

# Crowdsourced Peer Review

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# Definitions

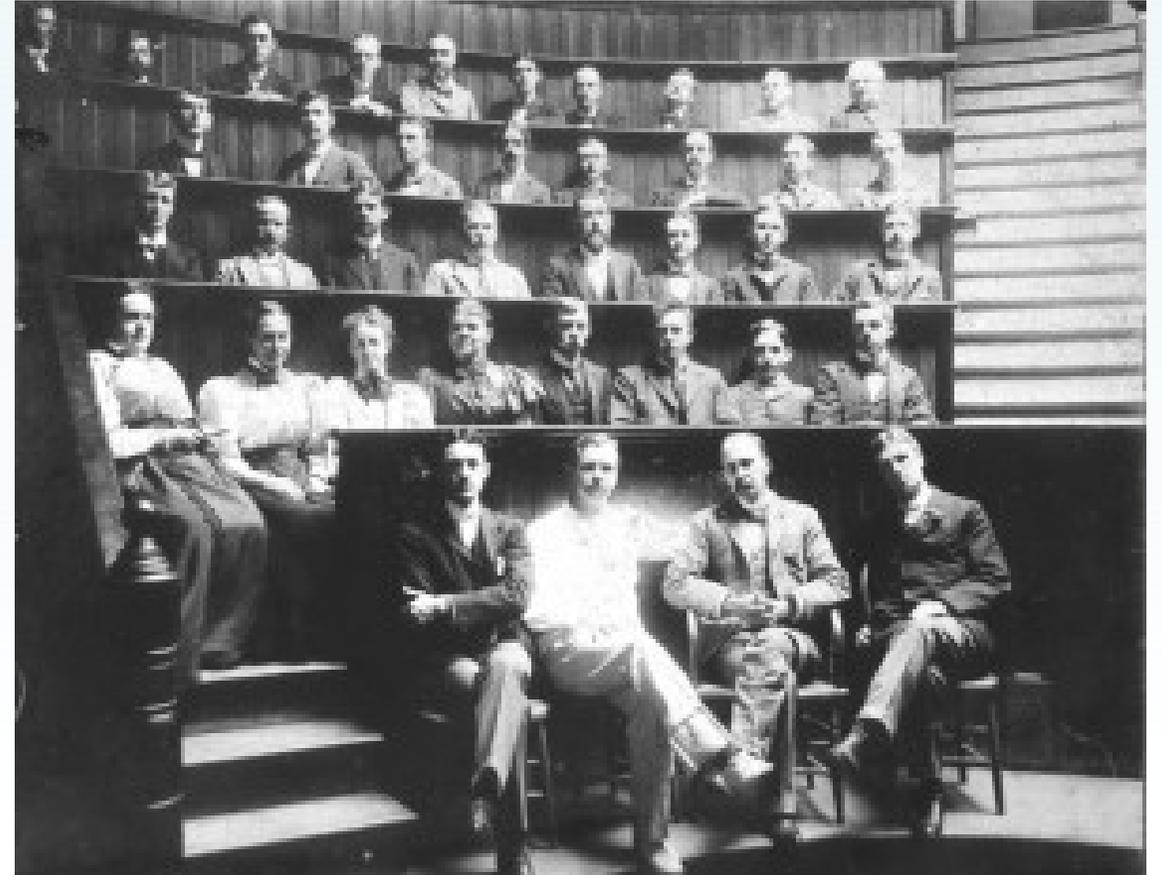
- Crowdsourced: the practice of obtaining needed services, ideas, or content by soliciting contributions from a large group of people and especially from the online community rather than from traditional employees or suppliers (Google definition)



# Definitions

Crowdsourced peer review definition: a **public review process** in which **any community member** may contribute to the article review. In crowd-sourced review there is **no limit to the number of comments** or reviews an article may receive.”

(Ford E. Open peer review at four STEM journals: an observational overview. *F1000Research*. 2015;4:6. doi:10.12688/f1000research.6005.2.)



Courtesy of NLM, circa 1900



# Definitions

- Post-publication Peer Review (PPPR): The review of scholarly content after publication
  - Possibly coined by Kent Anderson while at *Pediatrics* in 1999
  - Anderson later surmised that these PPPR reports were nothing more than e-letters.
  - In 2014, he argued that PPPR should be more formal but that cat may have been out of the bag
  - Researchers are calling online comments PPPR

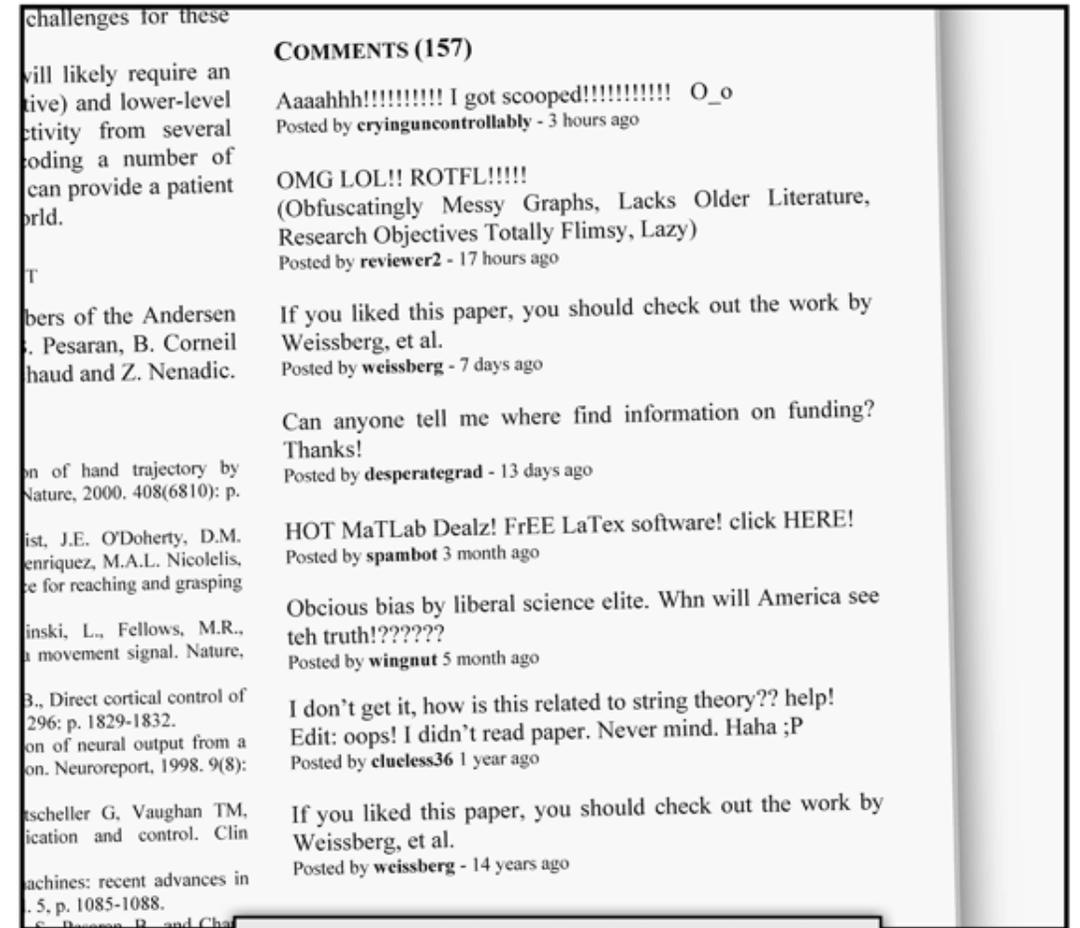
# Definitions

- Reronym: renaming something old because of new inventions. Example: Analog clocks were just clocks until digital clocks were invented. Now more terms are needed to distinguish.

Crowdsourced Peer Review =

Post-publication Peer Review =

Online commenting



# Crowdsourced Editing

- Wikipedia
  - Anyone can edit a page
  - Wiki parties
  - Political sabotage
  - Brand malignment

“Wikipedia went from people writing an encyclopedia to people writing rules about writing an encyclopedia, or writing bots to defend an encyclopedia, but without enough safeguards to save content from deletionists.”

James, A. 2017. “Watching Wikipedia's extinction event from a distance.”  
<http://boingboing.net/2017/02/14/watching-wikipedias-extincti.html>

# History

- The scholarly publishing process includes discussion of published results
  - Letters to the Editor, Discussions/Closures, etc.
  - PROS: They are peer reviewed and should add something to the literature. They can be cited.
  - CONS: “Open” discussion periods are short and submission process can be cumbersome
- Digital publishing opened door to online comments.
  - Many journals tried...and failed.
  - PROS: Faster and available to many more people. Discussion period open longer/forever.
  - CONS: Engagement is low and journals needed to moderate (labor intensive).

# Recent Timeline

2002

BioMed  
Central

2008

PLOS One  
Comment

2012

PubPeer

Faculty 1000  
Research

2013

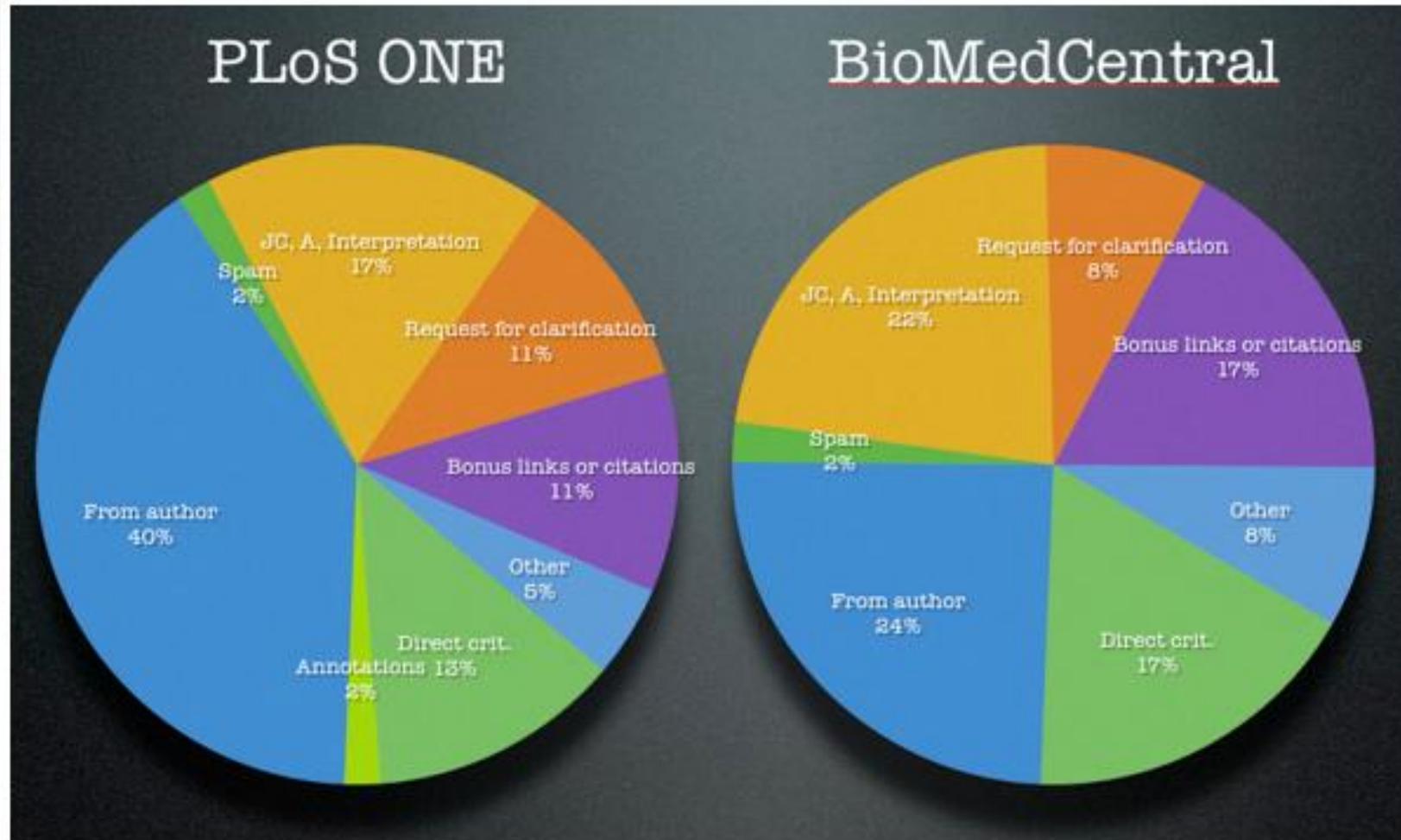
PubMed  
Commons

2014

ResearchGate

ScienceOpen

# Early Online Comments



Adie, E. 2008. Commenting on Scientific Articles (PLOS Edition).  
[http://blogs.nature.com/nascent/2009/02/commenting\\_on\\_scientific\\_artic.html](http://blogs.nature.com/nascent/2009/02/commenting_on_scientific_artic.html)

# Commenting on Journal Platforms

- *PLOS*
  - **Who can comment?:** any registered users
  - **Anonymous?:** registered users are to be unambiguous about who they are and requires competing interest statement. Could register fake name.
  - **Moderated?:** after posting
  - **Rate of comments:** ??

OPEN ACCESS PEER-REVIEWED

RESEARCH ARTICLE

## Nutrition and Health – The Association between Eating Behavior and Various Health Parameters: A Matched Sample Study

Nathalie T. Burkert, Johanna Muckenhuber, Franziska Großschädl, Éva Rásky, Wolfgang Freidl

Published: February 7, 2014 • <https://doi.org/10.1371/journal.pone.0088278>

Article	Authors	Metrics	Comments	Related Content
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Reader Comments (15)

[Post a new comment](#) on this article

0 RESPONSES	11 Jul 2016 19:38 GMT MOST RECENT	<b><u>misleading and not true</u></b> Posted by <a href="#">mkara</a> on 11 Jul 2016 at 19:38 GMT
1 RESPONSE	06 Feb 2016 14:46 GMT MOST RECENT	<b><u>interpretation of the study results</u></b> Posted by <a href="#">freidl</a> on 23 Apr 2014 at 11:43 GMT

# Commenting on Journal Platforms

- *Faculty1000 Research*
  - Papers are published online and peer reviewed in an open format
  - Once enough approvals are obtained by reviewers (suggested by authors and invited by the journal), the paper is indexed
  - At any time, readers can comment as well.
  - **Who can comment?:** any registered users
  - **Anonymous?:** no
  - **Moderated?:** yes
  - **Rate of comments:** Unable to filter.

The screenshot displays a journal article's interface. On the left, a 'METRICS' sidebar shows 85 VIEWS and 18 DOWNLOADS, along with buttons for 'Get PDF', 'Get XML', 'Cite', 'Export', 'Track', 'Email', and 'Share'. The main content area is titled 'Open Peer Review' and shows a 'Referee Status' of three green checkmarks. Below this is a table of 'Invited Referees' with three columns for 'Version(s) 1', '2', and '3'. The first row shows 'Version 1' published on 24 Mar 2017, with a question mark under version 1 and green checkmarks under versions 2 and 3, each with a 'read report' link. A list of three referees follows: 1. Ambok Bolong Abol-Munafi, Universiti Malaysia Terengganu, Malaysia; 2. Bradley J. Pusey, The University of Western Australia, Australia; 3. Rudy Agung Nugroho, Mulawarman University, Indonesia. Below the list is a link for 'All reports (3)'. At the bottom, the 'Comments on this article' section is circled in red, showing 'All comments (0)' and an 'Add a Comment' button.

Version(s)	1	2	3
Version 1 published 24 Mar 2017	?	✓	✓
	<a href="#">read report</a>	<a href="#">read report</a>	<a href="#">read report</a>

1 **Ambok Bolong Abol-Munafi**, Universiti Malaysia Terengganu, Malaysia  
2 **Bradley J. Pusey**, The University of Western Australia, Australia  
3 **Rudy Agung Nugroho**, Mulawarman University, Indonesia

[All reports \(3\)](#)

**Comments on this article**  
All comments (0)  
[Add a Comment](#)

# Commenting on Journal Platforms

- European Geosciences Union
  - Similar to *F1000 Research*: Posts paper, crowdsources comments, authors revise paper, reviewers conduct peer review, paper accepted or not. Everything is posted online.
- Challenge with EGU and F1000
  - What happens to a posted paper that no one wants to review?
  - What happens if it fails review and now stays on the site as a rejected paper?

RESEARCH NOTE metrics XX

**A metabolite of prostaglandin D<sub>2</sub>, 11β-prostaglandin F<sub>2α</sub> (11β-PGF<sub>2α</sub>), in exhaled breath condensate and serum of asthmatics with airway hyperresponsiveness to distilled water [version 1; referees: 2 not approved]**

Eduard V. Nekrasov, Juliy M. Perelman, Denis E. Naumov, Anna G. Prikhodko, Elena V. Ushakova, Victor P. Kolosov

REFEREES Andras Bikov; Giuseppe Santini

PUBLISHED 09 Mar 2016

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RESEARCH ARTICLE metrics X PEER REVIEW DISCONTINUED

**Engaging bioscientists in science communication: Evidence from an international survey [version 1; referees: 1 not approved]**

Andrea Boggio, Giorgio Scita, Carmen Sorrentino, David Hemenway, Andrea Ballabeni

REFEREE Vickie Curtis

FUNDER Cariplo Foundation

PUBLISHED 02 Mar 2017

# Commenting on Databases

- PubMed Commons
  - **Who can comment?:** you must have an account (req. being an au of a paper in PubMed)
  - **Anonymous?:** no
  - **Moderated?:** no
  - **Rate of comments:** Contains 27 million records. About 5100 of those have comments

The screenshot shows a PubMed article page for the paper "Why were Sardinians the shortest Europeans? A journey through genes, infections, nutrition, and sex." The article is by Pes GM, Toqnotti E, Poulain M, Chambre D, and Dore MP, published in *Am J Phys Anthropol* in 2017. The abstract discusses the unique anthropometric features of Sardinians and the factors contributing to their shorter stature. The page includes a "LinkOut - more resources" section and a "PubMed Commons" section. The "PubMed Commons" section is circled in red and shows a comment by "thomas samaras" dated 2017 Feb 15 1:05 p.m., which reads: "This is an excellent paper on height trends in Sardinia. However, I disagree with the precept that height can be used as a measure of health and longevity. Many researchers view ... more". The page also includes a "Send to" button and a "Format: Abstract" dropdown menu.

# Commenting on Databases

- ScienceOpen
  - Culling content from lots of sources (PubMed, ArXiv, Crossref)
  - Publishes “comments” and “reviews”. Unclear on the difference. Anyone can do either.
  - **Who can comment?:** any registered user
  - **Anonymous?:** no, but users can register fake names
  - **Moderated?:** no
  - **Rate of comments:** Contains 28 million records, 3 million of which are OA. Removing the reviews for their own journal, the site has 11 papers with reviews. Not clear on comments.

## Review by Dasapta Erwin Irawan

Review

Dasapta Erwin Irawan evaluated the article as: ★★★★★

This article is interesting, but the author should give more quantitative basis on the analysis.

Publication date: 11 May 2016  
DOI: 10.14293/S2199-1006.1.SOR-CHEM.AVBFJ8.v1.RLYSAJ

Level of importance: ★★★★★  
Level of validity: ★★★★★  
Level of completeness: ★★★★★☆  
Level of comprehensibility: ★★★★★☆  
Competing interests: None  
Recommend this review: +1 One person recommends this

Comments

Indonesia, my country, needs more model in modeling water balance. This is because our environment has been altered by uncontrolled man-made activities. Land use and land cover have been abusively changed without considering how such act will influence water potential and reducing water supply capacity, including aquifer supplu capacity. Therefore we need to observe how other region of country deal with the problem through water balance model. Therefore we think that this article is very important.

0 cited by	★★★★☆ 3 reviews	7 comments	0 recommends	3 shares	1,303 similar
MOST CITED	★ REVIEW	COMMENT	+1 RECOMMEND	SHARE ▾	ALL SIMILAR

RECORD ABSTRACT ARTICLE 8

Direct nucleophilic difluoromethylation of aromatic isoxazoles activated by electron-withdrawing groups using (difluoromethyl)trimethylsilane

Authors: Xin Wang<sup>1</sup>, Etsuko Tokunaga<sup>2</sup>, Norio Shibata<sup>1,2\*</sup>

Publication date: 18 December 2014

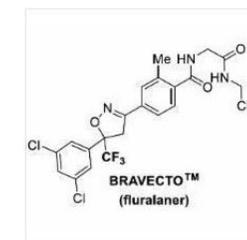
Journal: ScienceOpen Research – Section: SOR-CHEM

Publisher: ScienceOpen

DOI: 10.14293/S2199-1006.1.SOR-CHEM.AD1QVW.v2

Keywords: Chemistry, Fluorine, Difluoromethylation, Addition, Isoxazoline, Agrochemical, Insecticide

Read Download ▾ Bookmark



Abstract

# Commenting on Third Party Sites

- PubPeer: ...PubPeer is to foster a scientific environment where robust, high-quality research is valued, while providing a **forum to discuss the problems of unreproducible, misleading, misconceived or fraudulent work**. By commenting on publications [sic] **both positively and negatively** we add another dimension to an article's "impact" that is independent of the name of the journal in which it was published.
  - Comments are moderated.
  - Comments can be anonymous.
  - Hard to determine total comments on platform because they are pulling in PubMed Commons comments.

## "Depressive symptoms in mothers and children: Preschool attachment as a moderator of risk."

Stephanie Milan, Stephanie Snow, Sophia Belay, Developmental Psychology (2009)

Comments (1):

Display By: ---- ▾

**0** **Statcheck** : ( September 11th, 2016 2:35am UTC )

Using the R package statcheck (v1.0.1), the HTML version of this article was scanned on 2016-08-05 for statistical results (t, r, F, Chi2, and Z values) reported in APA format (for specifics, see Nuijten et al., 2015). An automatically generated report follows.

The scan detected 17 statistical results in APA format, of which 2 contained potentially incorrect statistical results, of which 0 may change statistical significance (alpha = .05). Potential one-tailed results were taken into account when 'one-sided', 'one-tailed', or 'directional' occurred in the text.

The errors that may affect the computed p-value (but not the statistical significance) were reported as:

chi2(10) = 16.27, p = .10 (recalculated p-value: 0.09216)  
Z = 2.17, p < .01 (recalculated p-value: 0.03001)

Note that these are not definitive results and require manual inspection to definitively assess whether results are erroneous.

Reference

Nuijten, M. B., Hartgerink, C. H. J., van Assen, M. A. L. M., Epskamp, S., & Wicherts, J. M. (2015). The prevalence of statistical reporting errors in psychology (1985-2013). Behavior Research Methods. <http://dx.doi.org/10.3758/s13428-015-0664-2>

Reply

Report

Permalink

# Other Forms of Commenting

- Blogs
  - Research discussed broadly within a community with context added by blog writer
  - PRO: Free of the confines of the journal; already belongs in a community
  - CON: May not get a whole lot of comments
- “News” sites
  - Website or online publications that write about research.
  - PRO: Wider audience for commenting
  - CON: Avg. reader of LA Times may not be the best source of commenting on scholarly content, trolls

# Trends and Successes

- Commenting on Journal Platforms is very limited
  - Comments can be inflammatory
  - Journals don't want to be in the middle of authors and readers
  - Journals more comfortable with the Editors controlling the narrative
  - Basic risk aversion
- Commenting on database platforms is slightly “more” popular
  - Many people are looking for papers and accessing papers from Pubmed
  - ScienceOpen is attempting to replace WOS and Scopus as a subscription-based database; but trying to be a lot of things simultaneously

# Why More People Don't Comment

- If you are reading a paper, why not write a review of it?
  - Time
  - You may skim papers looking for nuggets of info and a review requires more detailed report
  - Many comments are left hanging
- Motivation is lacking
- Very public (non-anonymous)
  - Early Career Researchers
  - Researchers seeking tenure
  - Government researchers
- Readers who feel strongly may write a Letter to the Editor or a Discussion and perhaps get cited

# Problems with Commenting

# Problems with Commenting

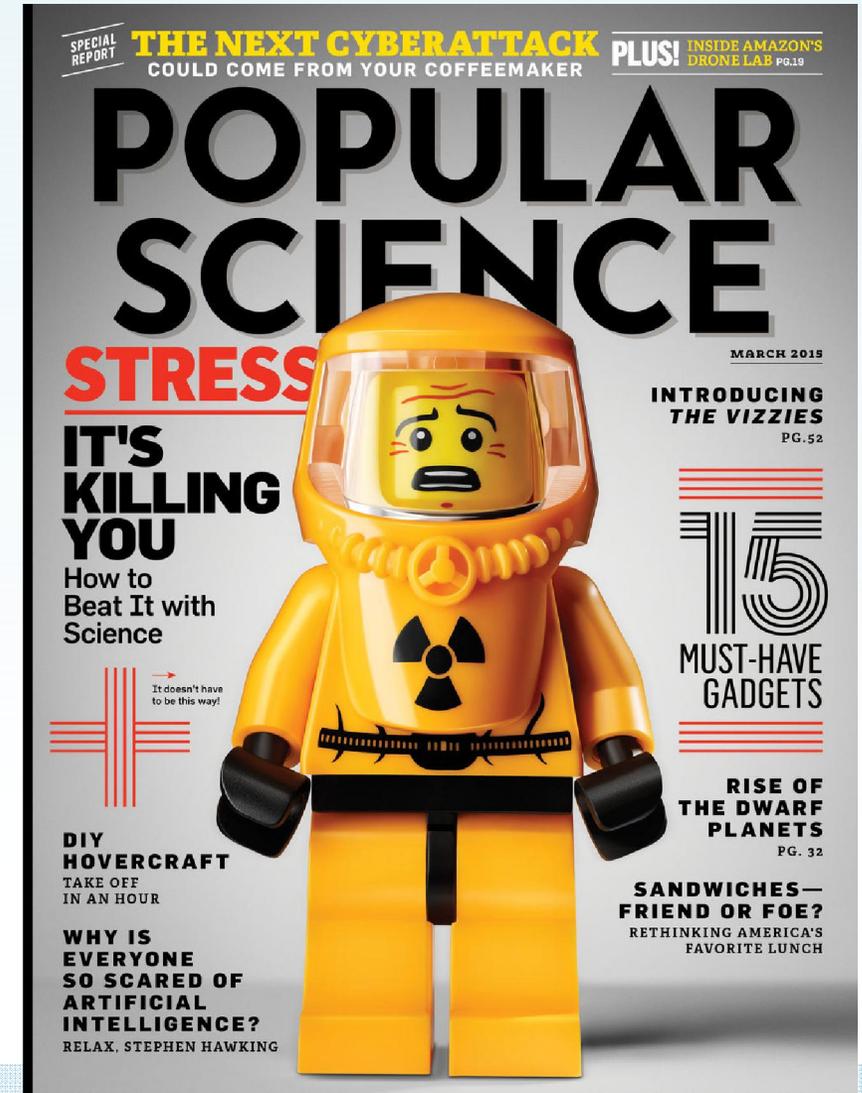


# Problems with Commenting

News: *Popular Science* Turns Off Commenting

“The editors argued that Internet comments, particularly anonymous ones, undermine the integrity of science and lead to a culture of aggression and mockery that hinders substantive discourse.”

(<http://www.newyorker.com/tech/elements/the-psychology-of-online-comments>)

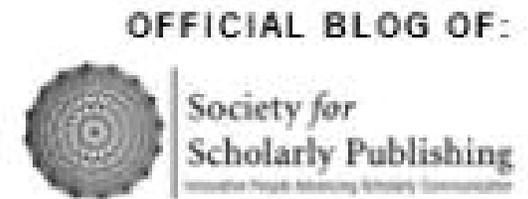


# Problems with Commenting

“Today’s commentators seem to have many axes to grind. Far too often, commentary forums degrade into polemical attacks with win or lose dynamics at their heart. The pursuit of knowledge and science isn’t the goal. Capitulation of one combatant to another is.”

Kent Anderson (<https://scholarlykitchen.sspnet.org/2014/04/15/stick-to-your-ribs-the-problems-with-calling-comments-post-publication-peer-review/>)

THE SCHOLARLY  
**kitchen**



# Problems with Comments

“One of the most important **controls of our behavior is the established norms within any given community**. For the most part, we act consistently with the space and the situation; a football game is different from a wedding, usually. The same phenomenon may come into play in different online forums, in which the **tone of existing comments and the publication itself may set the pace for a majority of subsequent interactions.**”

<http://www.newyorker.com/tech/elements/the-psychology-of-online-comments>

THE  
NEW YORKER

# Problems with Scholarly Commenting

- Anonymous Commenting: easier for personal ax grinding
- Loose verification of commenter
- COIs not disclosed
- Amazon reviews model
  - Recently argued that this would be a good idea
  - Readers can be swayed by comments that have not been moderated
  - Value of comments is only a snapshot in time
  - Amazon typically provides hundreds of reviews
  - Amazon adds “verified buyer” to some reviews
  - Tennant: <http://blogs.lse.ac.uk/impactofsocialsciences/2017/04/12/what-are-the-barriers-to-post-publication-peer-review/>

# What Is the Goal?

- Provide individuals with a forum to discuss scholarly content
  - Encourage rich additions to the discussion
  - Collaboratively take research to the next level
  - Provide a window into what the authors were thinking
  - Engage readers (sticky pages)
- Ensure that this forum is safe...for authors and users!
- Increase engagement and promote membership

# What Works

- Rich discussions of research happens in communities
- Journals build community but that community protects itself from outside comments
- Papers/research is discussed in safer platforms (well known blogs, LinkedIn groups, society platforms, conferences)
- Societies using tools like HigherLogic and Trellis (AAAS) to replicate those communities of members online
- CONS: These are closed groups with limited memberships



What's on your mind? Tell your connections!

Post

300 left



Emily Leonard posted a new update in AAAS Forum on Implicit Bias in Peer Review

3 weeks ago

0 Votes

0 Comments

2 Followers



Upvote



Follow



This study uses public information to analyze the effects of based on the reviewer. Though bias is often difficult to verify the researchers observed an under-representation of women, and a distinct correlation between the gender of the reviewer and that of the author.



eLIFE Gender bias in scholarly peer review

Cite as eLife 2017;6:e21718 Peer review has an important role in improving the quality of research papers. It is the "lifeblood of

## ASCE CROSS DIVISIONAL TEAM [SETTINGS](#)

COMMUNITY HOME

DISCUSSION **4**

LIBRARY **3**

BLOGS **0**

EVENTS **0**

MEMBERS **7**

### LATEST DISCUSSION POSTS [ADD](#)



#### RE: THOUGHTS ON NEXT MEETING

BY: [CHARLES DINGES](#), ONE MONTH AGO

There is no set schedule. I have been overbooked for 2 weeks but I should be free to assist (if that is desired) by next week. Charles V. "Casey" Dinges IV Senior Managing Director Public Affairs, Membership, Leadership & Programs ...

### LATEST SHARED FILES [ADD](#)



#### FOCUS SESSION ON YM USE OF TECHNICAL CONTENT - 201 ...

BY: [LESLIE PAYNE](#) YESTERDAY



#### STUDENT AND YOUNGER MEMBER COMMUNICATION STRATEGY

BY: [LESLIE PAYNE](#) YESTERDAY

and compliance by researchers who may not be familiar with the language of standard legal contracts, including brevity, the use of clear and simple language, and limiting the contract's content to essential elements, to "reduce time for negotiation between the study administrators and researchers" (Knoppers et al. 2013). We also drew on our experience with the International Cancer Genome Consortium (ICGC) Data Access Compliance Office (Milius et al. 2014).<sup>1</sup>

We discuss provisions of the EMC DAA here as we hope they may be of use to other institutions aiming to keep data protected while still encouraging innovative research. Furthermore, concerns over the lack of consistency in data access principles and agreements have been reported, even within programs, and these may be addressed through greater access to and explanation of existing policies and DAAs (Lowrance 2006). The EMC DAA is available on the [EMC Data Access Policy](#) web page. 1

<sup>1</sup>YJ is the ICGC Data Access Officer and a member of the ICGC Ethics and Policy Committee. SD is a former member of the ICGC Ethics and Policy Committee (2009–2013) and the ICGC Data Access Committee (2014–2015). GB is a member of the ICGC Data Coordination and Management Working Group.

A broad range of data users

**Next article:** Communicating science: Sending the right message to the right audience

Q  Manousos  

NOTES **COMMENTS** REVIEWS

This is an important study that records the experience of Canada. Many aspects could be useful for people setting data access policies in other countries.

 UPVOTE 0  DOWNVOTE 0  REPLY

 Manousos Markoulakis  
2017-03-04 00:53

### Inconsistencies in policies are a major problem for researchers

Furthermore, concerns over the lack of consistency in data access principles and agreements have been reported, even within programs, and these may be addressed through greater access to and explanation of existing policies and DAAs

Inconsistencies in policies, certainly not a rare phenomenon even within the same funding programme, can be frustrating and costly for researchers.

 UPVOTE 1  DOWNVOTE 0  REPLY

Thanks!

**Angela Cochran**

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**@acochran12733**