



THE FUTURE OF PEER REVIEW

AND WHY RESEARCHERS ARE LIKE PENGUINS

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WHY AM I HERE?

REVISED A multi-disciplinary perspective on emergent and future innovations in peer review [version 3; referees: 2 approved]

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An interesting experience in collaborative authoring and review in itself..

Have a pretty good peer review and publishing history for career stage.

Executive Editor for OA journal, Geoscience Communication.

And also Flaminio hasn't banned me from his events. Yet.

WHAT DID WE DO?

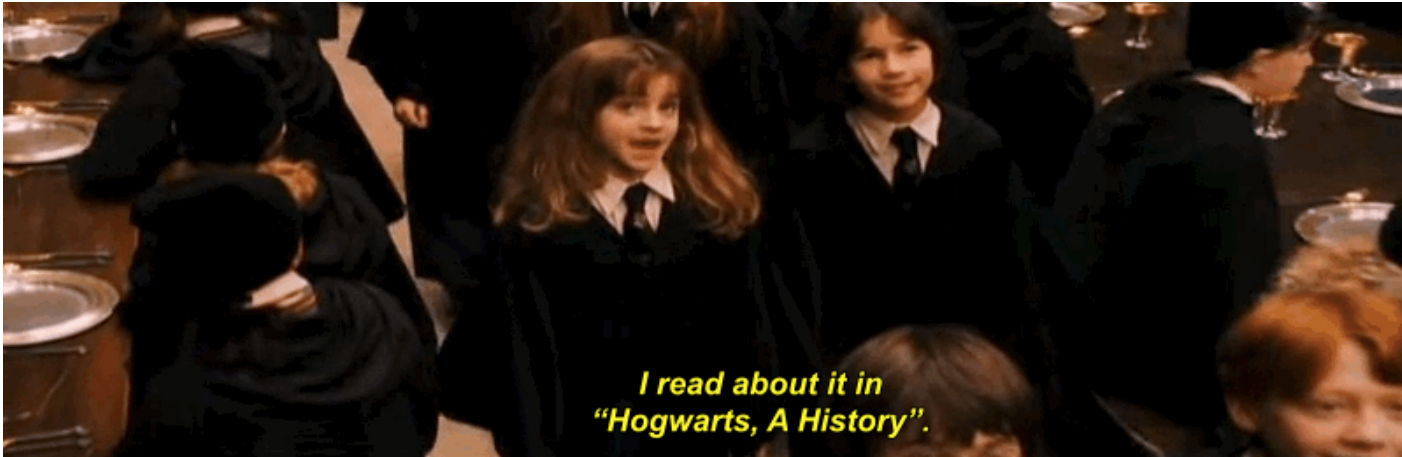
- It all began at the Mozilla Global Sprint in 2016...
- Open to anyone to contribute via Overleaf.
- Created a 42 page behemoth.
 - History, present state, and future of PR.
- We explored a range of services and their potential parallels with PR.
- Inadvertently ended up modelling a 'hybrid PR and publishing' platform.



Actual footage from the sprint

SOME QUESTIONS FOR YOU ALL

- What do you think of when you hear “peer reviewed”?
- How old do you think “peer review” is?
- Do you see peer review as a single, static process?
- Do you trust work more if it has been peer reviewed?
- How often do you read peer review reports for papers?
- Have you ever been frustrated by peer review?



TO DIVINE THE FUTURE OF PEER REVIEW...

...YOU MUST FIRST UNDERSTAND ITS HISTORY

CHEERS, FLAMINIO...

Ah ah

I am finishing mine. I added a bit of historical background

10h

Pivotal moments in the history of peer review have occurred when the public status of science was being negotiated

Current attempts to reimagine peer review rightly debate the psychology of bias, the problem of objectivity, and the ability to gauge reliability and importance, but they rarely consider the multilayered history of this institution. Peer review did not develop simply out of scientists' need to trust one another's research. It was also a response to political demands for public accountability. To understand that other practices of scientific judgement were once in place ought to be a part of any responsible attempt to chart a future path. The imagined functions of this institution are in flux, but they were never as fixed as many believe.

Alex Csiszar (2016) Troubled from the start. *Nature*, 532, 306-308

PAST NOTES
How long does academic review take on average?
has evolved over 300 years

- 1665 Henry Oldenburg, secretary of the Royal Society in London, creates the *Philosophical Transactions* to simplify his correspondence. He uses no referee system.
- 1699 France's Royal Academy of Sciences is given power by Louis XIV (dictated centre, with academy members) to report on and approve books for publication and bypass the royal censors.
- 1752 After violent sales of the *Philosophical Transactions*, the Royal Society establishes a committee to vote on what to publish.
- 1831 Cambridge professor William Whewell convinces the Royal Society to commission public reports on manuscripts. Might referees increase the visibility of science?
- 1833 By now the reports have become private and anonymous.
- 1892 A pamphlet 'On the Organization of Science' published in London by 'A Free Lance' kick-starts a movement to standardize the selection and distribution of scientific papers. Might referees be guardians of the literature?
- 1892 A paper surfaces that was rejected by a Royal Society referee in 1845, outlining the kinetic theory of gases more than a decade before James Clerk Maxwell's famous paper. Might referee systems be fundamentally flawed?
- 1968 British physicist John Ziman describes the referee as "the lynchpin about which the whole business of Science is pivoted". Outside the United Kingdom and North America, many editors and scientists remain largely unconvinced.
- 1973 External refereeing becomes a requirement for publication in *Nature*.
- 1991 An e-mail/FTP server at xxx.lanl.gov for freely sharing unreviewed physics preprints goes live. Later relocated to the web at arXiv.org, it becomes a touchstone for discussions about the end of peer-reviewed journals.
- 2006 PLoS ONE launches as an open access journal that eschews "importance" as a factor in peer review.
- 2007-11 *EMBO Journal*, the *Frontiers* series and *BMJ Open*, among other journals, experiment with open peer review, publishing reviewers' names or notes alongside papers.

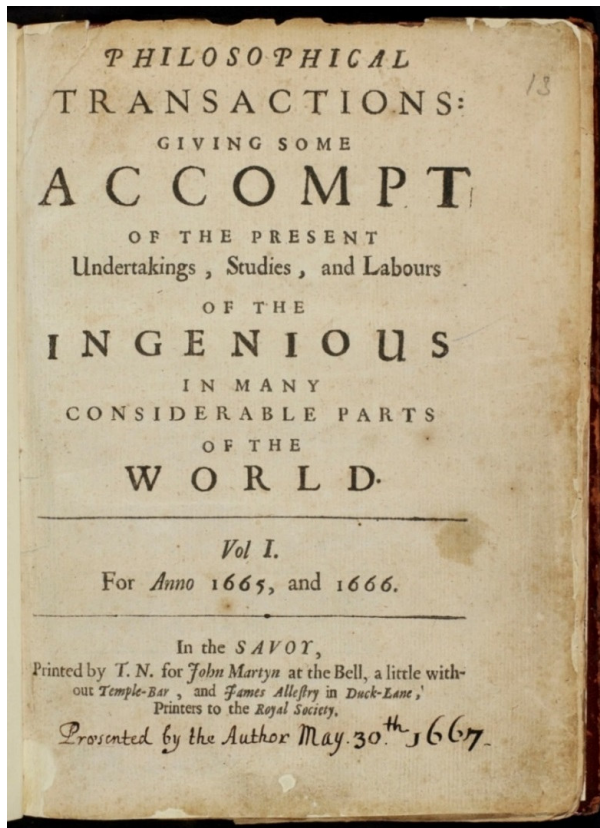
PEERE "New Frontiers of Peer Review"
www.peere.org
info@peere.org

PEERE training school, Split 2018

cost
EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

Going to be fun reviewing your paper now... #Reviewer2

1665: PHILOSOPHICAL TRANSACTIONS

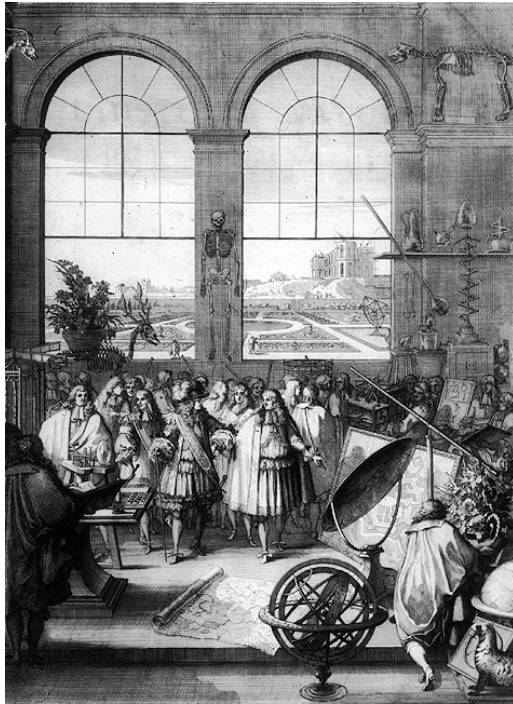


Henry Oldenburg – The first Editor?

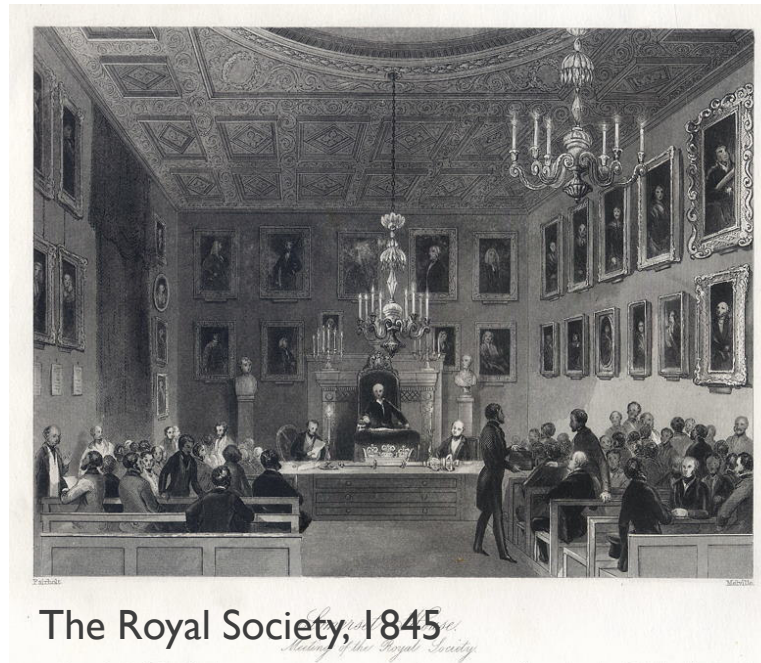
“Although the beginnings of “peer review” are frequently associated with the Royal Society of London when it took over official responsibility for the Philosophical Transactions in 1752, antecedents of peer review practices go back to the 17th century.”

- David Kronick (1990)

SOCIETIES AND ACADEMIES AS COMMUNITIES



Académie royale des sciences,
c.1671



The Royal Society, 1845

The formalised practice that we now call “peer review” actually only emerged in the early 19th century.

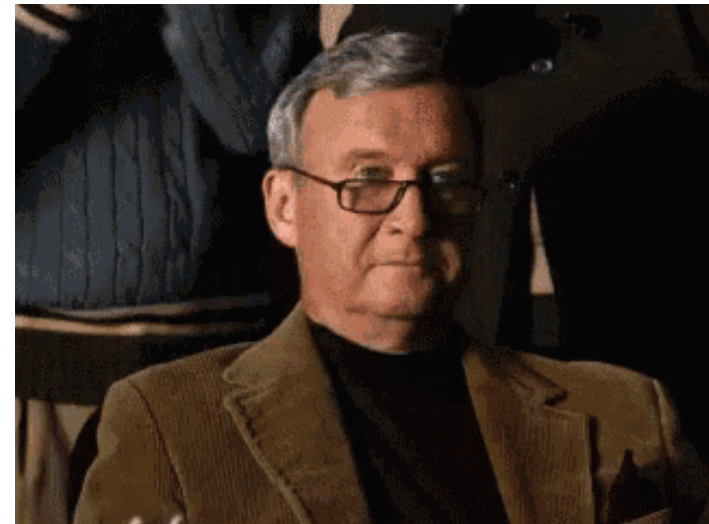
Learned societies were absolutely key in this.

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<https://www.timeshighereducation.com/features/peer-review-not-old-you-might-think>

EMERGENCE OF PROTO-PEER REVIEW

- Editorial committees had collective responsibility.
- Referee reports by Fellows of the Society – based on subject-specific expertise.
- Key tasks:
 - Eliminating obvious errors and oversights.
 - Improving the rhetorical style, and argumentation of the article.
 - **NOT** ‘gate-keeping’.
- Peer review was more of a ‘gentlemanly discussion’.

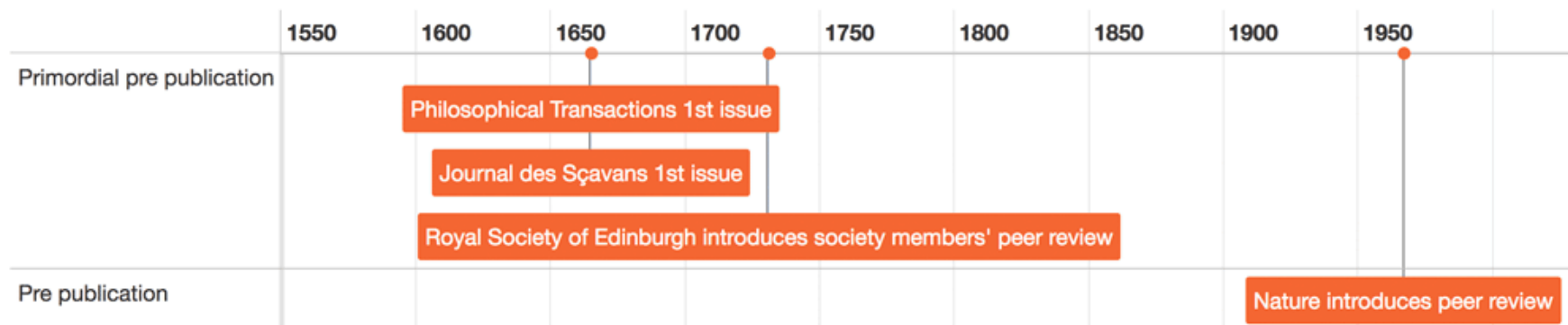


<https://www.ncbi.nlm.nih.gov/pubmed/2406469>

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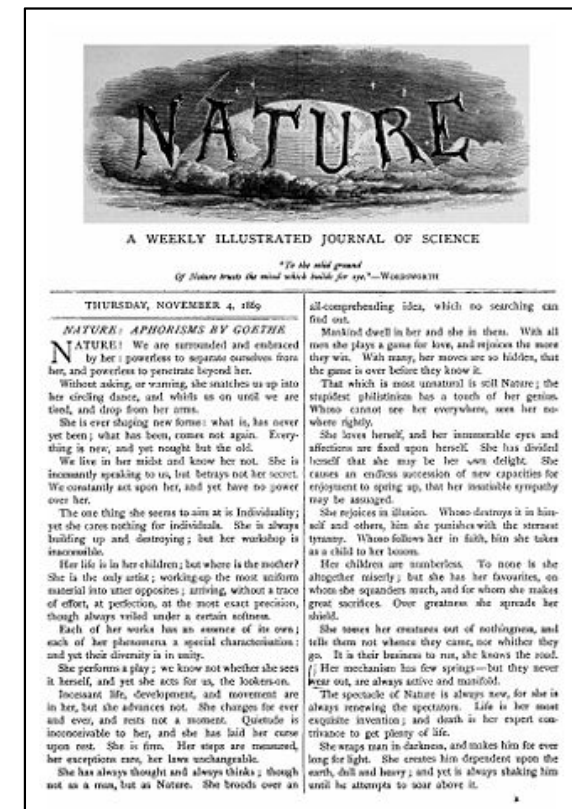
THE 19TH CENTURY REVOLUTION: THE FIRST WAVE

- Originality of research key as societies sought public interest.
- Self-authorship dominant. Collaboration non-existent.
- Origin of “peer review” as we now know it.
- Between 1,000-2,000 scientific periodicals.
 - Nature launched around 1869.



THE 20TH CENTURY EXPLOSION

- English becomes the dominant language of science (yay colonialism).
- Huge increase in the number of papers being published.
- Industry begins to get interested (££).
 - Typewriters (1890s), photocopiers (1959).
- Professional services become involved (££).
 - Editorial, publishing.
- Use of formalised peer review becomes more widespread.
- Around 21,000 peer reviewed journals (Dalen & Klamer, 2005).
 - Geographic expansion and specialisation of journals.



EINSTEIN: HATING ON REVIEWER 2 BEFORE IT WAS COOL

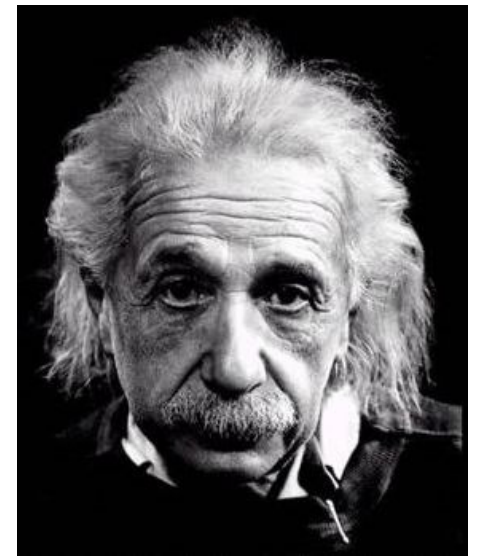
We (Mr. Rosen and I) had sent you our manuscript for publication and had not authorised you to show it to specialists before it is printed. I see no reason to address the – in any case erroneous – comments of your anonymous expert. On the basis of this incident I prefer to publish the paper elsewhere.

<https://theconversation.com/hate-the-peer-review-process-einstein-did-too-27405>

“According to the physicist and historian of science Daniel Kennefick, it may well be that only a single paper of Einstein’s was ever subject to peer review.”

<http://michaelnielsen.org/blog/three-myths-about-scientific-peer-review/>

Based on a paper on gravitational waves submitted to Physical Review in 1935.



THE NATURE OF THE BEAST

1966 John Maddox is appointed new Editor

1967 A formal peer-review system

MINOR POINTS

1. The paper is not of good enough quality for the illustrations that have to accompany many modern scientific papers. This deters a number of people from sending their stuff in.
2. Is it possible to get our price down to anything near competitive with Science? Or is Science subsidised, apart from the extra revenue from its greatly larger circulation and higher advertisement rate?
3. Science benefits from running its editorial board and editorial staff on the American pattern, which gives the impression of being more professionally produced than Nature.
4. The quality of production of Science is no better than Nature, but it looks more up to date. Nature retains a very Victorian air.

Maddox's first job was to tackle the backlog of 2,300 unpublished manuscripts. Some scientists complained that during Brimble's editorship the choice of printworthy pieces seemed "arbitrary" and "not up to standard" and that "valuable material was missed" (pictured are minor points from roundtable discussions with scientists. Note point 4: "Nature retains a very Victorian air"). The receipt date of manuscripts was not recorded.

The 5,001st issue in 1965 had thirty Letters to the Editor detailing scientific discoveries, in addition to two sections of Articles. Legend has it that the system used to track papers submitted by scientists under Brimble was a particularly wide windowsill, with manuscripts piled high by month — a visible 'histogram' of how much had still to be done. The only solution was a comprehensive refereeing system, which also meant that the referees themselves had to be refereed. It was eighteen months before the backlog of manuscripts was cleared. Image from archives of Macmillan Publishers.

1969 100 years of Nature

Nature did not implement any system of formal peer review until 1967, almost a century after it launched.

I published a few things in Nature when I was a PhD student [in the 1960s] and almost anything could get into it at the time, if it wasn't actually wrong. Refereeing was pretty erratic and I think they took more notice of where it came from than the content.

- Walter Gratzer, 1966

http://www.nature.com/nature/history/timeline_1960s.html

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4528400/>

PEER REVIEW EVOLVES

- The practice of editorial peer review did not become general until sometime after World War II.
- These procedures did not spread in an orderly way.
- Institutionalization of the process took place mostly in the 20th century.
 - To handle new problems in the numbers of articles submitted.
 - To meet the demands for expert authority and objectivity in an increasingly specialised world.
- Becomes synonymised with 'value'.
 - Commercialist opportunities arise.

<http://jamanetwork.com/journals/jama/article-abstract/380937>



PROFESSIONAL JOBS SUMMITS RANKINGS STI

Peer review: not as old as you might think

Peer review is often thought of as ancient and unchanging, but it is neither – and it shouldn't be treated as a sacred cow, argues Aileen Fyfe

June 25, 2015



By [Aileen Fyfe](#)
Twitter: [@AileenFyfe](#)



<https://www.timeshighereducation.com/features/peer-review-not-old-you-might-think>

WHAT CAN WE LEARN FROM HISTORY?

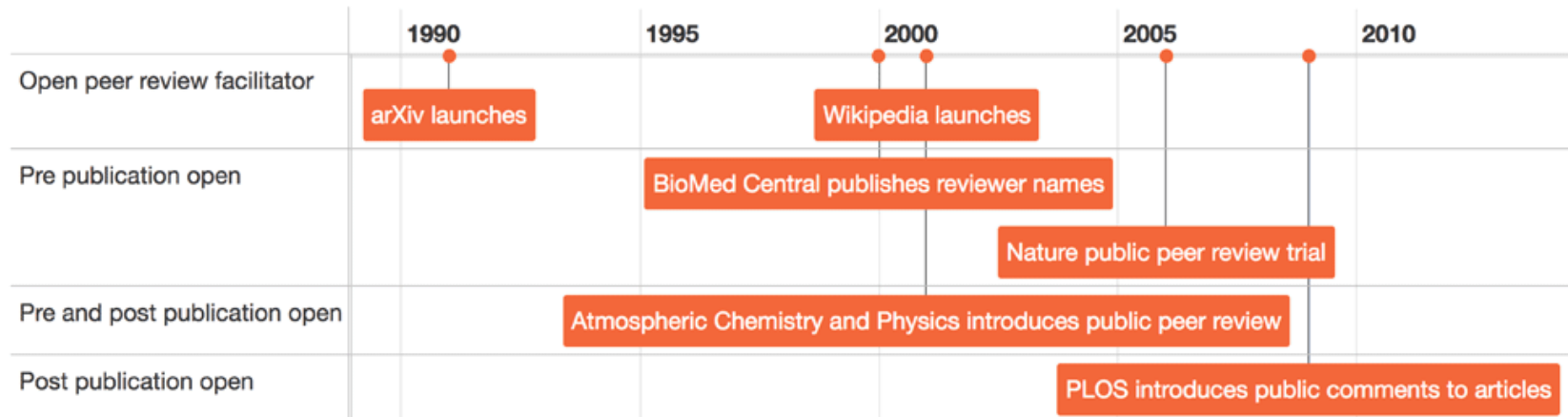
- The practices of peer review (and publishing) are not set in stone.
- They began with learned societies – they matter!
 - Priority was serving communities, not shareholders.
- Peer review is a very diverse process. More than you might think.
- Key questions:
 - Should practices developed for a print era be the same in a digital world?
 - Is the **ideal** of peer review still matched by the **process**?



"The Present is the Key to the Past is the Key to the Future". James Hutton.

LATE 20TH CENTURY: THE SECOND WAVE

Aka the time when people began to realise that the Web exists...



At one extreme were enthusiasts for electronic preprints, who regard them not as scientific papers in evolution but as near enough finished articles. To these respondents, the current long process of peer review and paper publication is detrimental to science and the public health: any way of getting scientific advances into the public domain fast is worth supporting.

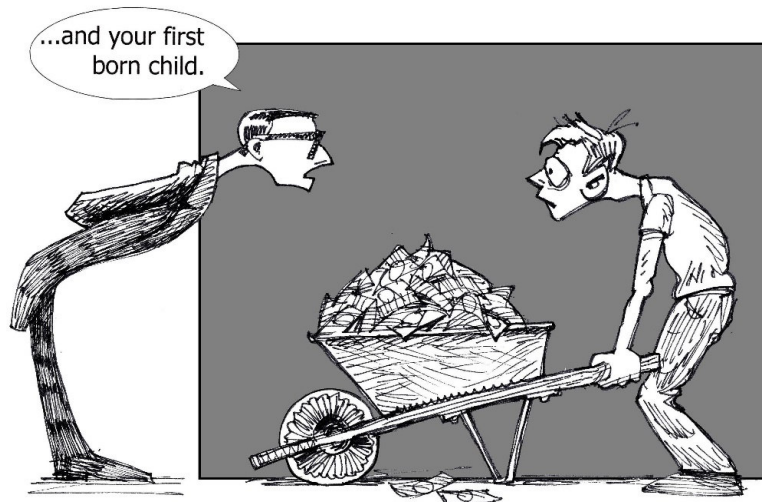
- Tony Delamothe (1998)

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ENTER THE ARXIV

- *“In the physical sciences, preprints have been de rigueur for a quarter of a century—the majority of research across a wide spectrum of disciplines is first posted on arXiv as non-peer-reviewed manuscripts.”*
- Paul Ginsparg, 2016.
- *“Thus, more than 100,000 research manuscripts annually on arXiv are open to comments from colleagues, which fosters collaboration and helps scientists to improve manuscripts before they are submitted to a peer-reviewed journal.”*

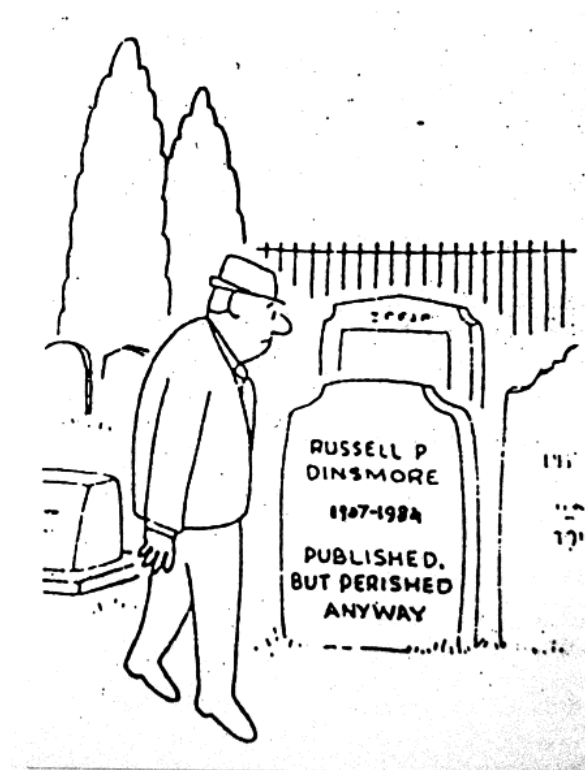




WHERE ARE WE NOW?

WELCOME TO THE WORLD OF BIG PUBLISHING

<http://whyopenresearch.org/costs>



<http://cassandralegacy.blogspot.co.at/2014/08/the-decline-of-science-we-are.html>

PEER REVIEW MODELS ARE QUITE DIVERSE

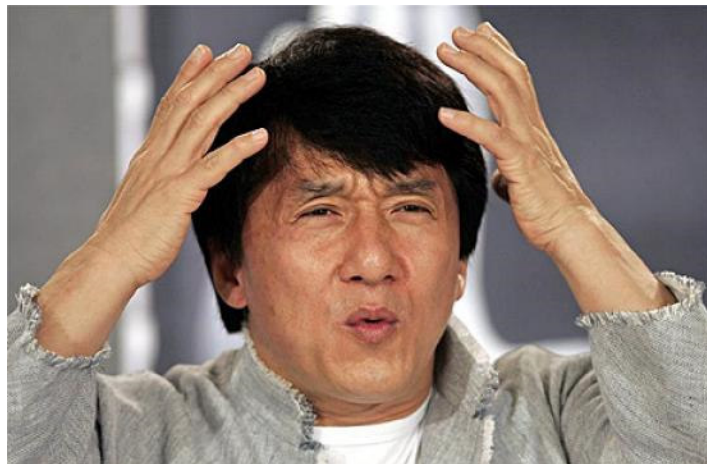
- There is no such singular entity as ‘peer review’
- Single blind
- Double blind
- TRIPLE blind
 - Mostly revolved around reciprocal anonymity
- Open peer review. How many definitions are there for this alone?



I 22, Jon, according to my systematic review. Thanks for asking.

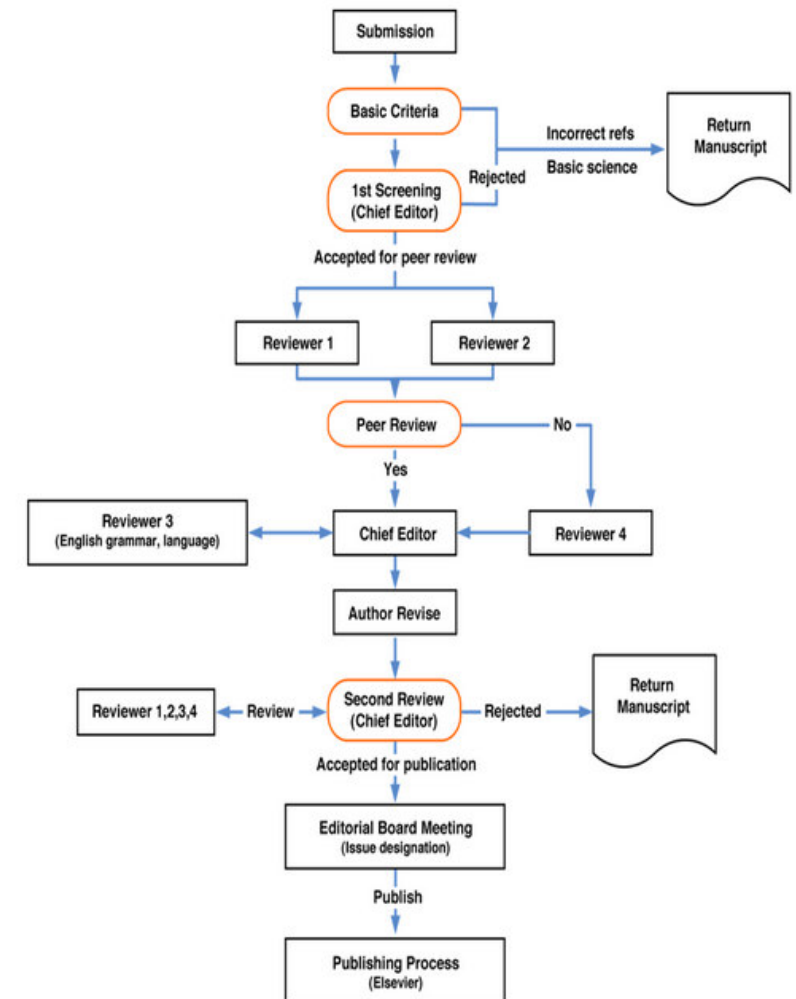
COMPLICATIONS THROUGH COMMERCIALISM

- Peer review gains status as a form of academic capital
- Peer reviewed papers equated with 'prestige'
- And a nice method for scholarly publishers to develop their brands



Peer Review Guidelines at Elsevier

<http://www.elsevier.com/reviewers/reviewer-guidelines>



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PEER REVIEW IS A SACRED COW (TO SLAY?)

- Publisher-driven.
- Anonymous.
- Closed and exclusive.
- Biased and subjective.
- Non-accountable.
- Time-consuming.
- Expensive (~\$2bn/year).

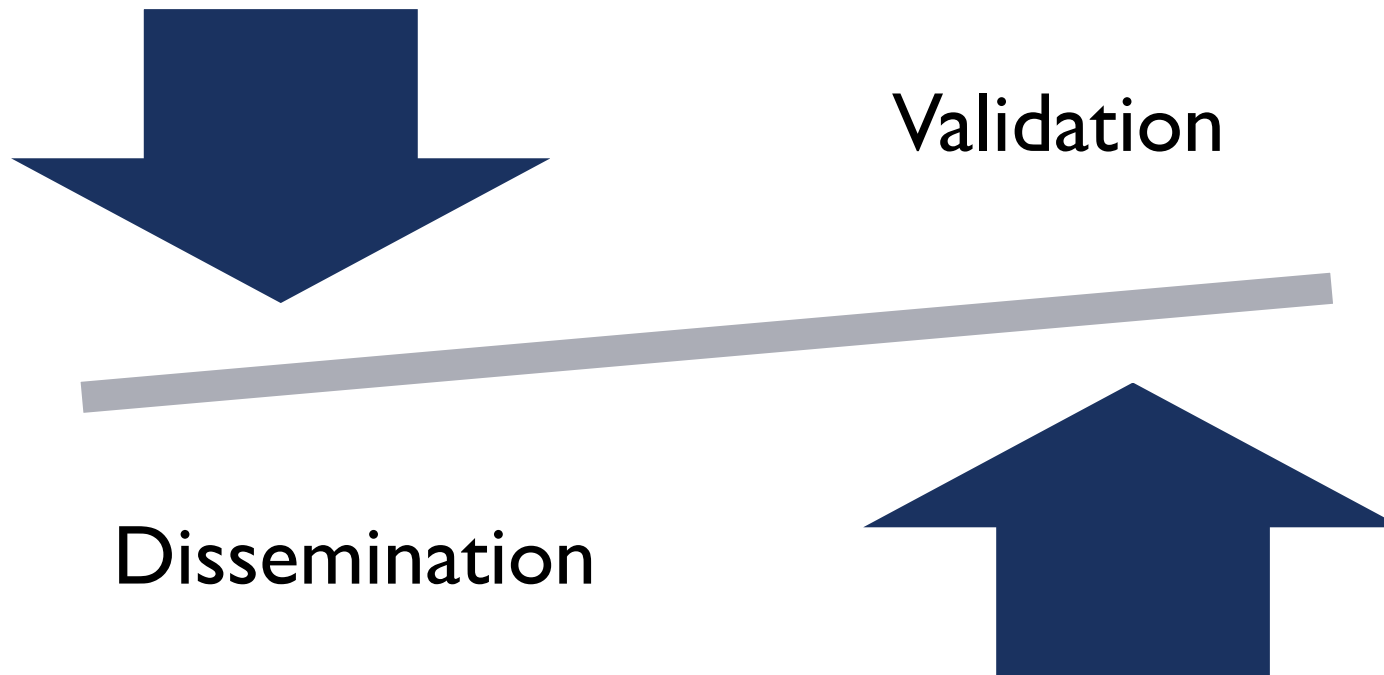


= Higher Quality?

<https://www.timeshighereducation.com/features/peer-review-not-old-you-might-think>

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FINDING A BALANCE



Think about this both as a commercial publisher and as a researcher, and the tensions this creates.

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OUR CURRENT SCHOLARLY PUBLISHING SYSTEM IS DIRE

“There is a nearly unanimous perception among molecular and cell biologists that publishing has become the most discouraging and frustrating part of research. The trepidation level peaks at each stage of the process: the editorial stage where rejection without review has become the norm; the review stage where reviewers frequently do not fully understand the work or its implications; and the revision stage, when authors shoulder the disproportionate effort to revise the paper per reviewers' demands.”



Peer review: A necessary evil, a hoop to jump through.

<http://embor.embopress.org/content/16/12/1588>

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PEER REVIEW AS PARODY

 Pinned Tweet



ShitMyReviewersSay @YourPaperSucks · 13 Nov 2014


"I am afraid this manuscript may contribute not so much towards the field's advancement as much as toward its eventual demise."

 21  861  1.8K 



ShitMyReviewersSay @YourPaperSucks · 17h

"This paper is absolutely ridiculous. It shouldn't be published anywhere and the author should not be encouraged to revise"

 8  31  241 

<https://twitter.com/YourPaperSucks>

PEER REVIEW IN A STATE OF CRISIS?

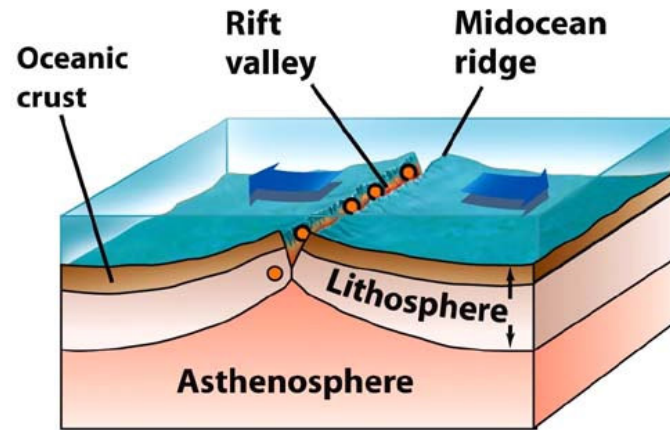
Peer review is.. *“slow, expensive, profligate of academic time, highly subjective, something of a lottery, prone to bias, and easily abused.”*

- Richard Smith, former EiC of the BMJ

“Pre-publication peer review is no longer necessary because the power of the internet now allows instant publication of all results without requiring assessments of their novelty or impact in the field.”

NO TRANSPARENCY NO CONSENSUS





DIVERGENT BOUNDARY

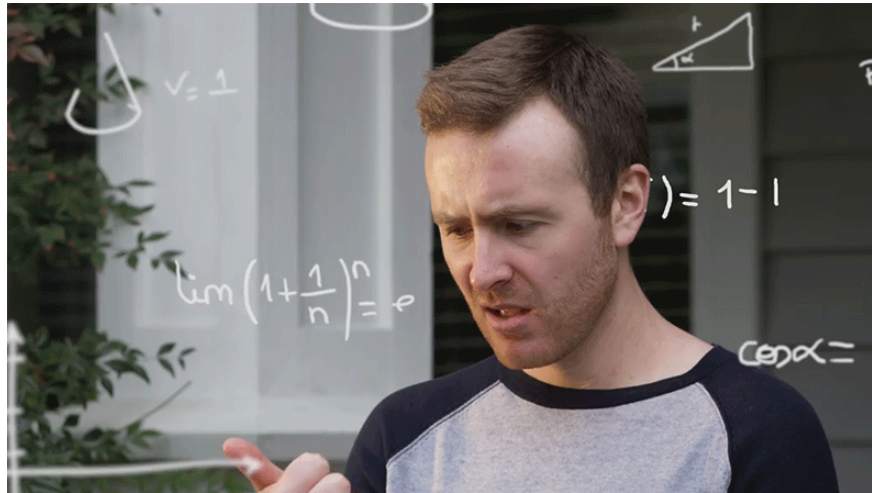
THE DIVERGENCE BETWEEN THE *IDEOLOGY* AND THE *PROCESS*

JONATHAN DUGAN TAUGHT ME THIS, AND IT HELPS EVERYTHING TO MAKE SENSE

Everything has geological analogues..

NO WONDER PUBLIC TRUST IN SCIENCE IS SO PLUMMETING

- *Reader:* “Why should we trust this scientific article?”
- *Scientist:* “Because it has been published in a scientific journal, and has been peer reviewed.”
- *Reader:* “What does that mean?”
- *Scientist:* “Specialists in the field vetted the information to see if it is scientifically rigorous.”
- *Reader:* “Which specialists? How many of them?”
- *Scientist:* “We don’t know. Maybe 2. Maybe not.”
- *Reader:* “Can we see what they wrote?”
- *Scientist:* “No.”
- *Reader:* “How did you handle bias and conflicts of interest?”
- *Scientist:* “I don’t know. We also did not review the code or the data, and the article is paywalled. But trust us.”



SO WHAT PEOPLE CALL A ,GOLDEN STANDARD' IS NON-TRANSPARENT AND COMPLETELY UNVERIFIABLE.

THIS IS THE SCIENTIFIC EQUIVALENT OF BULLSHIT.

PEER REVIEW: SURPRISINGLY HUMAN

“Social influence, bias and herding are also important factors in the peer review process that further compound the problem of unpredictability in complex networks.”

<http://embor.embopress.org/content/16/12/1588>

“Every scientist has a story (or ten) about how they were poorly treated by peer review – the important paper that was unfairly rejected, or the silly editor who ignored their sage advice as a referee. Despite this, many strongly presume that the system works “pretty well”, overall.”

<http://michaelnielsen.org/blog/three-myths-about-scientific-peer-review/>



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WHY THE RESISTANCE TO CHANGE?

- Peer review has become synonymous with quality.
 - Despite the overwhelming lack of evidence supporting this.
 - But it defines *everything* in academia.
- The myth that journals and peer review belong together.
- The myth that “it has always been this way”.
- An industry that relies on perpetuating these myths.



"Yes, the planet got destroyed. But for a beautiful moment in time we created a lot of value for shareholders."

INERTIA AND PENGUINS

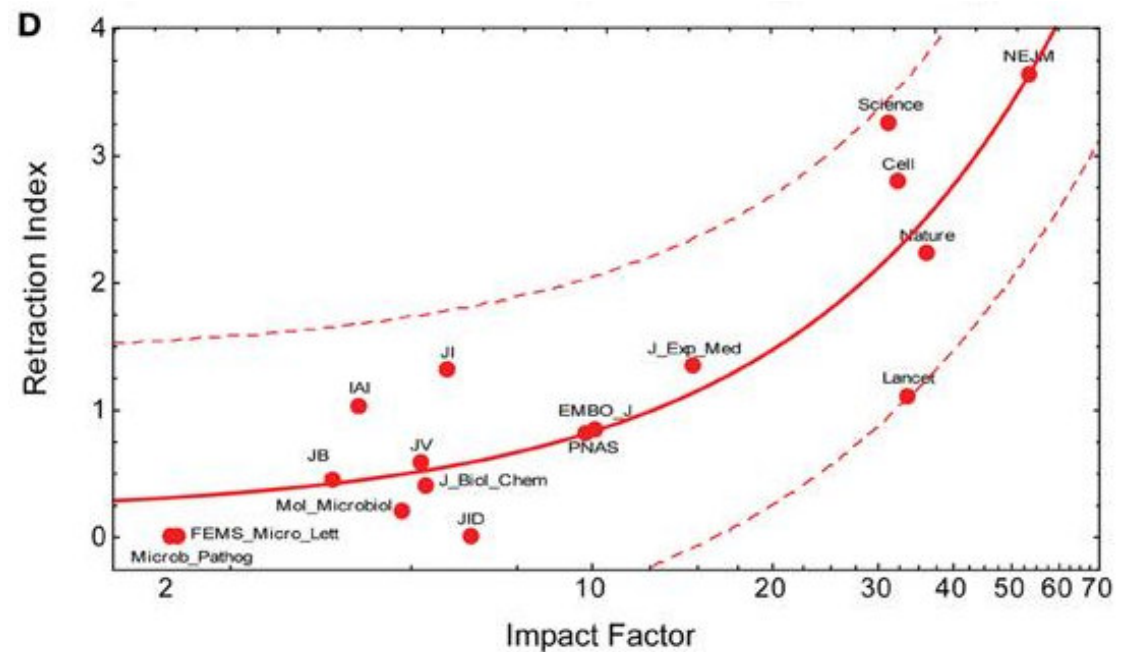


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PEER REVIEW AT GLAM JOURNALS

- Researchers are all guilty of “glam-humping”.
- Impact factors mean very, very little.
 - About research.
 - And researchers.
- Except the higher it is, the more likely it is that you committed fraud.
- **If you use the impact factor for anything other than it's intended purpose, you are statistically illiterate and should have all of your research retracted.**

<http://www.nature.com/news/why-high-profile-journals-have-more-retractions-1.15951>



<http://journal.frontiersin.org/article/10.3389/fnhum.2013.00291/full>

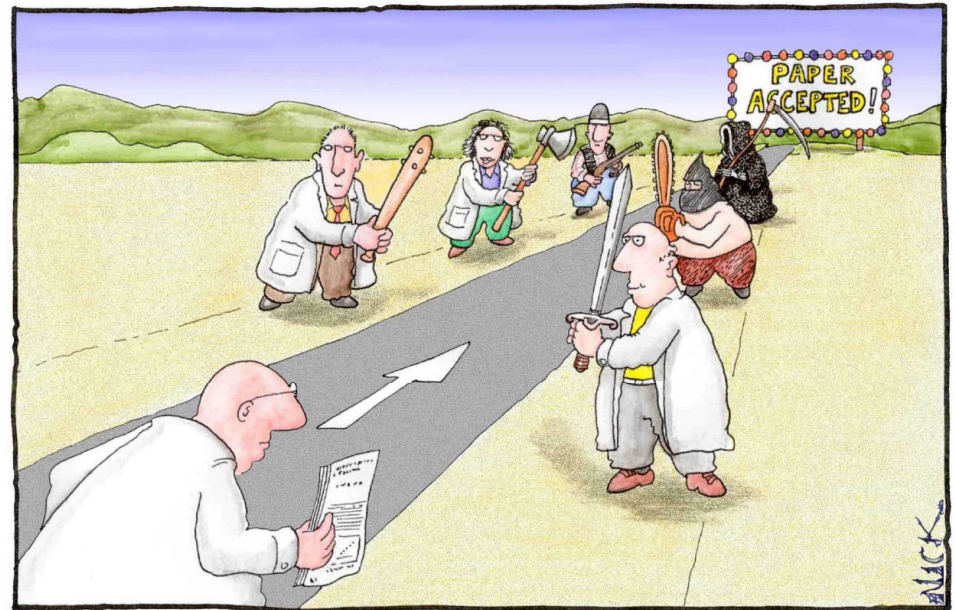
OPEN ACCESS HAS NOTHING TO DO WITH PEER REVIEW?

- But OA publishers were some of the first to experiment with peer review.
- PLOS ONE – megajournal with ‘objective peer review’ (2006).
 - Publishes “**scientifically rigorous research regardless of novelty**”.
- Frontiers – OA journal series with “interactive collaborative peer review” (2007).
 - “Direct online dialogue, enabling quick iterations and facilitating consensus”.
- eLife – ‘Takes the pain out of peer review’ (2012).



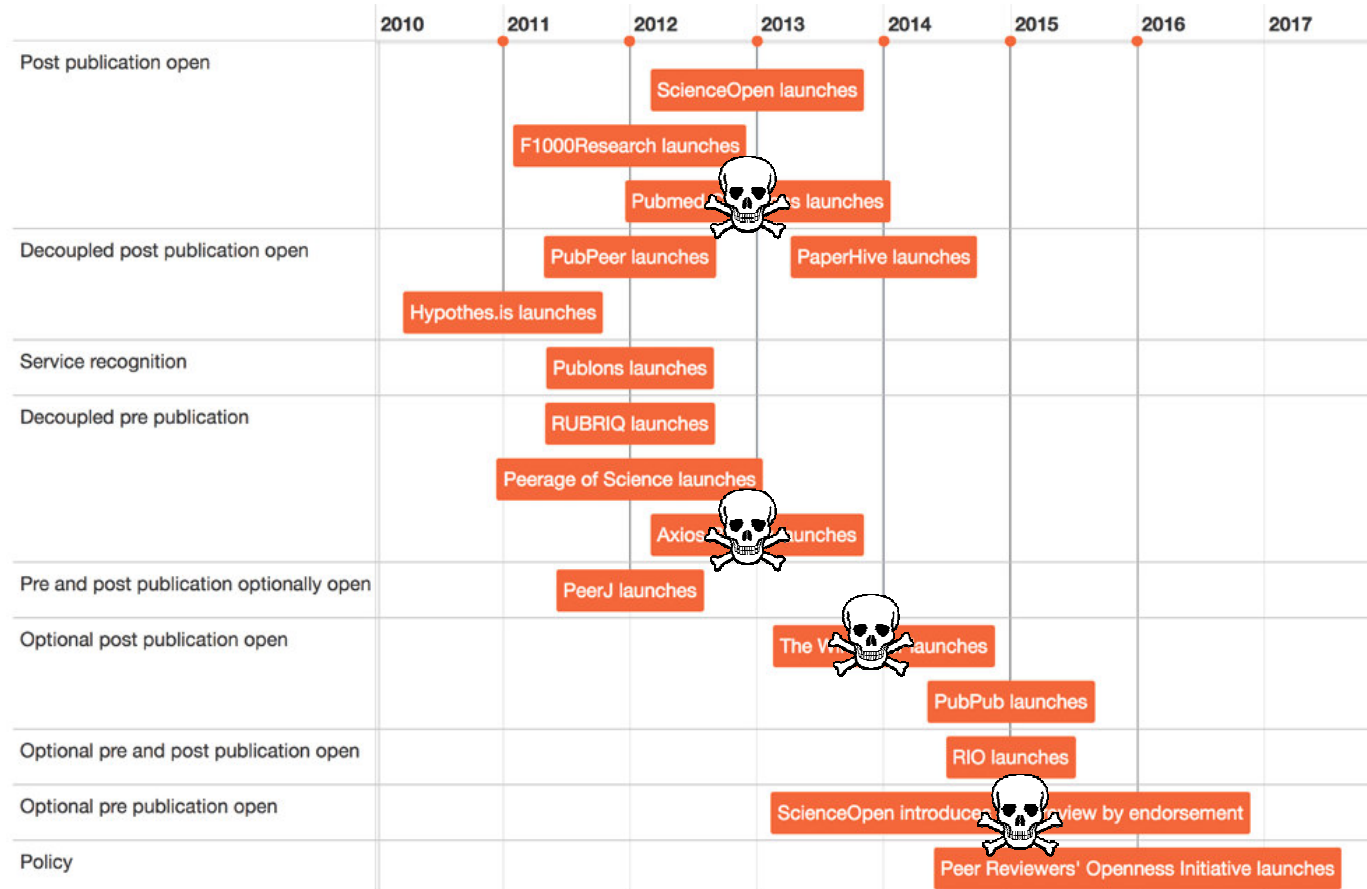
BUT...REALISM VERSUS RADICALISM

- **We really don't know that much about peer review.**
 - Many highly-opinionated editorials.
 - Many anecdotal.
 - Many small, population-level studies.
- Can we really say anything about the reliability of peer review?
- We know that the process *must* exist in scholarly communication in some form.
 - But what form should that take?



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

THE THIRD WAVE



People realise that the Web is actually pretty powerful.

Most new tools developed around a journal-based system. Therefore depend on publishers for sustenance.

Very little thought generally into either long-term sustainability or the social aspects governing PR practices.

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PUBLISH FIRST, PERISH LATER? (CATCHING UP TO 1991)

- F1000 Research – make papers (preprints) available first, then invite post-publication peer review later.
 - Takes advantage of version control.
 - Continuous peer review.
 - Open commenting.
- PubPeer, PaperHive, ScienceOpen.
- Overlay journals – a gamble?
- Dozens of new preprint platforms launched.
 - And new services around them.
 - Mostly community-governed.



"It's publish or perish, and he hasn't published."

"I don't mind your thinking slowly. I mind your publishing faster than you can think."

(The Nobel Laureates physicist Wolfgang Pauli)



THE PREPRINT REVOLUTION (AGAIN)

"If preprints should attain the dominant role they have in physics, publishing papers in journals may remain attractive only in journals that add real value to the scientific communication process."

- Bernd Pulverer (2016)

It only took 27 years..

<http://emboj.embopress.org/content/early/2016/12/01/emboj.201670030>



Graham Coop

@Graham_Coop

Follow



Left comment indicating that I regard [@biorxivpreprint](#) as my final version of genetic draft response, wont "publish"



Does linked selection explain the narrow range of genetic d...

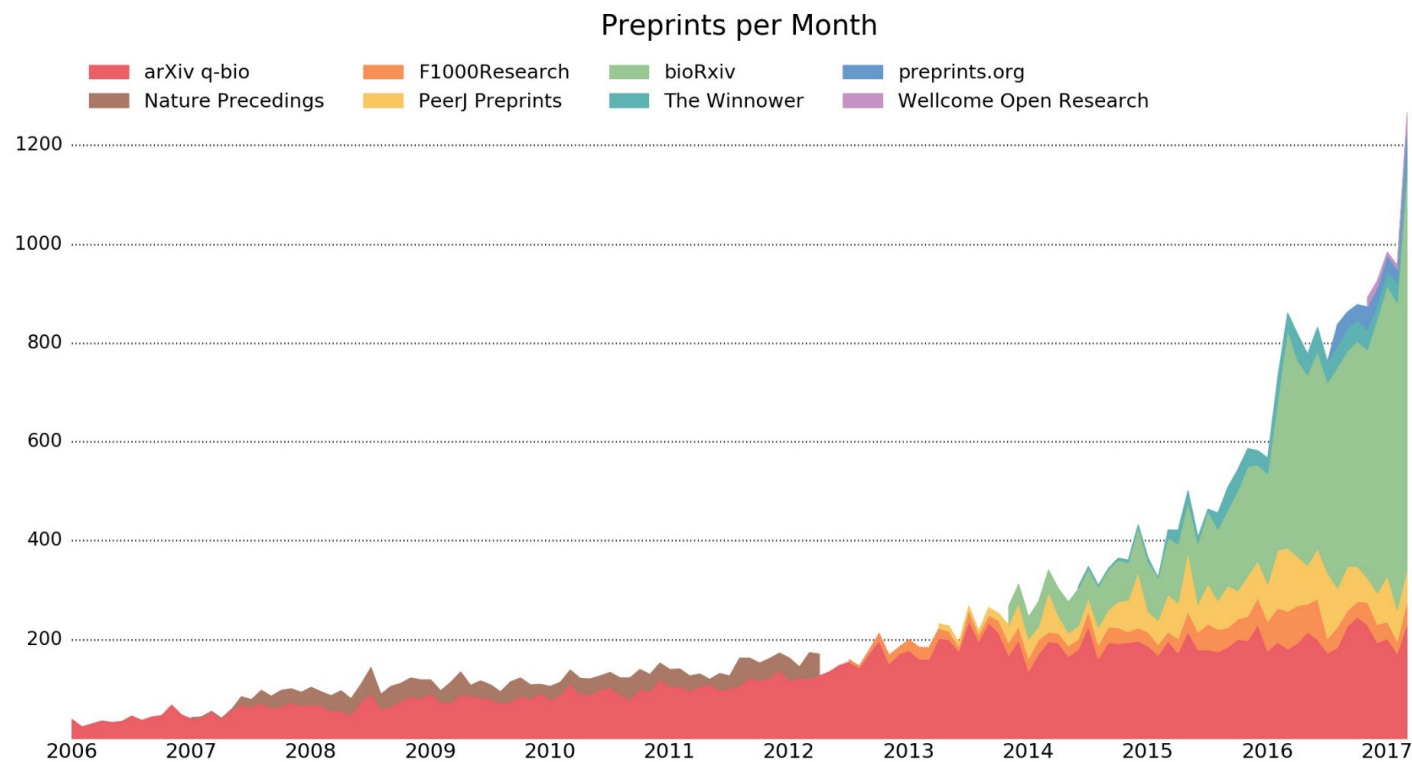
The relatively narrow range of genetic polymorphism levels across species has been a major source of debate since the inception of molecular population genetics. Recently Corbett-Detig et al fo...

[biorxiv.org](#)

2:49 AM - 13 Jan 2017

https://twitter.com/Graham_Coop/status/819738131612123137

ACCELERATED SCIENCE

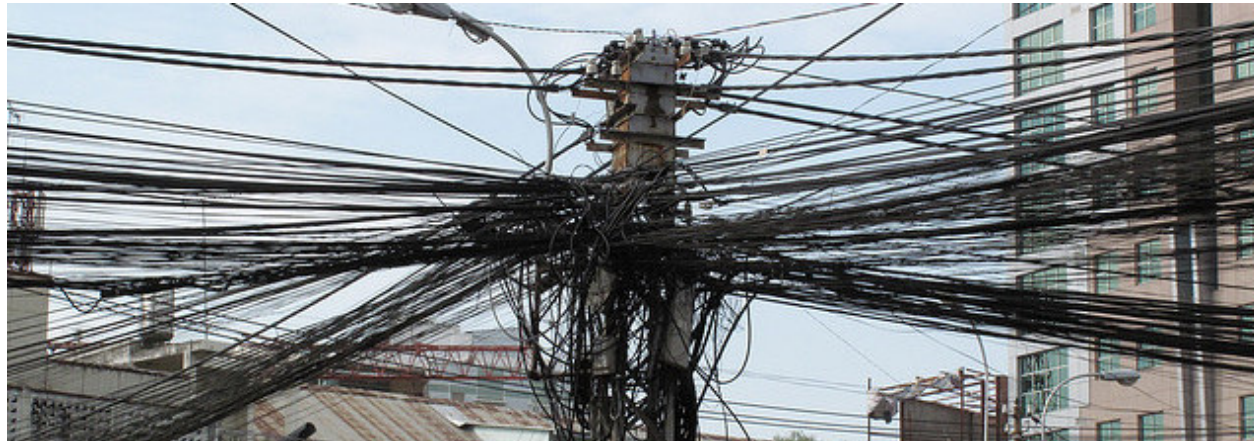


Credit: Jordan Anaya

<https://www.nature.com/news/heavyweight-funders-back-central-site-for-life-sciences-preprints-1.21466>

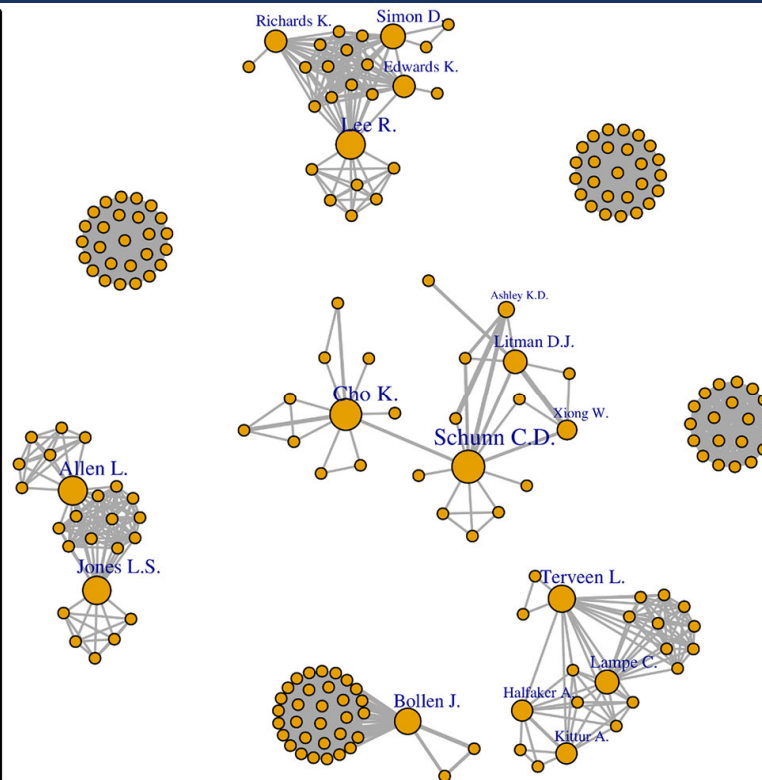
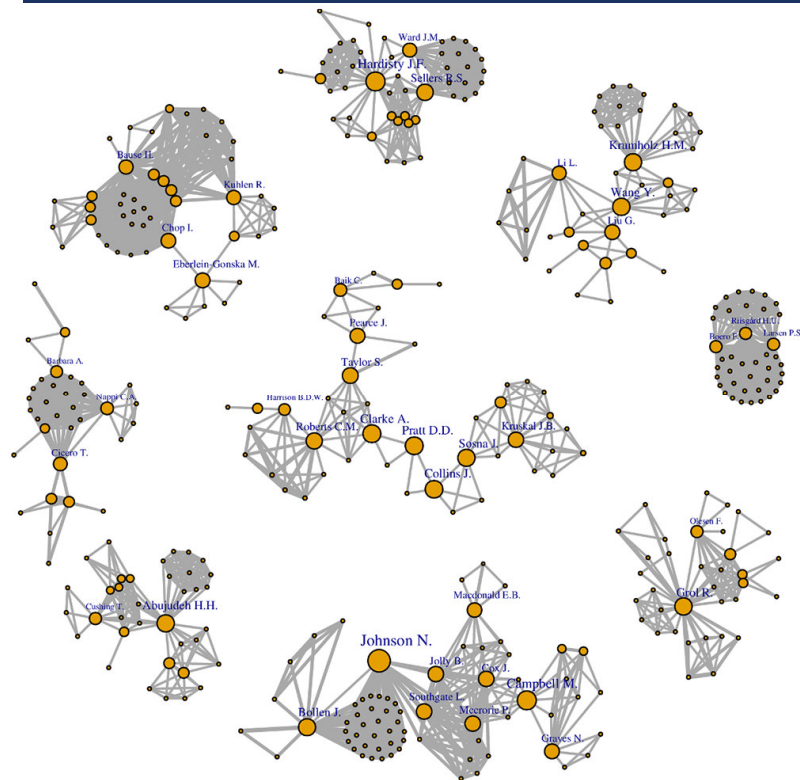
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THE NETWORKED 21ST CENTURY



Everywhere we are using networks to evaluate information on the Web. Why not in science? Use the power of professional networks to evaluate scientific results.

WHAT IS BEING DONE ABOUT THE KNOWLEDGE GAP?



- Lots of pretty awesome research.
- That reveal the different dimensions of dysfunction and bias.

IT FEELS LIKE WE'RE TRYING TO FORCE A CARTHORSE TO TROT FASTER, WHILE IGNORING THE JET-POWERED CAR WE HAVE INSTEAD.

A 19TH CENTURY PROCESS APPLIED TO A 17TH CENTURY COMMUNICATION FORMAT



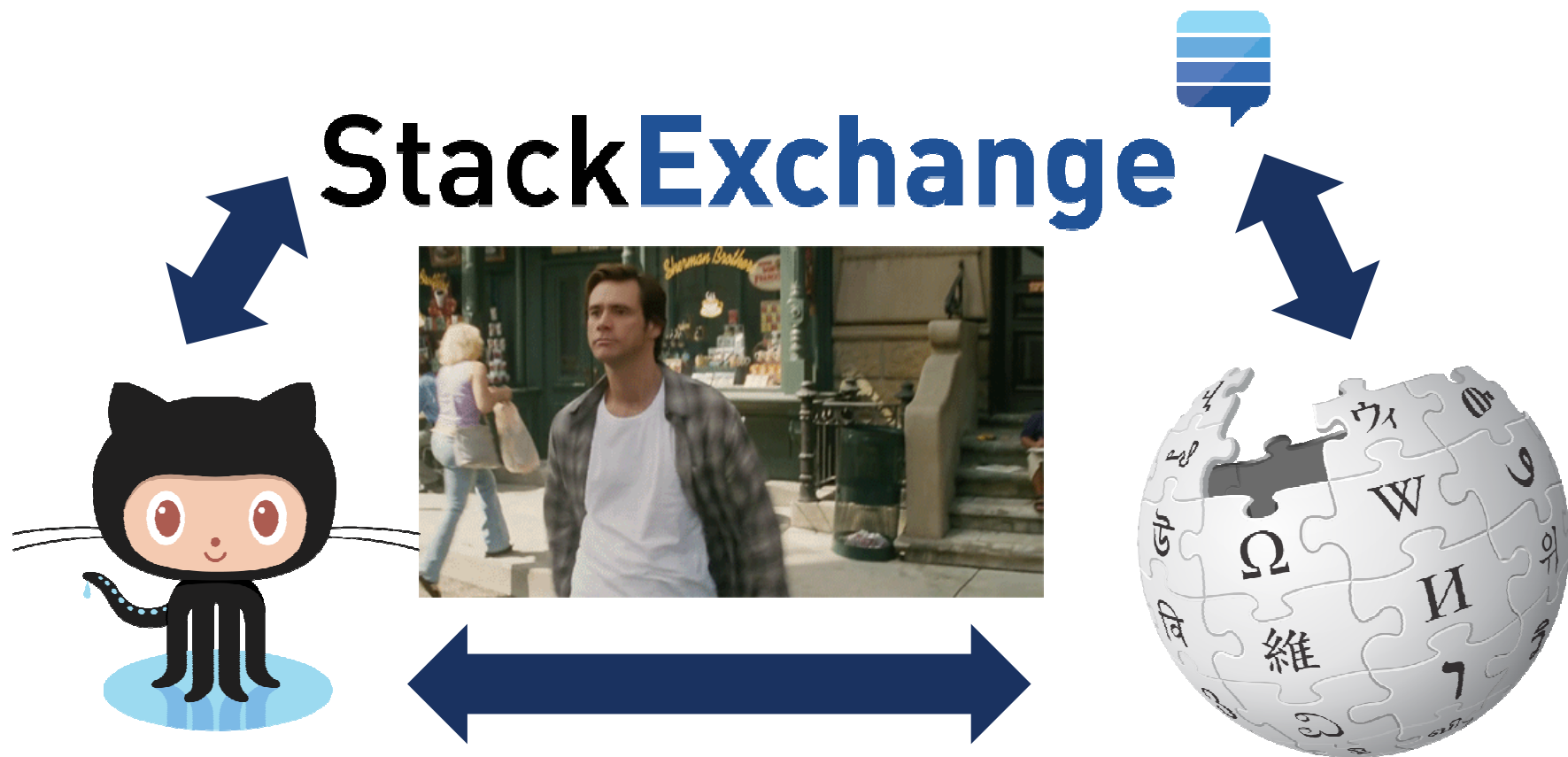
WHAT IF WE REBUILT THE ENTIRE SCHOLARLY COMMUNICATION SYSTEM FROM SCRATCH IN 2018?

BECAUSE THIS IS ESSENTIALLY THE ULTIMATE GOAL, RIGHT?

KEY ISSUE: MOST ACADEMICS REALLY DON'T GET IT

- The history of peer review – *“Hasn't it always been this way?”*
- The distinction between the ideology and the process.
- The present diversity of [open] peer review ([Ross-Hellauer, 2017](#)).
- That there is a incredible dearth of evidence around peer review.
 - And much of that is quite fragmented ([Grimaldo et al., 2018](#)).
- But we don't actually really need their permission to change things.
 - It hasn't mattered much in the past.
 - They can come willingly, or kicking and screaming, into the future.
- There is an **incredible** potential scope for systemic peer review reform.

WE HAVE THE TOOLS TO BLOW PEER REVIEW WIDE OPEN



THREE CORE ASPECTS FOR SUCCESS OF ANY PEER REVIEW PLATFORM

1. **Quality control/moderation**
2. **Certification/reputation**
3. **Engagement incentives**

HARMONY

So, how..?

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QUALITY CONTROL AND MODERATION

COMMUNITY, COLLABORATION, CONSENSUS

Traditional

Future

- | | | |
|---|---|---|
| ■ Gatekeeping function as a content filter (varying selectivity criteria) | ➡ | ■ Collaborative, constructive PR as 'issues' or comments |
| ■ QC incredibly difficult to measure, little evidence of actual success | ➡ | ■ QC achieved via consensus and evaluated based on engagement |
| ■ Typically closed system with a secretive and selective process | ➡ | ■ Self-organised, open and unrestricted communities |
| ■ Organised around journals ("papers" – it' 2018..) | ➡ | ■ Unrestricted content types and formats |
| ■ Non-accountable editor-controlled "black box of peer review" | ➡ | ■ Elected 'moderators' accountable to communities (QC & engagement) |
| ■ Structurally limited (2-3 people) | ➡ | ■ Semi-automated matching of content to reviewers |



CERTIFICATION AND REPUTATION

BECAUSE WE LOVE GIVING AWAY OUR LABOUR FOR FREE

Traditional

- Poorly recognised and rewarded activity for researchers
- Difficult to effectively measure due to opacity of process
- Often inappropriate journal-level proxies
- Issues surrounding identification within closed process
- High reviewer turn-down rates for various reasons
- A bit shit, really...
- But getting better!



Future

- Performance metrics based on nature and quality of engagement
- Open, continuous community-based evaluation tied to reputation
- Revealed at object and individual levels
- Fully transparent by default (e.g., via ORCID)* and portable
- Reviewer pool greatly expanded with low barrier to entry
- Potential for engagement filters
- Appealing for those in charge of assessment



INCENTIVES FOR ENGAGEMENT

BECAUSE SHEEP LIKE CARROTS

Incentives for engagement

Traditional

- Shared sense of duty as a natural, altruistic incentive
- Researchers generally feel they receive too little credit
- Incentives only for engagement, not for *high quality* engagement
- Incentives not tied to academic reputation or career progress
- 'Prestige' obtained by journals



Future

- Virtual rewards such as points, 'karma', badges or abilities
- Creates an incentive 'loop' as authors incentivised to maximise engagement
- 'Reviewing the reviewers' system incentivises high quality PR
- Can be tied to academic records and career advancement
- Establishment of individual prestige

SOME OF THE MAJOR FUTURE CHALLENGES

- ▶ Catalysing wider discussion, education, and innovation in peer review.
- ▶ Demonstrating that new models outperform traditional processes (or not).
- ▶ Agreement on interoperability requirements across stakeholders.
- ▶ Adoption of elements of the new system across specific communities.
- ▶ Increasing the role of peer review in research[er] evaluation processes.
- ▶ Adapting social communication traits into novel peer review models.
- ▶ Overcoming the “*If you build it, they will come*” fallacy.

FUTURE CHALLENGES



<https://twitter.com/AsuraEnkhbayar/status/838423030464409600>

“For better or for worse, science will have to live with traditional peer-reviewed journals, which are, in any case, already evolving and adapting.”

But..

- Do we really **need** journals?
- Do we really **want** journals..?

<http://embor.embopress.org/content/16/12/1588>

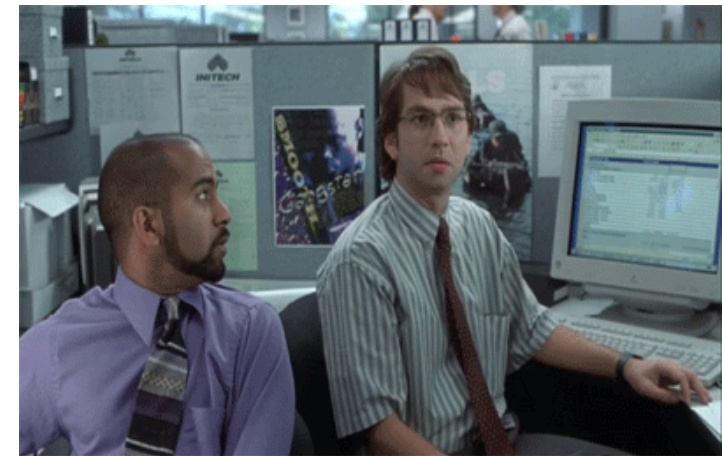


ALL OF US NEED TO BE DEEPLY INTROSPECTIVE AND ASK THE BIG QUESTIONS ABOUT PEER REVIEW

- ▶ How divergent are the ideologies and practices of peer review?
- ▶ How can Web-native technologies be used to address some of the major criticisms and issues with 'traditional' peer review?
- ▶ How is the Internet changing our expectations of how communication works, and why are scholarly publishing and peer review seemingly lagging behind this?
- ▶ How can we integrate Internet-style communication norms with peer review?
- ▶ How do we increase cross-stakeholder engagement to implement optimal models and practices of peer review?
- ▶ How much do we want to disrupt the relationship between peer review and journal articles? And what will the impact of this be?
- ▶ How can we regain the 'peer-to-peer' nature of peer review again?

THE DREAM?

- Building a peer review and scholarly communication platform designed for a Web-native research community.
- Resolution of all the technical and social issues associated with PR.
- Disruption of the entire scholarly communication process.
- Decoupling of peer review and communication from journals.
 - Or at least commercial entities who parasitize the process.
- Community adoption of standards to encourage practice and adoption.
- Put research communication in the hands of researchers.
- Saving the global research community \$billions every year. #
- Collectively address the real issue of control and governance of public research. Bam.



@protohedgehog

QUESTIONS?



@protohedgehog

FURTHER READING

- A multi-disciplinary perspective on emergent and future innovations in peer review
- What is open peer review? A systematic review
- You never said my peer review was confidential – scientist challenges publisher
- Breaking the traditional mould of peer review: Why we need a more transparent process of research evaluation
- What are the barriers to post-publication peer review?
- We have the technology to save peer review – now it is up to our communities to implement it
- The history of peer review, and looking forward to preprints in biomedicine
- Three myths about scientific peer review
- Peer review: not as old as you might think