



COPE Seminar 2021

Reducing the inadvertent spread of retracted science

Wednesday 29 September, 15:00-16:00 (BST)



Jodi Schneider



Daniele Fanelli



Geoffrey Bilder



**Deborah Poff
(Moderator)**



#COPE2021



PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

SPEAKERS



Jodi Schneider

PI of Reducing the Inadvertent
Spread of Retracted Science

Her recent work has focused on topics such as systematic review automation, semantic publication, and the citation of retracted papers, with funding from NIH, IMLS, the Alfred P Sloan Foundation, and NSF.



Daniele Fanelli

Fellow in Quantitative Methodology,
London School of Economics

He has conducted numerous influential studies on research misconduct, including analyses on retractions. He is also a member of the Committee for Ethics and Bioethics of Italy's CNR and of the Luxembourg Agency for Research Integrity.



Geoffrey Bilder

Director of Technology and
Research, Crossref

He has led the technical development and launch of a number of industry initiatives at Crossref, including Similarity Check (formerly CrossCheck), Crossmark, ORCID and the Open Funder Registry (formerly FundRef).

| C | O | P | E |



Jodi Schneider

COPE Seminar 2021



#C0PE2021

Continued Citation of Retracted Science and What We Can Do About It

Jodi Schneider

Assistant Professor of Information Sciences
University of Illinois at Urbana Champaign
@jschneider

COPE Seminar 2021

Virtual

Panel: Reducing the inadvertent spread of retracted science

2021-09-28



Jodi Schneider
jodi@illinois.edu

RETRACTION GUIDELINES

Summary

Editors should consider retracting a publication¹ if:

- They have clear evidence that the findings are unreliable, either as a result of major error (eg, miscalculation or experimental error), or as a result of fabrication (eg, of data) or falsification (eg, image manipulation)
- It constitutes plagiarism
- The findings have previously been published elsewhere without proper attribution to previous sources or disclosure to the editor, permission to republish, or justification (ie, cases of redundant publication)
- It contains material or data without authorisation for use
- Copyright has been infringed or there is some other serious legal issue (eg, libel, privacy)
- It reports unethical research
- It has been published solely on the basis of a compromised or manipulated peer review process
- The author(s) failed to disclose a major competing interest (a.k.a. conflict of interest) that, in the view of the editor, would have unduly affected interpretations of the work or recommendations by editors and peer reviewers.

What is retraction?

“Retraction is a mechanism for correcting the literature and alerting readers to articles that contain such seriously flawed or erroneous content or data that their findings and conclusions cannot be relied upon.”

COPE Council. COPE Guidelines: Retraction Guidelines. Version 2, Nov 2019
<https://doi.org/10.24318/cope.2019.1.4>

What is retraction?

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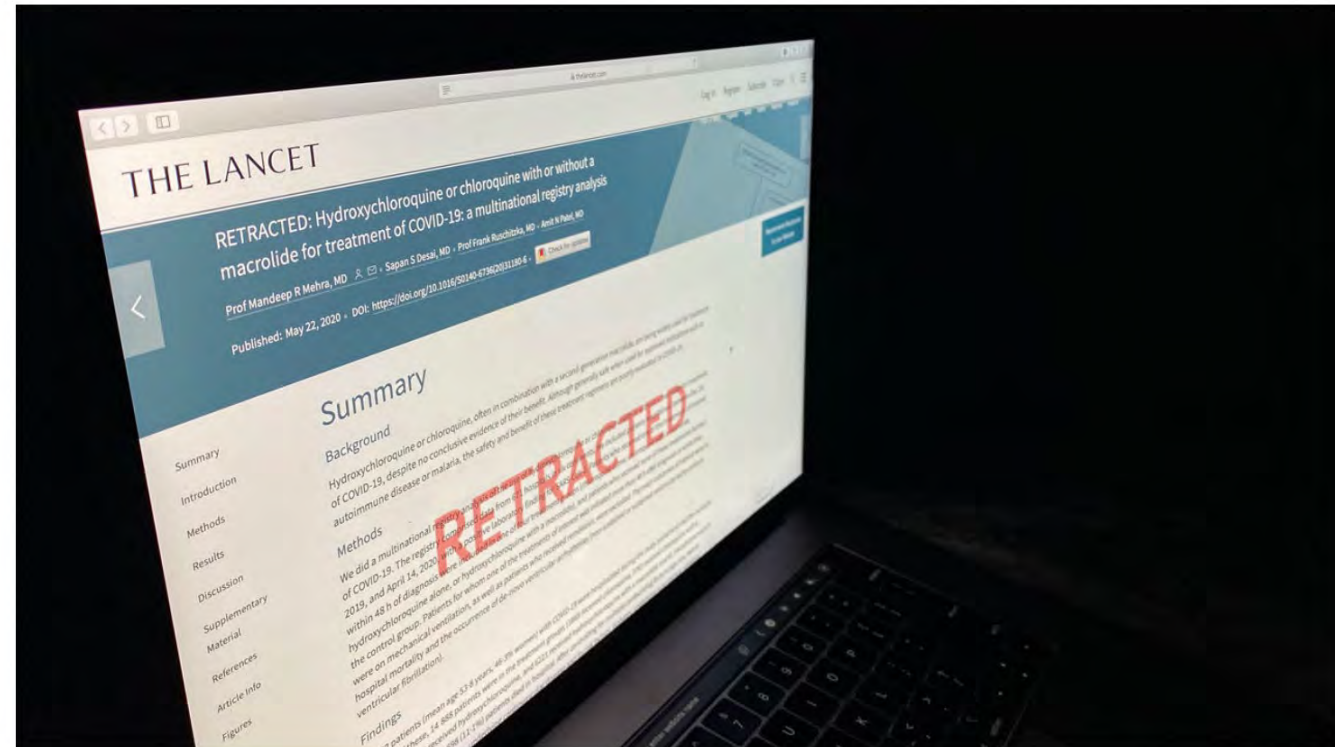
“Prompt retraction should **minimise the number of researchers who cite the erroneous work**, act on its findings, or draw incorrect conclusions such as from *‘double counting’* redundant publications in meta-analyses or similar instances.”

COPE Council. COPE Guidelines: Retraction Guidelines. Version 2, Nov 2019
<https://doi.org/10.24318/cope.2019.1.4>

Continued citation of retracted papers

Two COVID-19 articles that were retracted less than a month after they were published have over 900 citations each.

Science magazine examined 200 of the post-retraction citations to these papers and concluded that over half inappropriately cited the retracted articles.



E. PETERSEN/SCIENCE

Many scientists citing two scandalous COVID-19 papers ignore their retractions

By Charles Pillar | Jan. 15, 2021, 8:00 AM

<https://doi.org/10.1126/science.abg5806>

Few authors show awareness of retraction

94% of post-retraction citations in PubMed Central do **not** show awareness of the retraction

Tzu-Kun Hsiao & Jodi Schneider. Continued Use of Retracted Papers- Temporal Trends in Citations and (Lack of) Awareness of Retractions Shown in Citation Contexts in Biomedicine. In *Quantitative Science Studies* https://doi.org/10.1162/qss_a_00155



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Examples:

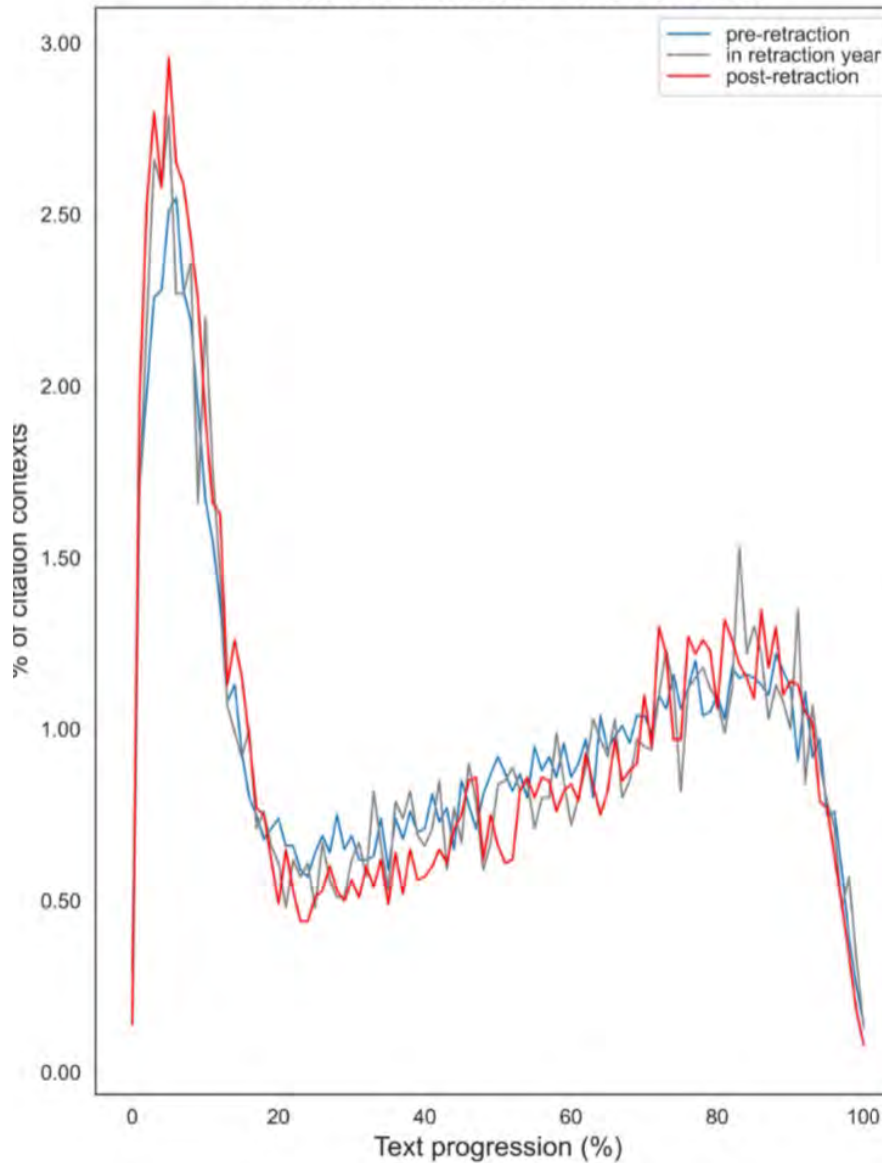
- A clinico-histopathologic study in rabbits confirmed that PRP treatment can achieve a faster wound healing rate [retracted cite].
- However, to date, only one human study has demonstrated an induction of SIRT1 mRNA level in PBMCs [retracted cite].

Tzu-Kun Hsiao & Jodi Schneider. Continued Use of Retracted Papers- Temporal Trends in Citations and (Lack of) Awareness of Retractions Shown in Citation Contexts in Biomedicine. In *Quantitative Science Studies* https://doi.org/10.1162/qss_a_00155



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All citation contexts in the main text



Few authors show awareness of retraction

- 94% of post-retraction citations in PubMed Central do **not** show awareness of the retraction
- No differences in where retracted papers are cited, before vs. after retraction

Tzu-Kun Hsiao & Jodi Schneider. Continued Use of Retracted Papers- Temporal Trends in Citations and (Lack of) Awareness of Retractions Shown in Citation Contexts in Biomedicine. In *Quantitative Science Studies* https://doi.org/10.1162/qss_a_00155



UNIVERSITY OF
ILLINOIS
URBANA - CHAMPAIGN



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FOUNDATION

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RISRS2020: Reducing the Inadvertent Spread of Retracted Science

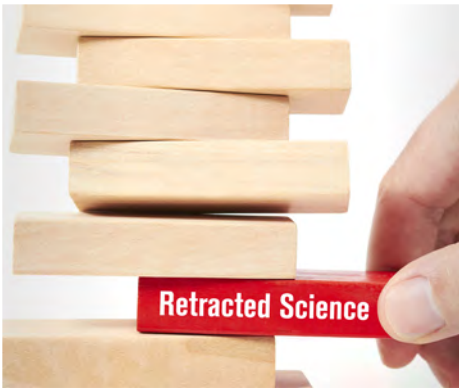
A stakeholder consultation & environment scan

- 47 interviews of stakeholders in the scientific publishing ecosystem.
- ~70 participants in a 3-part online workshop to interact, react, and reflect in real-time on the problem retractions pose and possible solutions.
- Literature review of empirical research about retraction
- Citation analysis of retracted research

Reducing the Inadvertent Spread of Retracted Science
<https://infoqualitylab.org/projects/risrs2020/>

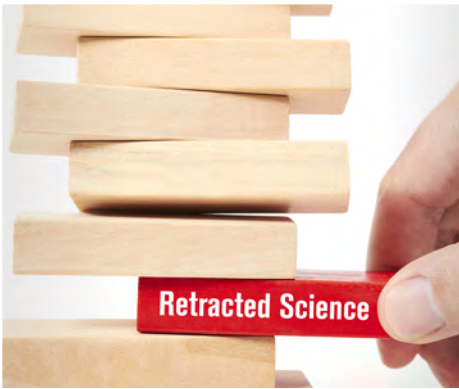


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RISRS2020 Recommendations

1. Develop a systematic cross-industry approach to ensure the **public availability of consistent, standardized, interoperable, and timely information about retractions.**
2. Recommend a **taxonomy of retraction categories/classifications and corresponding retraction metadata** that can be adopted by all stakeholders.
3. Develop **best practices for coordinating the retraction process** to enable timely, fair, unbiased outcomes.
4. **Educate stakeholders** about publication correction processes including retraction and about pre- and post-publication stewardship of the scholarly record.



RISRS2020 Report Summary



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In Review

Research Integrity and Peer Review 

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[» Learn more about In Review](#)

RESEARCH

Recommendations from the RISRS Report: Reducing the Inadvertent Spread of Retracted Science

> Jodi Schneider

DOI: [10.21203/rs.3.rs-783543/v1](https://doi.org/10.21203/rs.3.rs-783543/v1)  Download PDF

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Abstract

Background: Retraction is a mechanism for alerting readers to unreliable material, effectively removing from



BADGES



PEER REVIEW TIMELINE

CURRENT STATUS: **UNDER REVIEW**

Version 1

Posted 05 Aug, 2021

Community comments: 1

Review #3 received
Received 23 Sep, 2021



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CORREC: Communication of Retractions, Removals, and Expressions of Concern

NISO Voting Members Approve Work on Recommended Practice for Retracted Research

September 22, 2021 - The National Information Standards Organization (NISO) today announced that its proposed work item for a Communication of Retractions, Removals, and Expressions of Concern (CORREC) Recommended Practice has been approved by NISO Voting Members.

Retracted research is published work that is withdrawn, removed, or otherwise invalidated from the scientific and scholarly record. Although relatively rare, retracted research—including unsupported or fabricated data, fundamental errors, and unreproducible results—can be inadvertently propagated within the digital scholarly record through citations. The CORREC Recommended Practice is intended to help address this problem, by clearly identifying parties involved in the retraction process, along with their responsibilities, actions, notifications, and the metadata necessary to communicate retracted research.

CORREC is an output of both the recent Sloan Foundation-funded project, [*Reducing the Inadvertent Spread of Retracted Science \(RISRS\)*](#) and the 2021 NISO Plus conference, where this topic was



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For more information about the Working Group, or to volunteer to participate, please contact the NISO Office at nisohq@niso.org.

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Daniele Fanelli

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THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■

Why we should not introduce a “removal” retraction category

A summary and commentary of RISRS’s subcommittee on retraction taxonomies

Daniele Fanelli



The RISRS sub-committee

Recommend a taxonomy of retraction categories/classifications and corresponding retraction metadata that can be adopted by all stakeholders.

It recommended a simplification of existing categories:

- Correction
- Expression of Concern
- Retraction with Replacement
- Retraction
- Withdrawal

- But dissent on introducing a 6th category, “removal”.

Why?

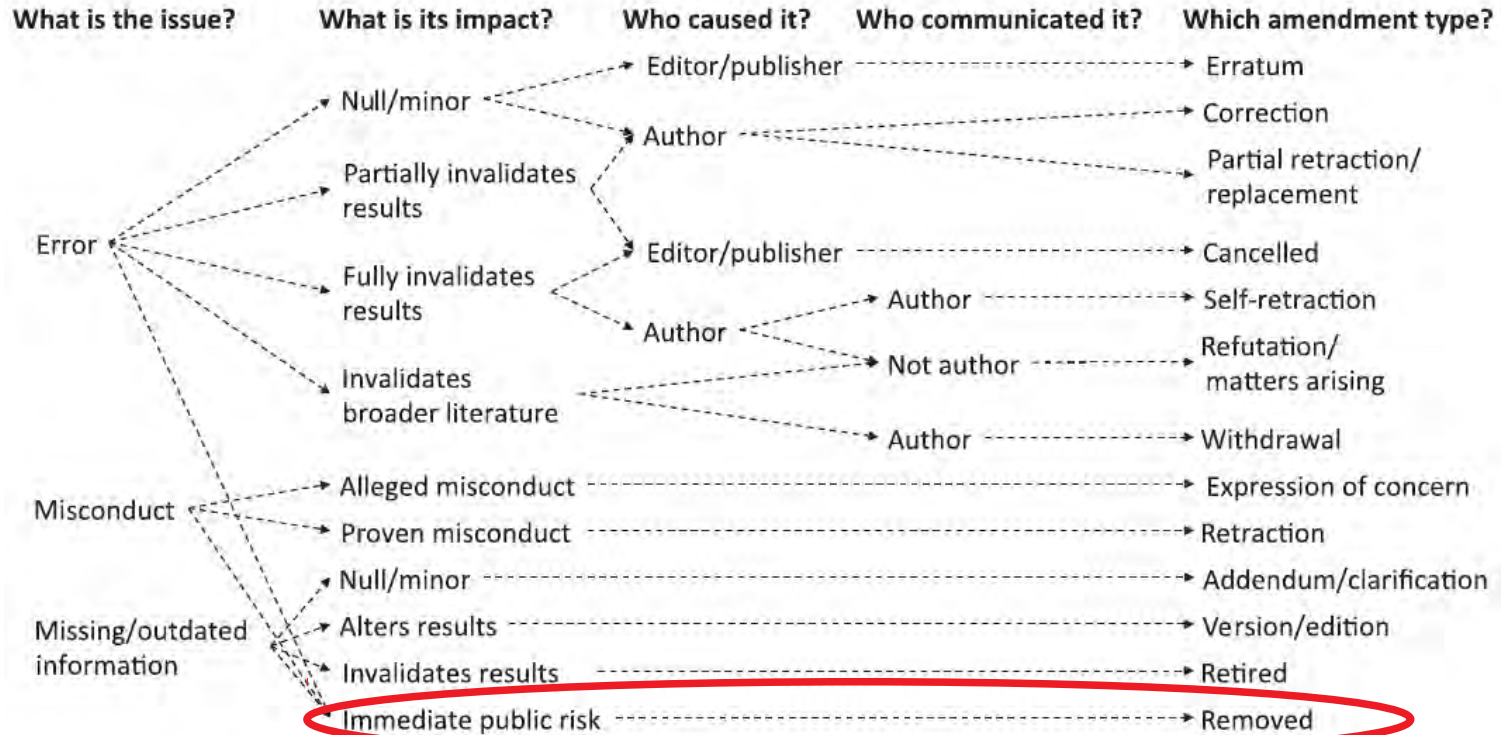


FIGURE 1 Flow chart illustrating how each amendment type may be identified by answers to at most four factual questions. These questions and answers summarize the dimensions and conditions described in Table 1 and in the text

(Fanelli, Ioannidis, Goodman 2018, Eur J Clin Inv)

Arguments for/against a “removal” in the report

For: Those articles that contain content that seriously violates ethical norms and standards, such as individuals’ rights to privacy, are determined to cause high-level national or international security risks, or that perpetuate harmful inequities, **such as racism** cannot simply be retracted and allow the original article, even with retraction labeling or watermark, to remain accessible.

Against: [...] The term “removal” represents a new category of retraction, which it is **not the task of this committee to determine.** [...] Determining **new forms of retractions** and new ethical norms around retraction is a task for professional society and ethics committees (e.g., COPE, CSE) and, where such new norms and retraction types to be introduced, the present taxonomy could be easily expanded to include a new term.

But IMO we really shouldn’t have any kind of removal in science.

Scholars are increasingly under attack



Journal of Controversial Ideas

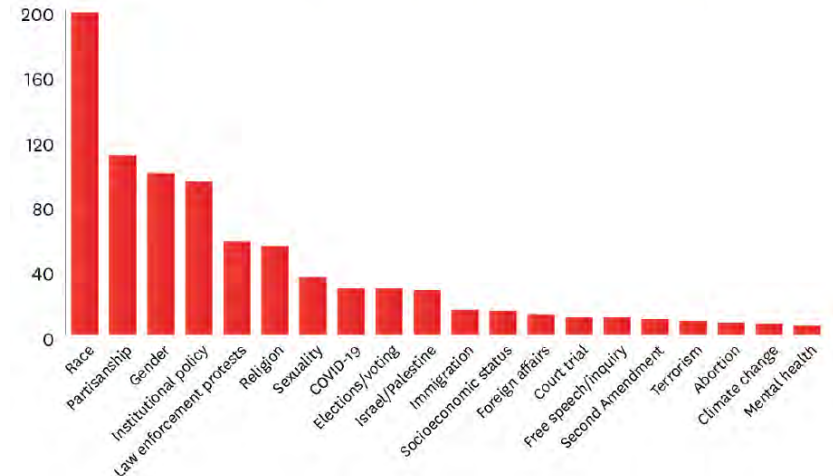
(ISSN: 2694-5991) Open Access Journal

Welcome to the website of the *Journal of Controversial Ideas*, the first open access, peer-reviewed, interdisciplinary journal specifically created to promote free inquiry on controversial topics.

The *Journal of Controversial Ideas* offers a forum for careful, rigorous, unpolemical discussion of issues that are widely considered controversial, in the sense that certain views about them might be regarded by many people as morally, socially, or ideologically objectionable or offensive. The journal offers authors the option to publish their articles under a pseudonym, in order to protect themselves from threats to their careers or physical safety. We hope that this will also encourage readers to attend to the arguments and evidence in

See also report by Foundation for Individual Rights in Education 2021, [thefire.org](https://www.thefire.org)

Number of scholars targeted for expression about the following topics:



“Non-epistemic” retractions already occur

- Bruce Gilley, Political Science, Portland State University, 2017. His paper, **The Case for Colonialism**, was retracted after academics initiated a petition calling to retract, signed by thousands, and then both Gilley and the journal editor received what they considered to be credible death threats.
- Stephen Gliske, a neuroscientist at University of Michigan, published a paper presenting **a new theory of the development of gender dysphoria**. It offended trans activists and their academic allies, who launched a retraction petition that was ultimately successful.
- Ted Hill, Math professor, Georgia Tech, wrote a paper offering an **evolutionary explanation for the male variability hypothesis** (the idea that human males are more variable than human females on many attributes). It was accepted for publication at a journal; this evoked protests and outrage, which had the effect of pressuring the accepting journal to “unaccept” the article. He then had it accepted at another journal, which evoked more outrage (the manifest substance of which involved the process by which the paper was accepted), and it was again unaccepted.

(Stevens, Jussim, Honeycutt 2020, *Societies* 10:82)

Who draws the line and where, between legitimate but controversial scholarship and “perpetuating harmful stereotypes”?

Even 'ancient' papers are retracted because offensive

RETRACTION

Observations on Homosexuality Among University Students: Retraction

Talbott, John A. MD

The Journal of Nervous and Mental Disease: December 2020 - Volume 208 - Issue 12 - p 915
doi: 10.1097/NMD.0000000000001273

BUY

ERRATUM

Metrics

Erratum

The editor of *The Journal of Nervous and Mental Disease* retracts the article "Observations on Homosexuality Among University Students" by Glover (Vol. 113, pp. 377–387, May 1951). See the scanned pdf of the original article at <http://links.lww.com/JNMD/A109>. The retracted original manuscript can be accessed online at https://journals.lww.com/jonmd/Citation/1951/11350/OBSERVATIONS_ON_HOMOSEXUALITY_AMONG_UNIVERSITY.1.aspx.

Simon LeVay, PhD, who wrote the groundbreaking study of brain differences between homosexual and heterosexual men almost 50 years ago (LeVay, 1991) has asked that the journal retract an article written 70 years ago (Glover, 1951). The 1951 Glover article supports long discredited beliefs, prejudices, and practices (e.g., conversion therapy) and will be retracted as requested. It will, however, be kept in the journal's archives for its historical value.

As an editor of scientific journals for more than 50 years, I have witnessed the changes brought about by

- 2) Proof that values, opinions and sensitivities change (and will continue doing so)
- 3) Scientific articles have documentary value beyond their scientific value
- 4) Even if "removed", the article will never actually "disappear", but become evidence of conspiracy

In summary:

- 1) Editors who wish to "cancel" an article already have means to do so.
- 2) A formal "removal" category would:
 - a) invite arbitrary use
 - b) formalize scientific "book burning"
 - c) without achieving it practically

email@danielefanelli.com

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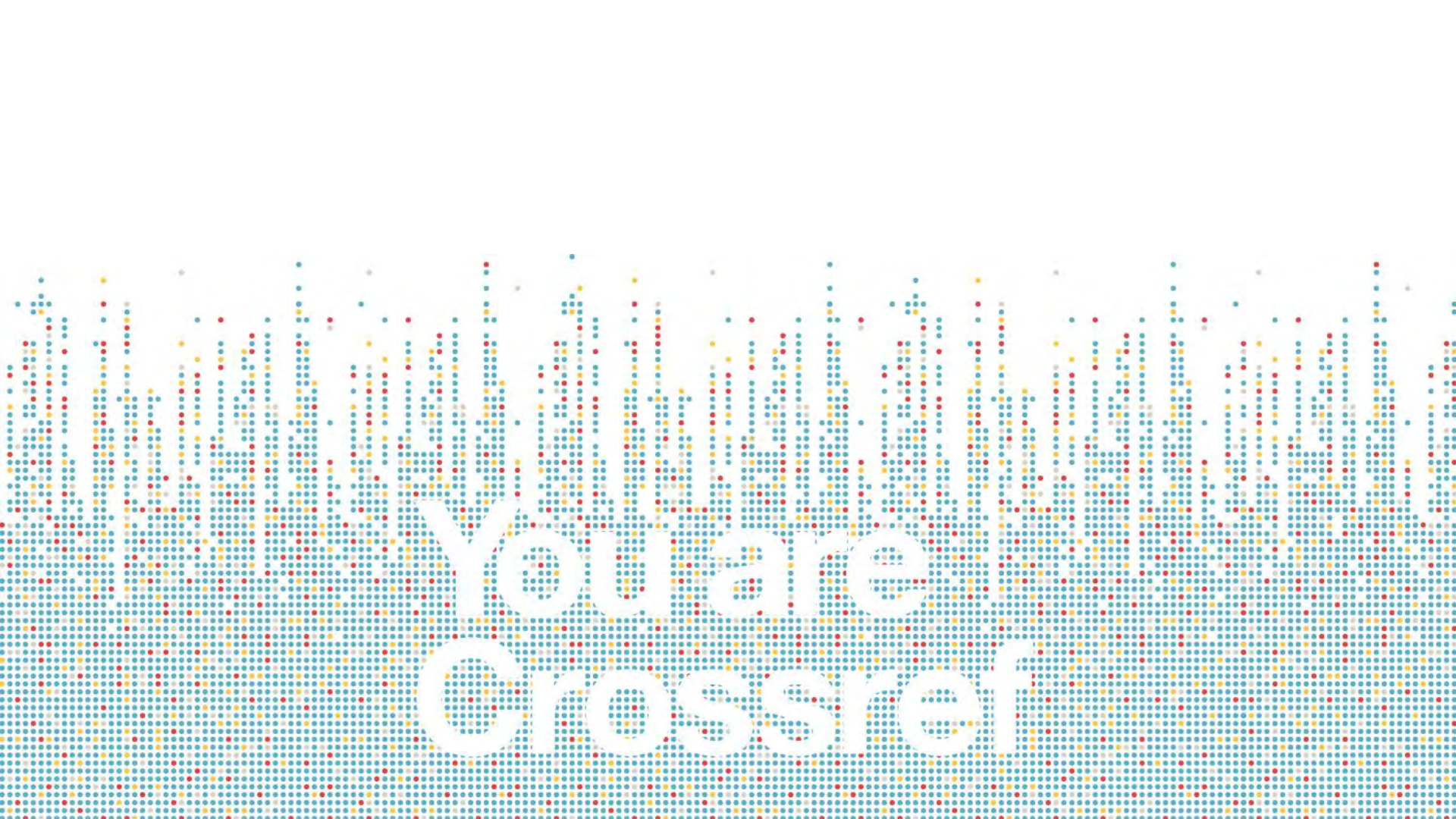


Geoffrey Bilder

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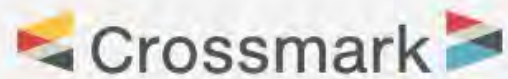
#C0PE2021



Is CrossMark star-crossed?

What we've learned from trying to get publishers to do the same thing the same way.





[Home](#) > [Find a service](#) > **Crossmark**

The Crossmark button gives readers quick and easy access to the current status of an item of content, including any corrections, retractions, or updates to that record.



Geoffrey Bilder
Director of Technology & Research
gbilder@crossref.org
@gbilder



APRIL 17, 2008

CROSSREF ANNOUNCES CROSSCHECK PLAGIARISM DETECTION SERVICE

Earlier this week CrossRef announced an agreement with iParadigms, LLC to launch the CrossCheck service to aid in verifying the originality of scholarly content. Following on the success of CrossRef's recent pilot of CrossCheck, the service is scheduled to go live in June.

CrossRef is partnering with iParadigms, LLC to offer our members the opportunity to verify the originality of works submitted for publication using the iThenticate service to check against a vast database of proprietary as well as open web content. Until now, there was no automated way to check submissions against previous publications because the published literature had not been indexed and "text fingerprinted" for this purpose. The CrossCheck database will include the full-text journals of leading academic publishers, and is expected to grow very rapidly over the coming months as CrossRef member publishers sign up for the service.

CrossCheck will be available to all CrossRef members who opt to contribute their content to the database. For more information, see the [press release](#). Or contact CrossRef's new product manager, Gabe Boucher, at gboucher@crossref.org.

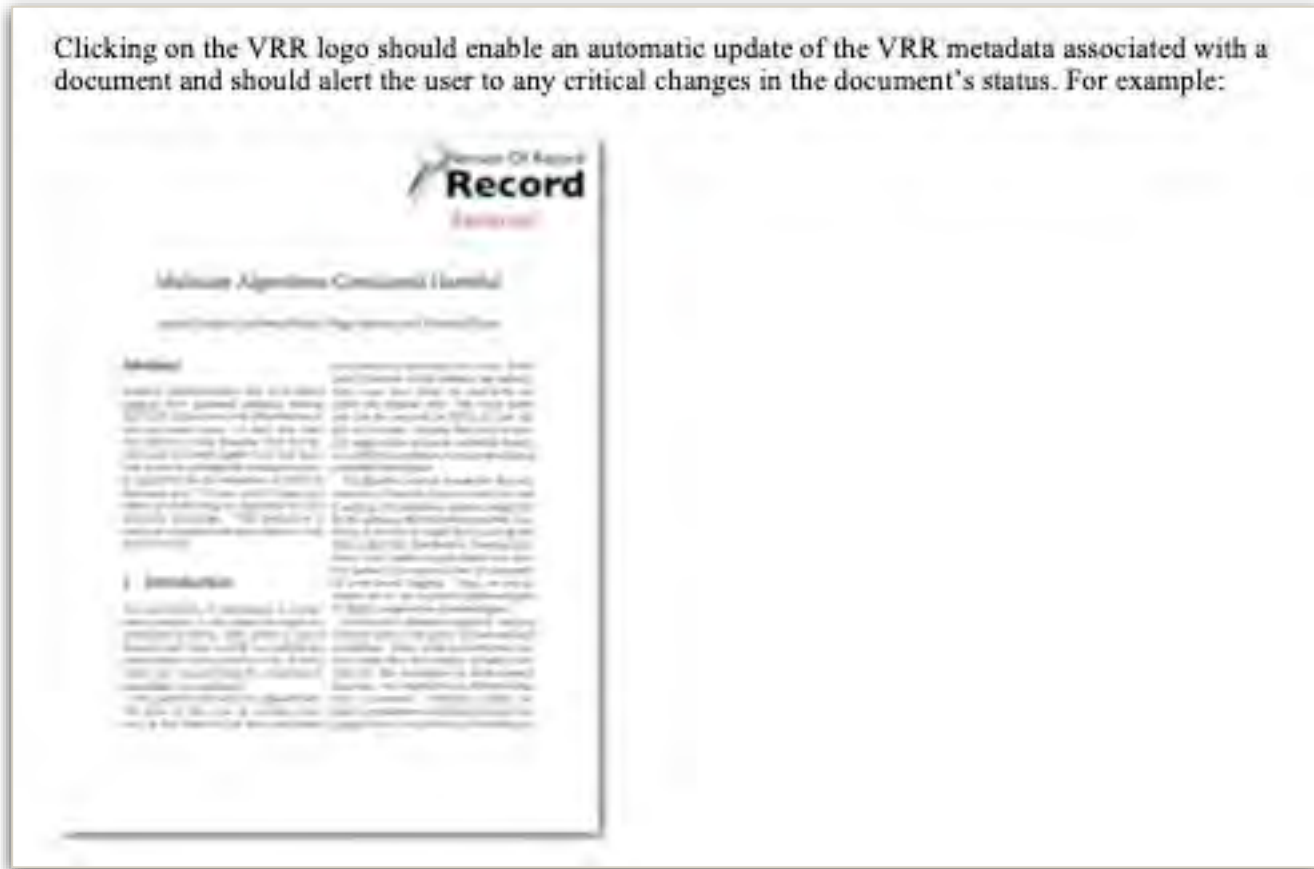
**Product Recall-
Important**

**Oxford Handbook of
General and Adult
Nursing**

We have been advised that this title contains errors.
Would any customers who have purchased this title
please return it for a full refund.

late 2007

Clicking on the VRR logo should enable an automatic update of the VRR metadata associated with a document and should alert the user to any critical changes in the document's status. For example:



CrossMark™ Update Identification Service Launches to Alert Readers to Changes in Scholarly Content

27 April, Lynnfield, MA USA—CrossRef today launched the CrossMark update identification service. The CrossMark system will alert researchers to important changes that may occur to published scholarly content and will highlight important publication record information. The CrossMark service has been piloted by several CrossRef member publishers for the past year.

"Finding update and corrections for scholarly documents can be a frustrating business for researchers, especially in an environment where content is available from so many channels," said CrossRef Executive Director Ed Pentz. "Scholarly publishers routinely note changes to their content, but how this is done varies from publisher to publisher, which can make them difficult to locate. Before CrossMark, researchers had no way to tell if any changes had occurred to a PDF that they had downloaded months earlier. Now by simply clicking a single, recognizable logo, any reader can have access to this important information."



CrossMark

← click for updates

Clicking on the CrossMark logo launches a pop-up box that provides status information, for example, that the document is up to date, or that it has a correction, update, retraction, or other change that could affect the interpretation or crediting of the work. It also provides a permanent link, via the CrossRef Digital Object Identifier (DOI) to both the publisher-maintained version of the content and the update.

Correction dated 2006-12-1:
<http://dx.doi.org/10.1107/S090744490604246>

This document is maintained by the publisher:

Document: Application of the use of high-throughput technologies to the de...

Publication: Acta Crystallographica Section D Biological Crystallography

Published: 1 October, 2006

CrossRef DOI Link to Publisher-Maintained copy:
<http://dx.doi.org/10.1107/S0907444906030915>

CrossMark Policy: International Union of Crystallography (IUCr)

2006

2011

2016

2021

2026

2005

2007

2008

2009

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

2021

2022

2023

2024

2025

2026

2027

2028

2029

^ All Events

◆ Similarity Check (née CrossCheck) WG started

Jan 2007

◆ CrossMark WG (née Version of Record Record) started

Jul 2007

◆ Similarity Check (née CrossCheck) announced

Apr 2008

◆ CrossMark launches

Apr 2012

◆ Crossmark fees removed

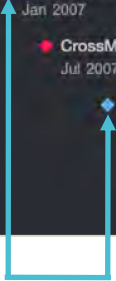
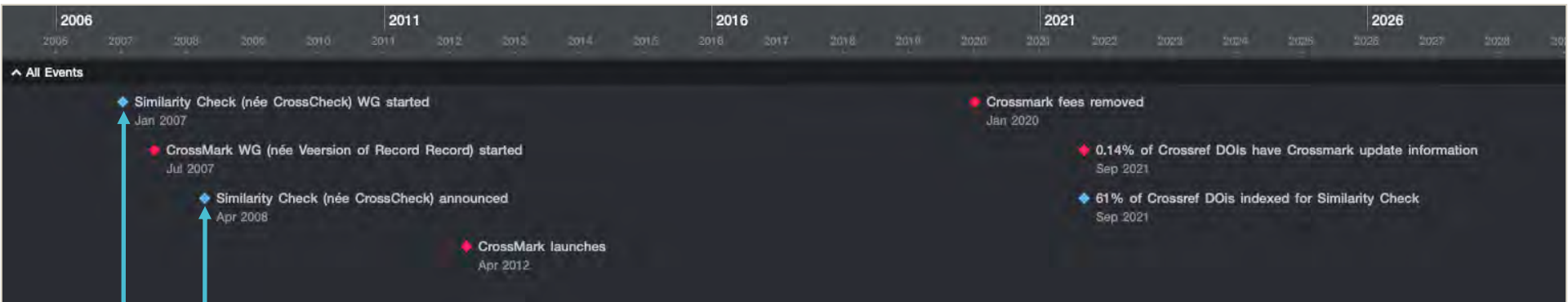
Jan 2020

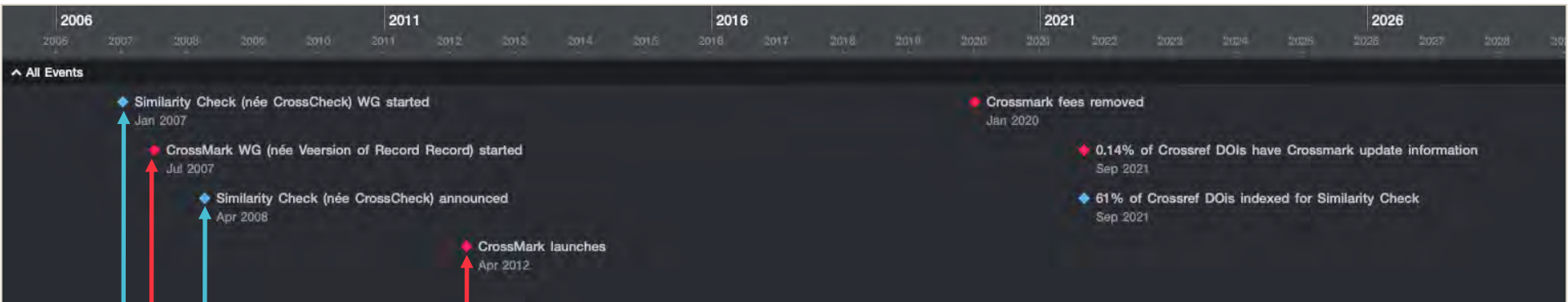
◆ 0.14% of Crossref DOIs have Crossmark update information

Sep 2021

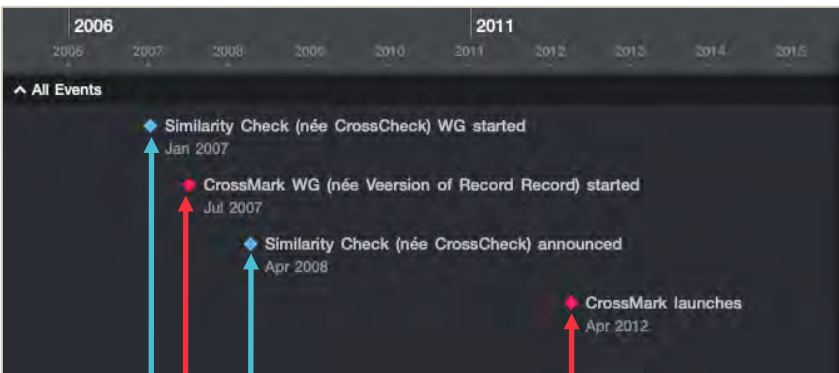
◆ 61% of Crossref DOIs indexed for Similarity Check

Sep 2021

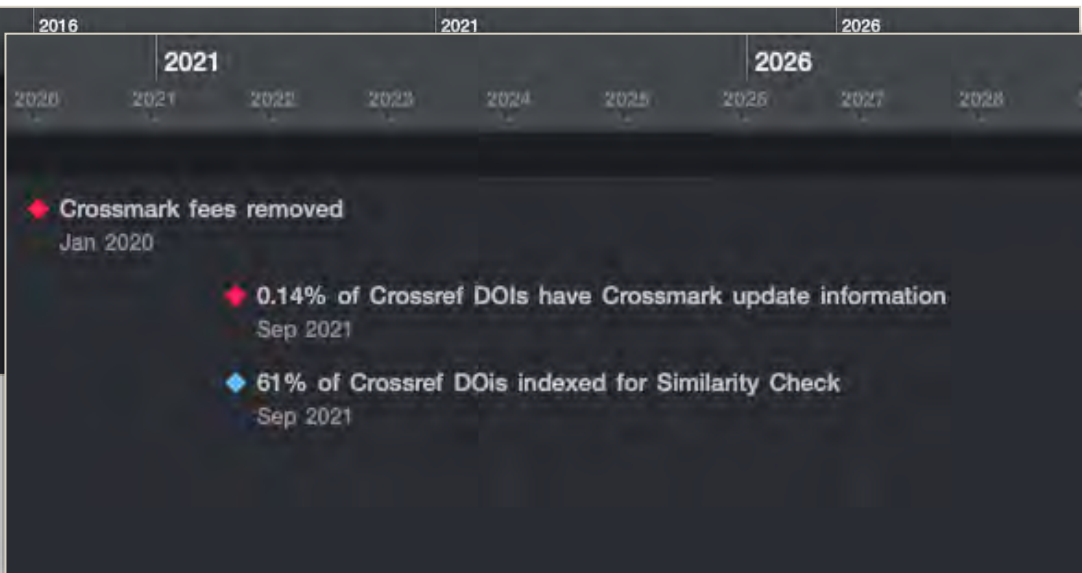




^ All Events

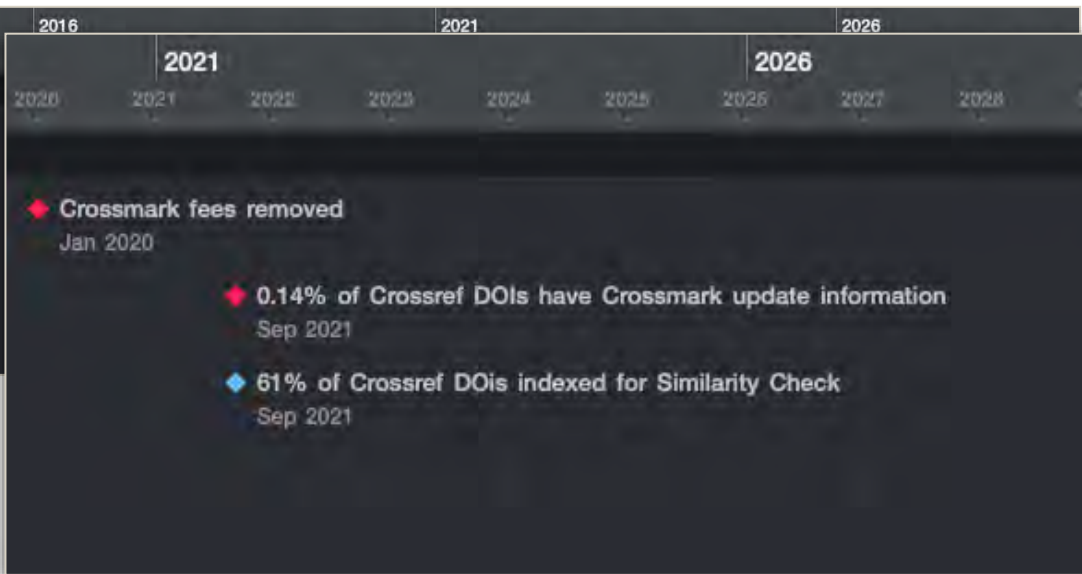


What happened here?





What happened here?



Why such different results?

What happened between
2008 and 2012?



We argued.

About the scale of the problem

About the stigma

About the name of the service

About the design of the logo

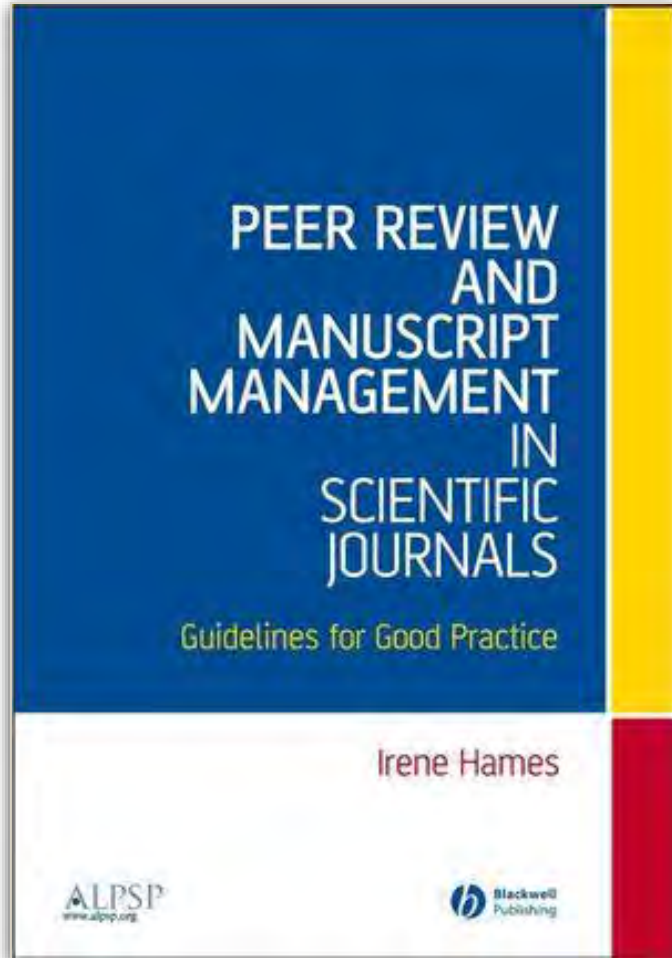
But mostly...



About recommended practice

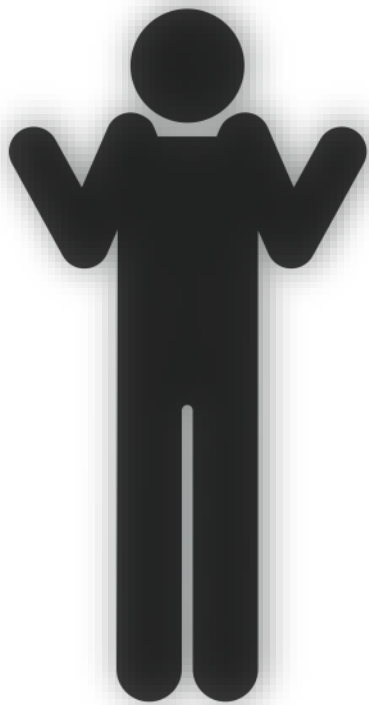
About the taxonomy

Recommended practice



- “Editors and journals have a duty to keep the scholarly record sound and free from fraudulent or incorrect data.”
- Links should set up between the notice and the paper it refers to.
- Corrections should be in “citable form”
- [notices should only be issues] “to correct errors that affect the content of a paper, that may influence the interpretation of the work or its repetition, or that incorrectly attribute credit for the work.”
- Removals should be avoided except in special circumstances.
- Replacements should be avoided altogether.

Which brings us back to the
taxonomy...



We eventually gave up.

We decided to not enforce a taxonomy and to see what emerged.

With predictable results.

<https://api.crossref.org/works?facet=update-type:25>

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"erratum": 45810,  
"new_version": 22666,  
"retraction": 6619,  
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"withdrawal": 1944,  
"addendum": 819,  
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"Retraction": 4,  
"invited-article": 2
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Registered CrossMark update types as of September 2021

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erratum	45810
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retraction	6619
new_edition	5747
corrigendum	2389
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expression-of-concern	6
Retraction	4
invited-article	2

addendum | ə'dɛndəm |

noun (plural **addenda** | ə'dɛndə |)

1 an item of additional material added at the end of a book or document, typically in order to **correct**, **clarify**, or supplement something.

corrigendum | ,kɒrɪ'dʒɛndəm |

noun (plural **corrigenda** | ,kɒrɪ'dʒɛndə |)

a thing to be **corrected**, typically an error in a printed book.

correct | kə'rekt |

verb [*with object*]

put right (an error or fault): *the Council issued a statement correcting some points in the press reports.*

- mark the errors in (a written or printed text)

erratum | ɛ'rɑ:təm |

noun (plural **errata** | ɛ'rɑ:tə |)

an error in printing or writing.

- (**errata**) a list of **corrected** errors appended to a book or published in a subsequent issue of a journal.

retraction | rɪ'trækʃ(ə)n |

noun

1 [*mass noun*] the action of drawing something back or back in.

2 [*count noun*] a **withdrawal** of a statement, accusation, or undertaking.

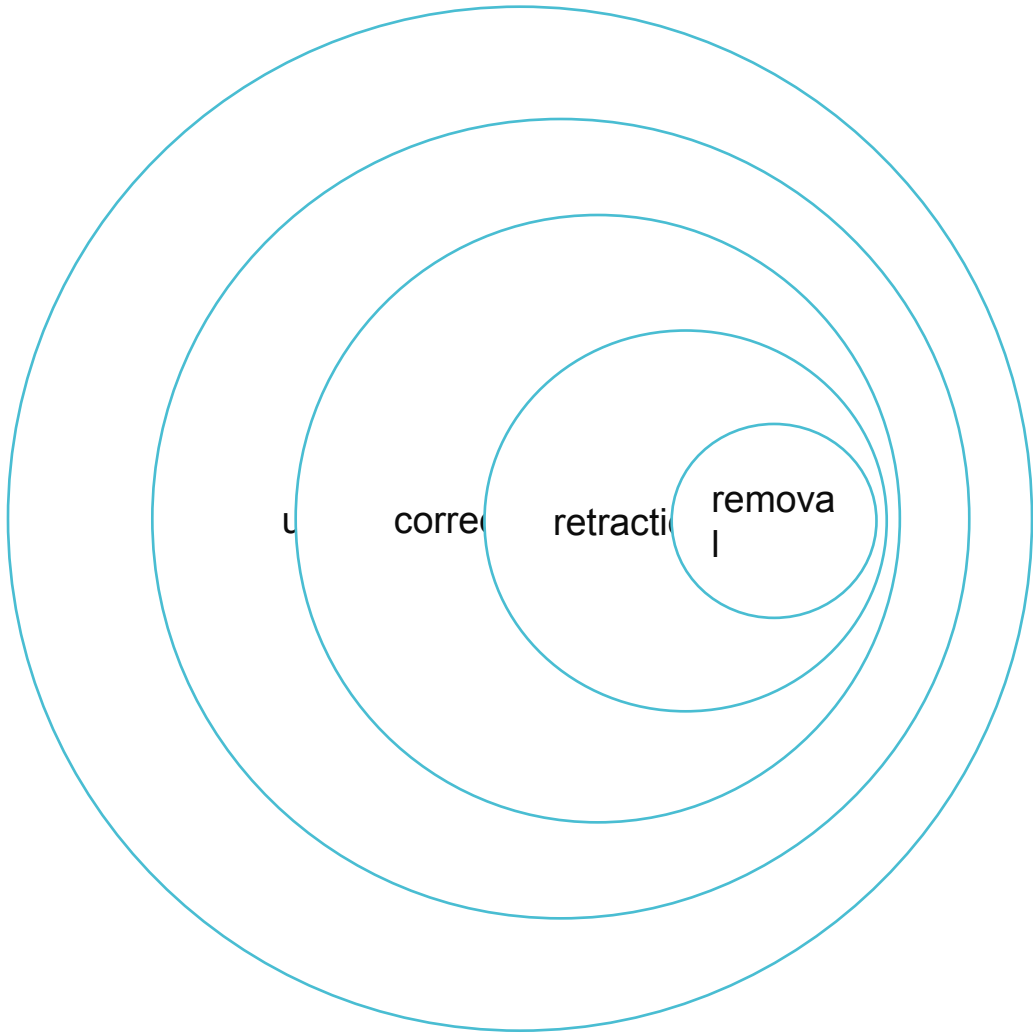
withdraw | wɪð'drɔ: |

verb (past **withdrew** | wɪð'dru: | ; past participle **withdrawn** | wɪð'drɔ:n |)

1 [*with object*] remove or take away (something) from a particular place or position

publish
er note

comme
nt



And so in 2014, we
standardised.



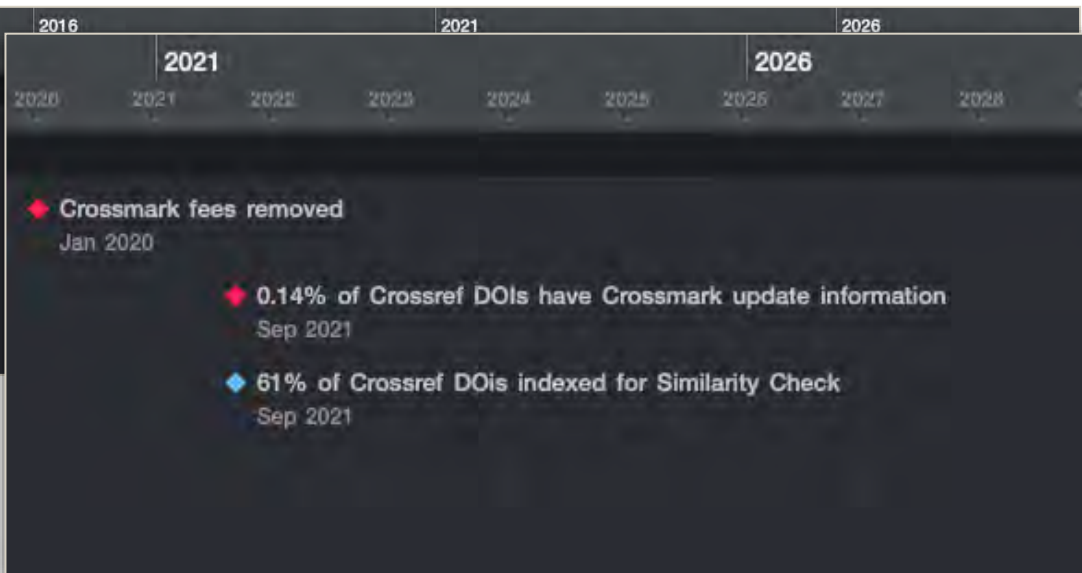
- addendum
- clarification
- correction
- corrigendum
- erratum
- expression_of_concern
- new_edition
- new_version
- partial_retraction
- removal
- retraction
- withdrawal

Why such different
results?





What happened here?



Why such different results?

Stigma needs to be addressed



What have we learned?



Publisher workflows treat corrections/retraction on an ad-hoc basis.

We should focus on machine
actionability instead of UX.

Required metadata should include a summary.

Corrections to the scholarly literature
should be open.

Keep the taxonomy simple.



- correction (combine errata & corrigenda)
- retraction
 - expression of concern
 - partial retraction
 - self retraction
- removal

Do not charge extra for doing something that you consider to be best practice.

We we can harness the community to make the stigma of **not** reporting retractions greater than the stigma of reporting them (HT RetractionWatch)

And some personal
observations



The retraction notification problem will not be solved until we address liability issues.

The root of the problem of publication misconduct fraud is the use of publications as a proxy for productivity and the resulting publication pressure.



Thanks

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Director of Technology & Research
@gbilder





PROMOTING INTEGRITY IN SCHOLARLY
RESEARCH AND ITS PUBLICATION

QUESTIONS AND ANSWERS?

THANK YOU

| C | O | P | E |

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