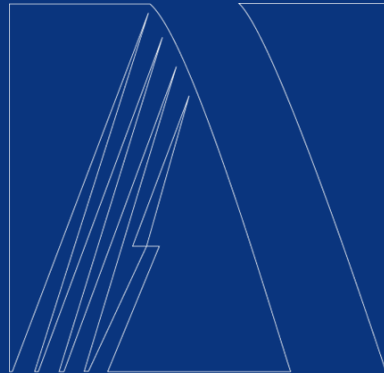
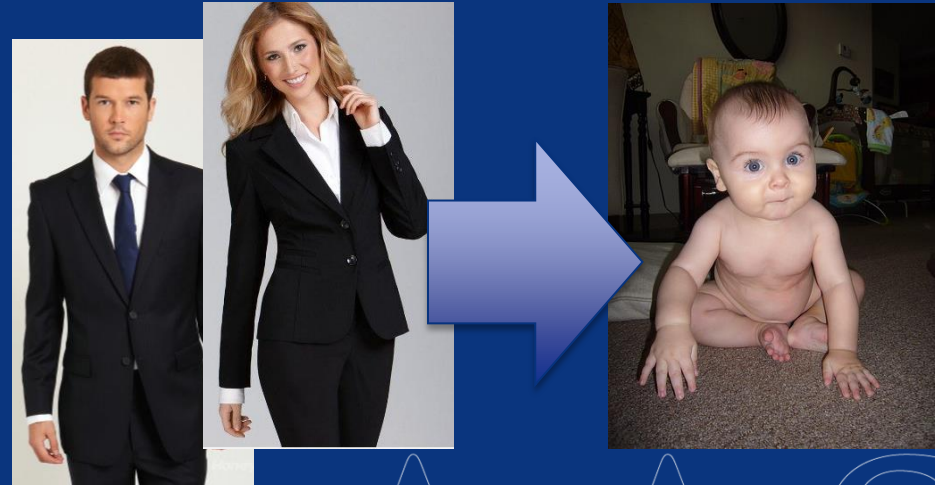


Trust and Transparency in Peer Review: From Business Suit to Birthday Suit

Kent R. Anderson
Publisher, AAAS/*Science*





the school

WHAT'S HOT

AUTHORS, ECONOMICS, ETHICS, H

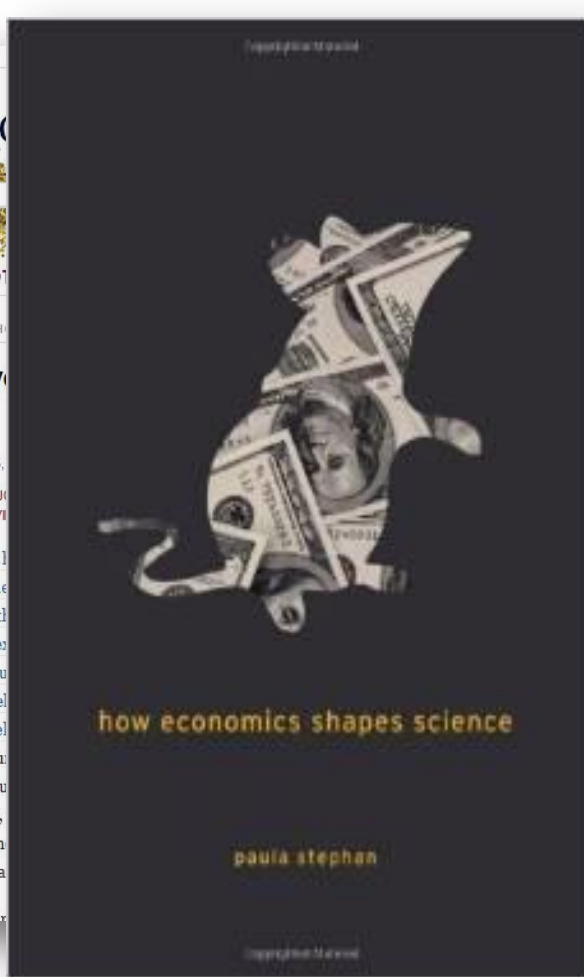
Buried in the Matry Peer Review

POSTED BY KENT ANDERSON · NOV 25,

FILED UNDER ACADEMIA, ACADEMIC J
JOURNALS, PEER REVIEW, REVIEW, REVI

It's well known that publishers l
an inadequate job conveying the
importance and complexity of th
they and their staffs, vendors, ex
specialists do, day in and day ou
produce thousands of high-level
many of them with daily or weel
publication schedules. But it hu
more when it seems we've succu
our own inadequate marketing,
muster the effort to reveal the n
of value inside even one of the a

This sad reality appears any nur



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DE DISHES BY STEWART WILLS

"He chose to surrender the gun rather than miss his flight to West Palm Beach": "packing heat" at the airport. [nytimes.com/2015/01/18/sun...](#) 15 hours ago

Here's a clever one for a Friday: "expansion microscopy" -- getting better resolution by inflating the sample. [osa-opn.org/home/newsroom/...](#) 2 days ago

Nature, SciAm publisher to merge with Springer. Wow. [reuters.com/article/2015/0...](#) 3 days ago

AUTHORS



The Knowledge Economy

- Knowledge is non-excludable and non-rivalrous
 - People can't be prevented from using it
 - Two people can derive the same knowledge at once
- Markets typically do a poor job providing items with these characteristics
- Scientific publishing does an **excellent** job
- **Why?**



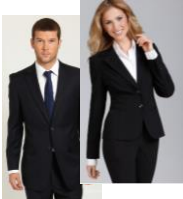
The Priority System

- The only way scientists can establish priority of discovery is to make their findings public.
 - Stated differently, the only way to make it yours is to give it away.
- This makes it excludable and rivalrous
- Priority “solves” the public good problem, providing a strong incentive for scientists to share their discoveries.



Rewarding Achievement

- Priority encourages production and sharing of research.
 - It is virtually impossible to reward people in science for effort since it's virtually impossible to monitor scientists.
 - The priority system solves this, rewarding people for achievement rather than effort.
- Priority also discourages shirking — knowing that multiple discoveries of the same finding are somewhat commonplace leads scientists to exert effort.



Prizes in the Priority System

- **Grants**
 - Relatively difficult to come by, not very public
- **Tenure**
 - Slow to come, sporadic, difficult to achieve
- **Patents**
 - Unusual, difficult to come by, little academic recognition
- **Prizes**
 - Sporadic, unpredictable, and difficult to achieve
- **Publication**
 - Frequent, common, achievable, public, informs other elements of the priority system



Peer Review and Priority

- Peer review refines the priority system
 - Editorial review is a vital part
- Peer review is associated with brands and reputations within the publishing environment
- Publication with certain brands can advance a career significantly
- Publisher infrastructure and management of peer review is not “value add” by publishers but **essential to the academic endeavor**



Editors Are Part of the Process

“Editors are not supposed to be a mere relay service, shuttling messages between the authors and the reviewers Editorship is a scientific activity, not just a bureaucratic one. . . . The peer-reviewed journal system, rather like the judge-and-jury system, relies on a balanced tension.”

- Neuroskeptic, May 2, 2015



Peer Review and Priority

- How peer review refines the priority system:
 - Novelty: Is this information new?
 - Quality: Was the research done well?
 - Importance: Does this end the debate?
- That is: **First, best, or last**



The Importance of Independence

Funders

Foundation

Corporation

Government

Institution

Individual

Authors

Individual

Collaborative



How Good
Is It?

Brand

External Source of Review

- The importance of a peer review and enhanced priority system outside of funders and academia
- Provides important checks on power and bias
- Publishing has traditionally created independent revenue sources
 - This is changing, and may have profound effects



Typical Forms of Transparency

- Authors and affiliations
- Materials and methods
- Results
 - Data
- Disclosures of competing/conflicting interests
 - Research roles
- Contact information (corresponding author)



Hacked Forms of Transparency

- Authors and affiliations – fake, appropriated authors
- Materials and methods – incomplete or incorrect listings
- Results – faked results
 - Data – faked data
- Disclosures of competing/conflicting interests – lacking
 - Research roles – lies, all lies
- Contact information (corresponding author) – faked





July 2015 – AAAS Acquires PRE

- Strong mission alignment
 - Enhance scientific communication
 - Promote and defend the integrity of science and its use
- Broader scope that goes beyond transparency
 - Standards, training and support, and research
- Currently retooling for 2016 relaunch



Peer Review Details

DOI: 10.2337/db14-1562

- Method of review: **Single-Blind**
<http://diabetes.diabetesjournals.org/site/misc/PoliciesDiabetes.pdf>
- Rounds of review prior to acceptance: **3**
- Article screened for plagiarism prior to acceptance?: **YES**
- Date of original submission: **2014-10-10**
- Date accepted: **2015-01-24**

Roles who reviewed

Editor-in-Chief:	1
Associate Editor:	1
Reviewer:	3

This journal adheres to guidelines provided by the following organizations and employs services which reflect best practices in scholarly publishing.





The F1000 Research Approach

The screenshot shows the F1000Research website homepage. At the top, there is a navigation bar with links for FACULTY of 1000, F1000Prime, F1000Trials, F1000Research, and F1000Posters. A search bar and 'Advanced' search options are also present. Below the navigation, there are links for 'Articles', 'For Authors', 'Blog', 'Advisory Panel', and 'About / Contact'. On the right side of this bar, there are links for 'Submit an Article', 'Sign In', and 'Register'. The main content area features a large illustration of a man running with a scroll, representing the journal's speed. The headline reads 'The first Open Science journal for life scientists'. Below this, a five-step process is outlined: 1. NO PUBLICATION DELAY, 2. ALL DATA INCLUDED, 3. POST-PUBLICATION PEER REVIEW, 4. OPEN REFEREEING, and 5. FULL OPEN ACCESS. A paragraph explains that all articles, including research findings, analyses, opinions, and comments, are published immediately after a quick internal check. A 'READ MORE' button is provided. Below the main content, there is a section titled 'Our Publishing Process' with the sub-heading 'Open refereeing + user commenting'. It describes the process of selecting referees and publishing their reports alongside the article. To the right of this text is a 'SUBMIT' button. Below the publishing process section is a 'Featured Article' section. It features a thumbnail image of red-stained cells and the title 'Extracellular histone H1 is neurotoxic and drives a pro-inflammatory response in microglia'. The article is dated 08 JUL 2013 and lists authors Jonathan D Gilthorpe, Fazal Oozeer, and Julia Nash. To the right of the featured article is a 'F1000Research' banner with the text 'IMMEDIATE PUBLICATION. PEER REVIEWED. INDEXED IN PUBMED.' and a circular graphic that says 'SUBMIT YOUR NEGATIVE RESULTS'.

FACULTY of 1000 F1000Prime F1000Trials F1000Research F1000Posters Welcome Guest

F1000Research

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- 2 ALL DATA INCLUDED
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Featured Article

RESEARCH ARTICLE

Extracellular histone H1 is neurotoxic and drives a pro-inflammatory response in microglia [v1; ref status: indexed, <http://f1000r.es/f18z>]

PUBLISHED: 08 JUL 2013
Jonathan D Gilthorpe, Fazal Oozeer, Julia Nash *et al*
F1000Research 2013, 2:148

F1000Research

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F1000 Research

- Authors pay upon publication
- Publication \neq acceptance
- Acceptance comes after publication
- Acceptance based on PMC standards for indexing, as dictated by PMC
 - Two “unconditional Approves”
 - Two “Approved with reservations” + one “unconditional Approve”
- Comments are shorter and less helpful
- Can something be “unapproved”? Unindexed?



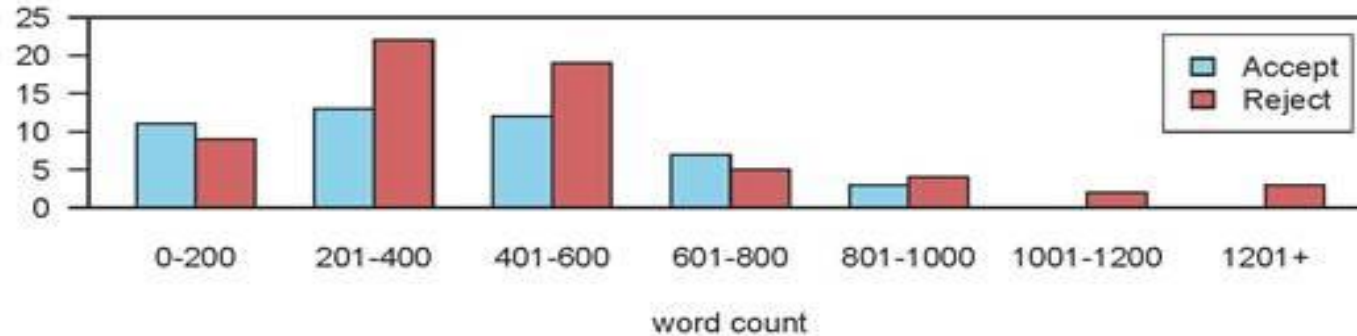
F1000 Research

- “*F1000Research* is a publishing platform and not a journal – we have **no academic editors making acceptance/rejection decisions following peer review**. We also have no article type restrictions and strongly encourage the publication of small studies, negative/null findings, data and software articles, case reports etc, as well as more typical research articles.”
- *F100Research* articles are indexed in PubMed via PMC

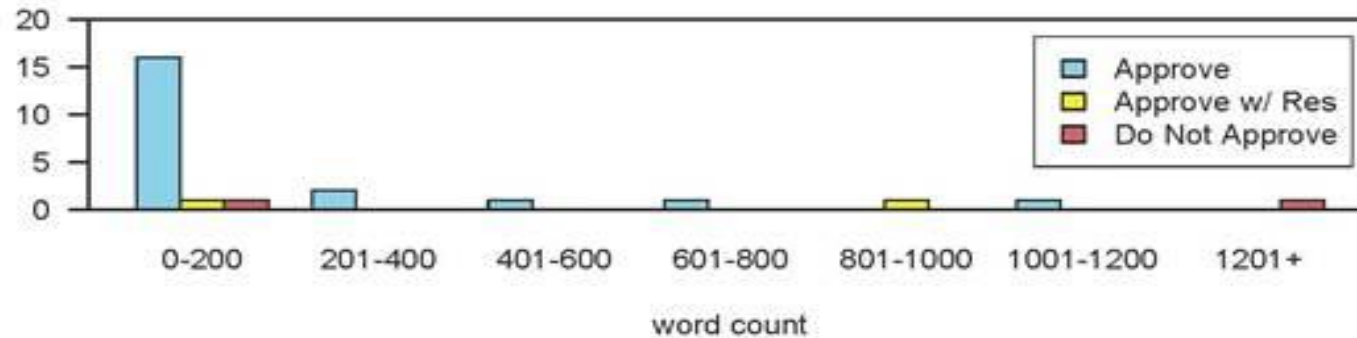




Medical Journals



F1000 Research





In short, this study has a questionable premise and fatal flaws, and shouldn't be quoted as a reliable source of information about print advertising, associated revenues, or business model options for journals of any kind. From a *PLOS ONE* peer-review perspective, I have to say that this analysis isn't even "methodologically sound."

uncluttered by commercial messages. The media has already taken the message and run with it, with little to no scrutiny.

Unfortunately, the samples, models, and assumptions in the analysis are deeply flawed, leading the authors to incorrect conclusions.

The authors sampled library copies, mostly Canadian editions, of Canadian, US, and UK general medical journals.

Sampling from library copies is a major limitation, as library copies generally carry fewer ads than other segments of the print run for many of these large-circulation journals.

Most general medical journals publish enough copies to have demographic splits (based on regions and audience characteristics). These are portions of the overall print run in which ads targeted at

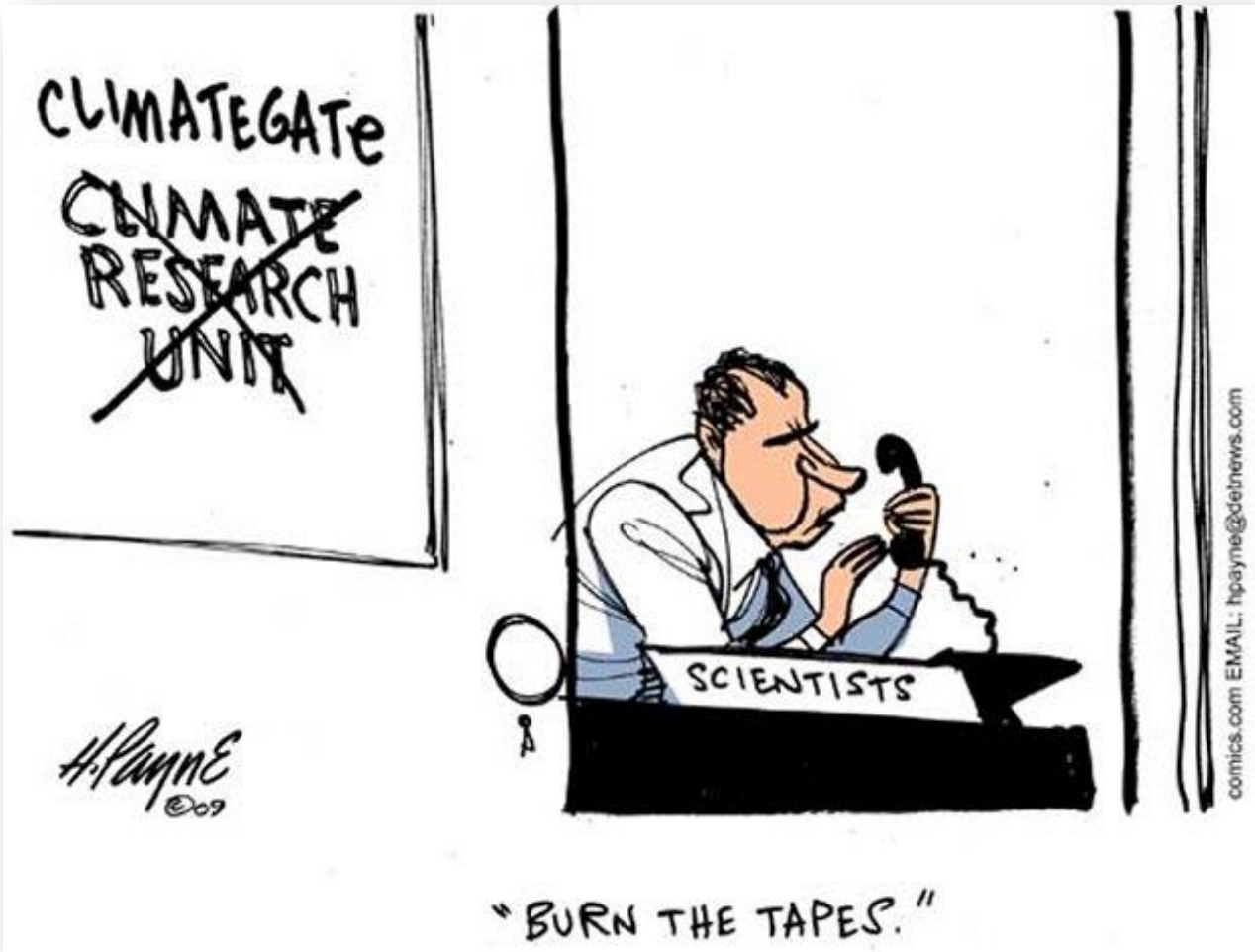


Cover of the first issue of Canadian Medical Association Journal. (Photo credit: Wikipedia)









From the [Washington Post](#):

[Rep. Lamar] Smith, a prominent congressional climate-change skeptic, has for weeks demanded internal documents and e-mails from [the National Oceanic and Atmospheric Administration] he says will prove that ... scientists manipulated global temperature data to advance President Obama's climate agenda. [NOAA Administrator Kathryn] Sullivan has refused to turn them over.

Now National Center for Science Education executive director Ann Reid is placing her organization squarely [against scientific transparency](#), as evidenced by her recent post on the efforts by NOAA to withhold documents relevant to the government agency's claimed manipulation of data on global warming.

for all correspondence related to a paper from this June that yet again debunked the persistent false claim that global warming has been on "pause" since 1998. Congressman Smith rejects the scientific conclusions, preferring instead to believe that NOAA scientists and officials have colluded to change data to further what he calls President Obama's "climate change agenda" but what is actually, um -- how to put this diplomatically? -- the scientific reality. There is simply no evidence to substantiate his conspiracy theories, and overwhelming evidence against them.

In an earlier [post](#), the NCSE head lamented the oversight that the committee is exercising over the *publicly funded* work of scientists employed and contracted by the government. The [Washington Post](#) reported on the unwillingness of

It's even more depressing to contemplate that TWENTY YEARS LATER the forces of denial are still up to the same tricks, attacking the scientist rather than engaging responsibly with the data, and doing their best to insert unmerited doubt and confusion into the international conversation on climate change. (Gee, right before the next big international climate change conference....coincidence?) At NCSE, we deal with the consequences of that campaign to cast doubt every day, as we try to help teachers cover climate change forthrightly and without false debate. Doubt doesn't stop at the classroom door, and millions of students are being misled about how certain the scientific community is that the climate is changing and human activities are responsible. The damage that this kind of attack does to science education and the scientific enterprise overall cannot be overstated





Lee Fang

Nov. 27 2015, 3:54 p.m.

Coal CEO Thanks Lamar Smith, Asks Him to Expand Probe of Climate Scientists

In recent remarks Robert E. Murray, the chief executive officer of Murray Energy, the largest privately-held coal mining company in America, enthusiastically praised Rep. Lamar Smith, R-Tex., the chairman of the House Committee on Science, Space and Technology, for leading an investigation into prominent climate scientists and environmental officials.

Murray, speaking at a conference on global warming and climate change, wanted to expand the probe into the Nation's

Murray then declared that the American Meteorology Association and Union of Concerned Scientists, two private nonprofits that serve the scientific community, also “need to be investigated.”

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“They’re crony capitalists, they’re making a fortune off of you the taxpayer,” said Murray, who stood up to praise the Texas congressman again on the next day of the conference. After receiving the second round





AAAS Leads Coalition to Protest Climate Science Inquiry

FULL STORY



Many strengths
Still strong
Still useful
Important
Editors matter

More modern
Retains strengths
More reassuring
More approachable

Loss of perspective
Unaware of risks
No shame or humility
Could do better
Selfish benefits

Naïve
Simplistic
Untrained
Blank slate
Exploitable



Thank You



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