

An Examination of the Reliability of Prestigious Scholarly Journals

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**A question for almost
any nation**

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**How should levels of
scientific funding be
distributed across
different universities?**

The UK's current approach

- 1. We have a Research Assessment Exercise (RAE)**
- 2. We elect peer-review panels to decide on quality**

Big sums of money are involved

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**About 12 billion Euros will
be allocated in the UK over
the next few years.**

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It wants to design a 'metrics' approach.

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is to:*

**have a system where papers
are rated according to the
prestige of the journal**

Might this have advantages?

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- **Objective (if we use journal rankings from ISI, say)**
- **Potentially inexpensive**
- **Simple to understand**
- **Fairly immune from personal biases**
- **Emphasizes refereed work**

**So this paper asks a natural
question**

**How reliable are journal
labels?**

**There is some earlier work
on this issue.**

One of the most famous studies

- **Peters, J.P. and Ceci, S.J. (1982). Peer-review practices of psychological journals: The fate of published articles, submitted again. *Behavioral and Brain Sciences*, 5, 187-255.**

Another interesting piece

- **Starbuck, W.H. (2003). Turning lemons into lemonade – Where is the value in peer reviews? *Journal of Management Inquiry*, 12, 344-351.**

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Hence a natural concern:

**Is the quality of a journal a
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**My data apparently suggest
no.**

A simple test

I collect data on economics articles published 25 years ago, in 1981.

The data suggest that article quality often differs greatly from that of the journal 'label'.

**Of course, we therefore
need some reasonably
objective measure of
'quality'.**

One approach

Arguably, although not perfect (self-citations, US bias, fashion, etc), the number of citations to an article is a way to judge an article's importance.

**Assume that total citations are a
rough proxy for excellence**

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I find it is better to publish the best article in the Oxford Bulletin of Economics than all 4 of the worst-4 articles in the equivalent issue of the American Economic Review.

***Perhaps you could turn to
the hard copy of the paper.***

For Policy

**Then what should nations
do?**

My own view

- 1. In the very short-run, put weight on the journal's prestige**
- 2. In the longer-run, put weight on the number of citations to the individual article**

This suggests that we should devise a formula that means the journal prestige 'label' matters only if the article was published very recently.

Thus, it is necessary to weight partly the article and partly the journal.

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This sounds like a convex combination.

One possible suggestion:

'Valuing' a journal article

$$v = w(y)c + [1-w(y)] e(j, r, i)$$

where value v is a convex combination of citations c to the article and the prestige e of the journal

As the years, y , increase:

**the emphasis should switch
from the prestige of the journal
to the number of citations that
the actual article is accruing:**

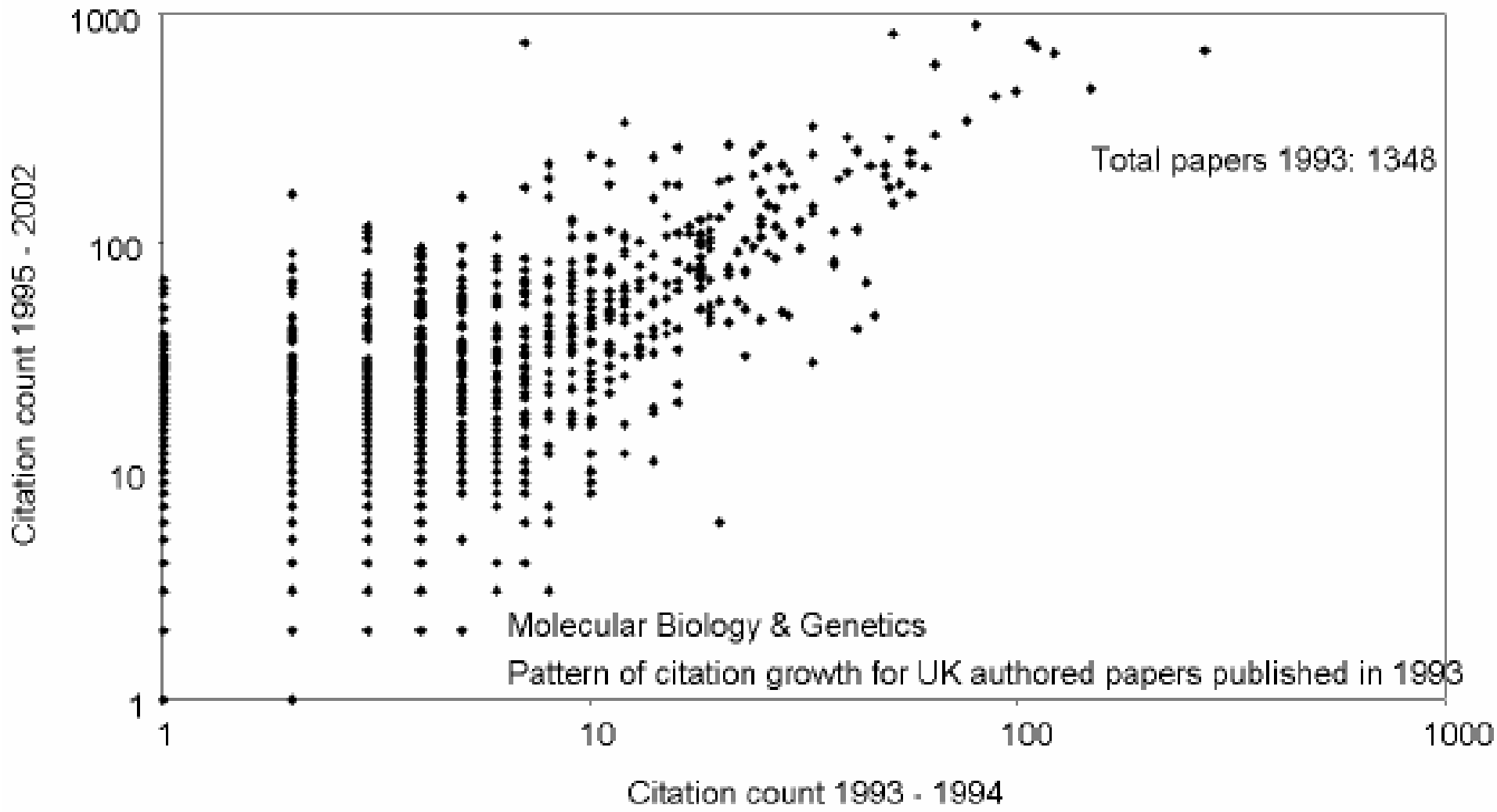
$w(y)$ rises and $1 - w(y)$ shrinks.

Other recent work

A 2005 paper by Jonathan Adams in Scientometrics.

It shows that cites (t) quite closely predict cites (t+8).

**Adams examines papers in
molecular biology and
genetics.**



Summing up the ideas today:

Conclusions

Journals are unreliable.

Elite journals often publish poor papers, and vice versa.

A scientific-funding system needs to recognise this.

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