Reputation, authority and incentives. Or:

How to get rid of the Impact Factor

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Summary

Intended: What to keep of present system and what to change

Turned out to be: Why should we change the current system?

- Journal hierarchy as a replacement for filters
- Solid business model
The current system

Publish or perish: number of publications

Where are you published?

~24,000 scholarly journals (12,000 with IF)
~2.5 million publications/year
60–300 applicants per tenure-track position

Reading publications is impossible!

Hierarchy of journals: Impact Factor
There is no replacement for reading papers!!

As much as one may like to avoid metrics altogether, that Genie is already out of the bottle.
"Not everything that can be counted counts, and not everything that counts can be counted."

Albert Einstein
Show of hands:

- Who knows what the IF is?
- Who uses the IF to pick a journal (rate a candidate, etc.)?
- Who knows how the IF is calculated and from what data?
ISI: Thomson Reuters (2008)

- 50,000 employees
- US$600 million profit/quarter
- Thomson family owns 53%
- $30,000–120,000/year subscription rates
The impact factor

Introduced in 1960's by Eugene Garfield: ISI

IF=5

Articles published in 06/07 were cited an average of 5 times in 08.

Citations

- 2008

Articles

- 2006 and 2007
The impact factor

Journal X IF 2008 =

All citations from Thomson Reuters journals in 2008 to papers in journal X

Number of citable articles published in journal X in 2006/7
Three main categories of problems

- Negotiable
- Irreproducible
- Not mathematically sound
Negotiable

- PLoS Medicine, F 2-11 (8.4)
- Current Biology F from 7 to 11 in 2003
  - Bought by Cell Press in 2001
Not reproducible

- Rockefeller University Press buys their data from TR
- Up to 19% deviation from published records
- Second dataset still not correct
Not mathematically sound

- Left-skewed distributions
- Weak correlation of individual article citation rate with journal IF
So, how could ‘impact’ be measured?

- Where the work is published
  - The IF.
- Citations
  - scholarly, hyperlinks, social bookmarks
- Web usage
  - Publisher platform; 3rd party locations
- Expert ratings
  - F1000; Peer Reviewers; Ed Boards etc
- Community rating & commenting
  - Digging; Commenting; Rating etc
So, how could ‘impact’ be measured?

- Media/blog coverage
  - Which sources are considered the most important?

- Policy development?
  - Who published it?
  - And where do they work? What did they publish before? How impactful are they?

- Who is talking about it?
  - And what authority do they have?

- Who is citing it?
  - And what authority do they have?
How is ‘Impact’ Measured?

“Your article was published in a journal with an Impact Factor of X”
How could Impact be Measured?

Your article:

- Received X citations (de-duped from Google Scholar, Scopus, and Web of Science)
- It was viewed X times, placing it in the top Y% of all articles in this journal/community
- It received X Comments
- It was bookmarked X times in Social Bookmarking sites.
- Experts in your community rated it as X, Y, Z.
- It was discussed on X ‘respected’ blogs
- It appeared in X, Y, Z International News
Authority 3.0 (Michael Jensen, NAP) in ‘The New Metrics of Scholarly Authority’

- Prestige of the publisher (if any).
- Prestige of commenters/users.
- Percentage of a document quoted in other documents.
- Raw links to the document.
- Valued links.
- Obvious attention: discussions in blogspace, comments etc.
- Language in comments: positive, negative, clarified, reinterpreted.
- Quality of author's institutional affiliation(s).
- Significance of author's other work.
- Amount of author's participation in other valued projects.
- Reference network: the significance of all the texts cited.
- Length of time a document has existed.
- Inclusion of a document in lists of "best of," in syllabi, indexes, etc.
- Types of tags assigned to it.
- Authority of the taggers, the authority of the tagging system.
Incentive structure: what is good for scientists is not necessarily good for science.

How could we align the incentive structure?

Discuss…