiments will only work if access is wide/open

Atmospheric Chemistry and Physics (2001)

8 weeks online discussion (ACPD)
Formal peer review
If accepted, publication (with discussion but not review reports)



ACP data for 2005

Published 240 papers (final)

1 in 4 received comments during ACPD

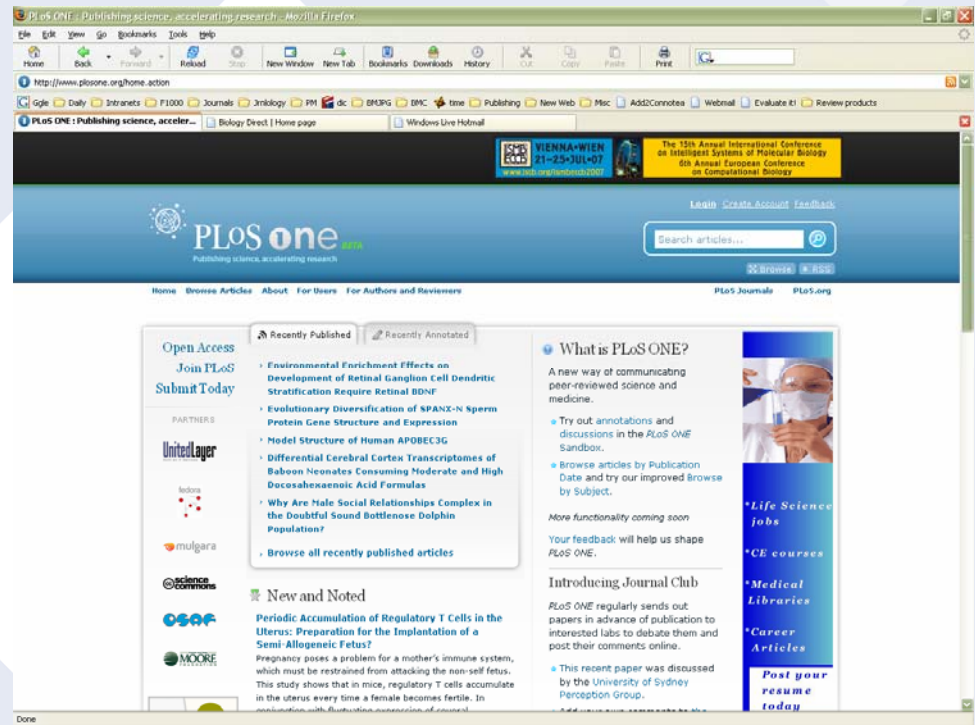
On average, comments were 0.45 pages long

Comments can be anonymous

12th journal in its field (of 169)

PLoS One

Low barrier to
publication
Post-publication
comments



Biology Direct (2006)

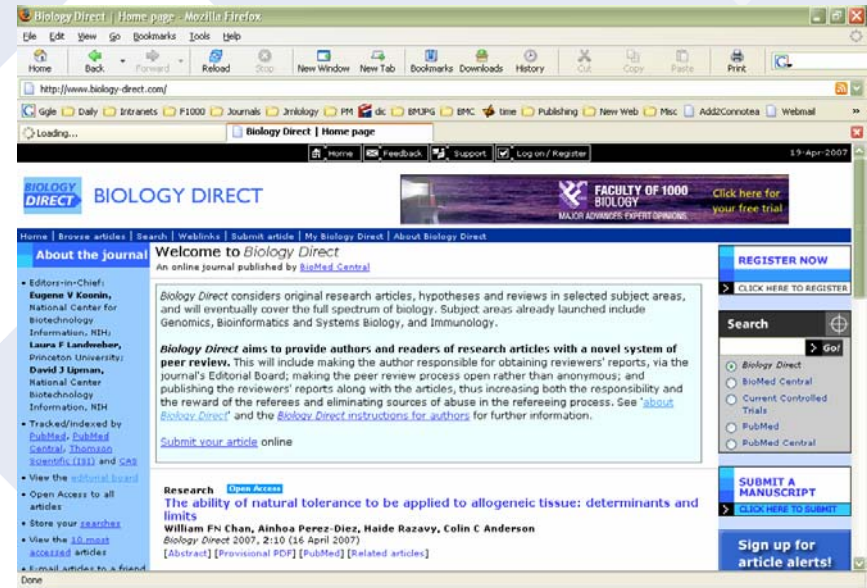
A BMC journal

“Author-guided peer review”

Final article published with reports included

2007 – 10 articles

2006 – 39 articles



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