

The future of Peer Review ensuring/assuring quality



Janet Seggie, HMPG
(SAMA)

The future ...

- Is there a future for peer-review?
- What will be the shape of peer-review in the future?

**the wisdom of the crowds
vs
wisdom of the few**

Who are the peer reviewers ?

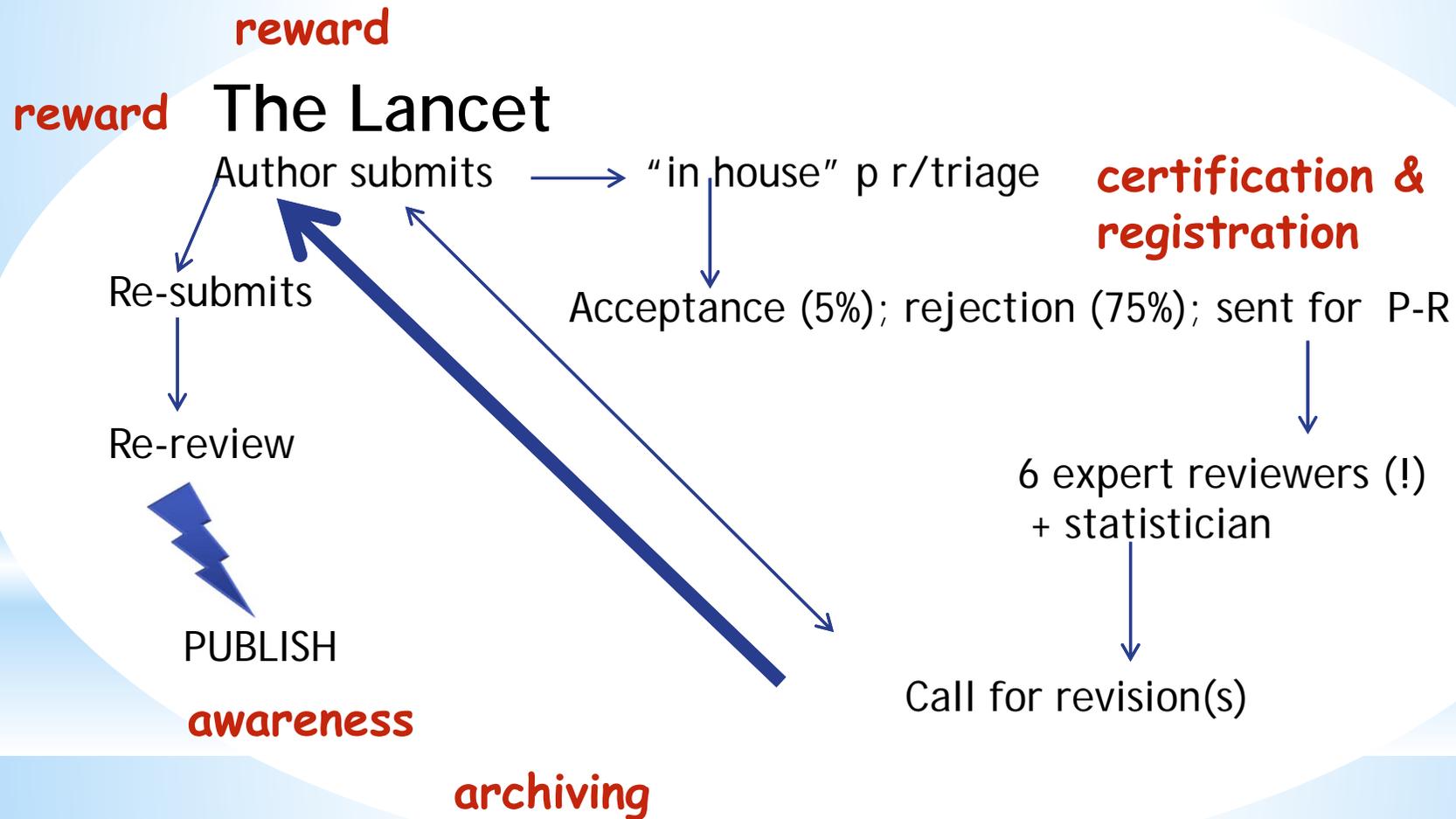
An “elite” - **clinicians/scientists** who work in a field relevant to the paper under consideration

academics (on a relatively short list of experts/often in a narrow field) who have experience, insight, and the respect of other researchers -

**offer wise advice
and**

get it right most of the time

The traditional process: wisdom of the few



Pre-publication peer review

- clarifies - scientific error filtered out
- poor quality work rejected
- places new work in context of available evidence
- requires declaration of limitations
- prevents over-interpretation
- It is right for the readers
 - ◆ journal fulfills the awareness role
 - ◆ published work cited & archived

a “flawed process at the heart of science and journals”

[Richard Smith](#)

- **Slow**
- **Expensive** ... of time and money
- **Inefficient** ... cycling to other jnls
- **Inconsistent** (6 reviews for stats consistency!)
- Subjective
- Inexpert/amateurish
- **Blocks innovation**
- **Biased** ... gender, language, nationality, against `negative studies'
- **Open to abuse** ... conflicts of interest; politics
- **Fails to determine fraud**

The future ...

- no peer review ...

Duesberg in SA!

- "triage" only ... by editor(ial committee)
Risks !

the shape of peer-review in the future? 1

- **research/new findings in context ...**
reports of new research linked to an up-to-date systematic review
 - the Cochrane collaboration model (at the Cochrane Library) ... pre- and post-publication review
 - commissioned editorial

the shape of peer-review in the future? 2

Open peer review = transparency

where the identity of the reviewer (s) is known to the author ...

allows authors and readers to determine whether the review process has been just

! Smaller jnls c smaller constituencies

... capacity ?

The shape of peer-review in the future 3

The Internet -
digital, networked environment

replace

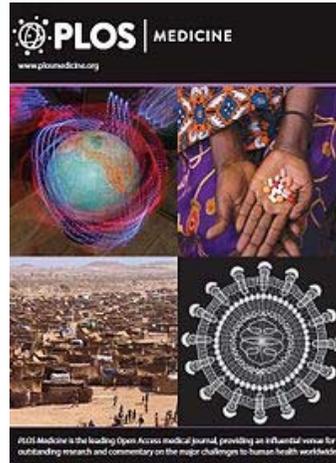
the wisdom of the few

with

the wisdom of the crowds

define 'peer' as broadly as possible

- to maximize the power of collective intelligence



"disruption!"

encourages open peer-review

Criteria for Publication

Originality

Importance to researchers or practitioners in the field

Interest for researchers or practitioners outside the field

Rigorous methodology with substantial **evidence for conclusions**

Conducted according to the **highest ethical standards**

"Game of Papers"

"Cascading" peer review systems



eLIFE



PLOS



EMBO

excellence in life sciences



BioMed Central
The Open Access Publisher

The consortia will enable papers, with their accompanying referee reports, to move more easily between publishers.

pre-publication peer review

Rubriq.com ...

peer review ...

decides where a study gets published
rather than whether it gets published

Peerage of Science

[Home](#) [Solutions](#) [How it works](#) [Peers](#) [Journals](#) [FAQ](#)

 [LOG IN](#)

A new service for scientific peer review and publishing

for the Peers, by the Peers

[Submit](#)

[Sign up](#)

114
Manuscripts

257

Peer reviews

681

Peer review
evaluations

1386
Scientists



from **497**
institutions



in **53**
countries



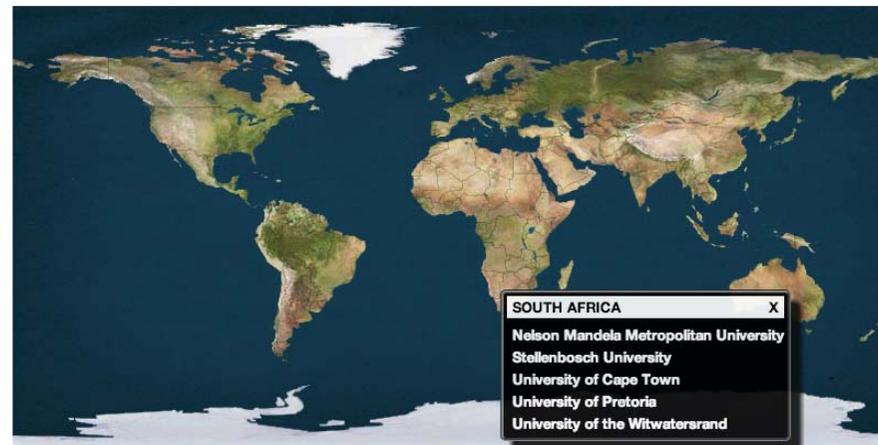
peer review and publishing

for the Peers, by the Peers



Peers

Click the map to find Peers.



Res Altwegg
Dieter Oschadleus
Les Underhill

Authors submit a manuscript

Peers voluntarily engage in review processes -
Peerage Essay

Peer-review-of-peer-review

each review gets a quality index

Authors and the Editors track the process -
can access the review

Manuscript revision upload,
or withdrawal for re-submission

Final evaluation of the revised manuscript

Authors may accept a direct publishing offer from a
subscribing journal or

choose to export the peer reviews to any journal of
their choice

6 weeks

pre-publication via the Internet ...



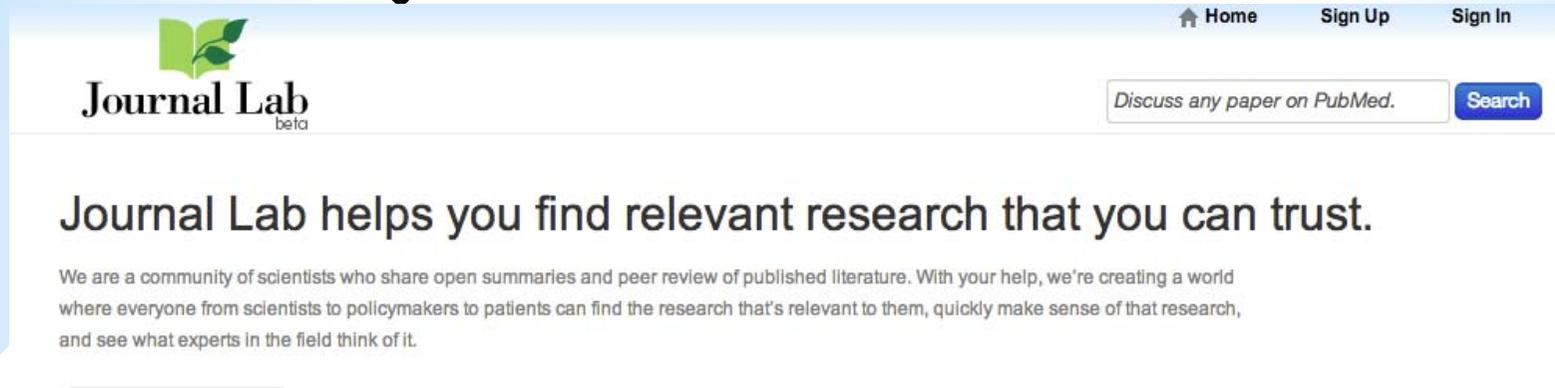
open peer review policy

a bias to publish

the pre-publication history including all submitted versions

reviewers' reports and authors' responses will be linked to form the published article.

post-publication via the Internet ... a virtual journal club



Grad students and post-docs ...

**contribute by sharing their insights about
published data**

that regularly occur in lab meetings and journal clubs

by summarizing papers and leaving comments

build name recognition

Peer review via the internet ...

- **Faster**
- **More efficient**
- **Expensive ... of time and money**
- **Inconsistent**
- **Subjective**
- **Inexpert/amateurish**
- **Blocks innovation**
- **Biased ... gender, language, nationality,
against `negative studies`**
- **Open to abuse ... conflicts of interest; politics**
- **Fails to determine fraud**

The future ... steady evolution
pre- *and* post-publication peer review

“making continuous
but constructive criticism
of research a new norm of science”

(Horton, 2011 - written evidence to UK Parliament)

“blessing” upon
the science that has been reviewed
for its worthiness for publication

[Richard Smith](#)



The shape of peer-review in the future aimed at improvement

- **standardizing** procedures;
- **opening** up the process;
- **blinding** reviewers to the identity of authors;
- reviewing protocols;
- **formal training** of reviewers - standards and ethics
- being more rigorous in selecting and deselecting reviewers;
- using electronic review;
- **rewarding** reviewers;
- providing **detailed feedback** to reviewers;
- using more checklists;
- creating professional review agencies

... promoting fairer review

- Appeals process
- Ombudsman
- Ethics review boards

... capacity ?

