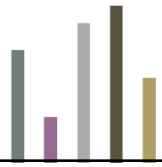
COPE COMMITTEE ON PUBLICATION ETHICS

Publishing and ethics: Retractions

Chris Graf, COPE (Committee on Publication Ethics), and Wiley

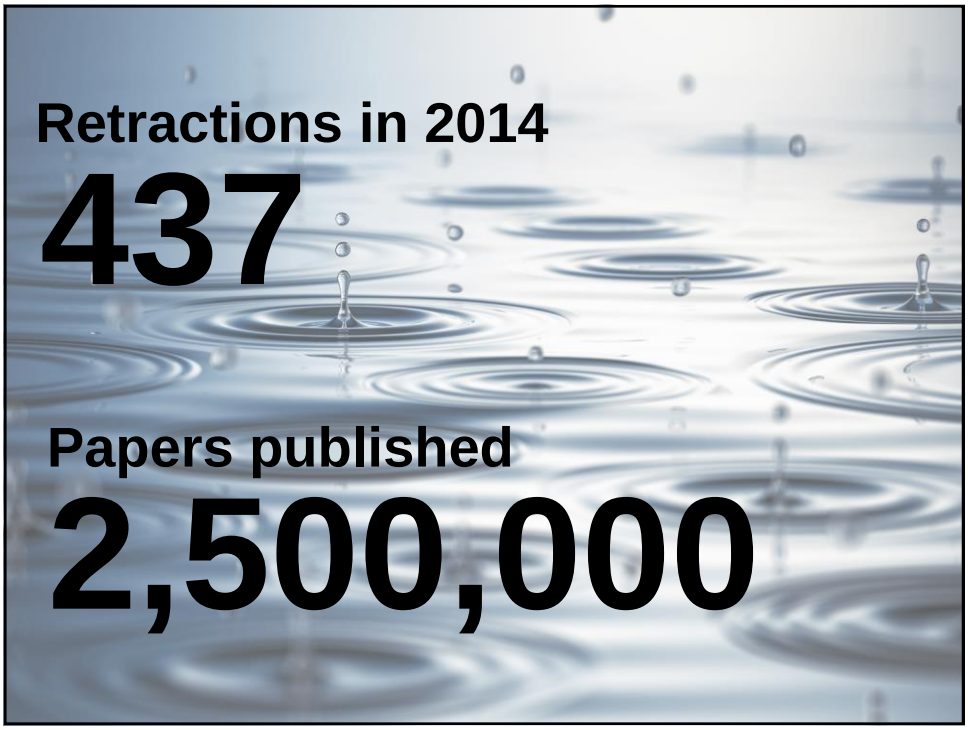
Disclosures: CG works for Wiley and benefits from the company's commercial success. Wiley paid CG's travel expenses. CG receives no form of compensation from COPE for his voluntary role as COPE Councillor and Vice Chair (Elect).

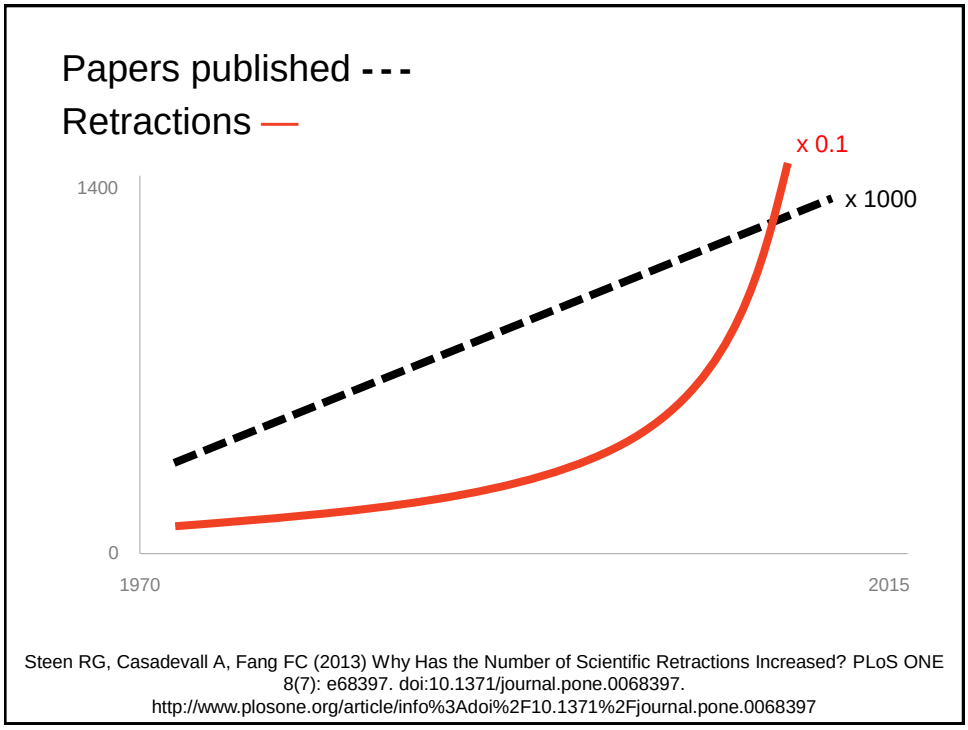


> There is reasonable evidence that scientific misconduct is both common and under-reported.

Why Has the Number of Scientific Retractions Increased?

Steen RG (2013) PLoS ONE 8(7): e68397. doi:10.1371/journal.pone.0068397/

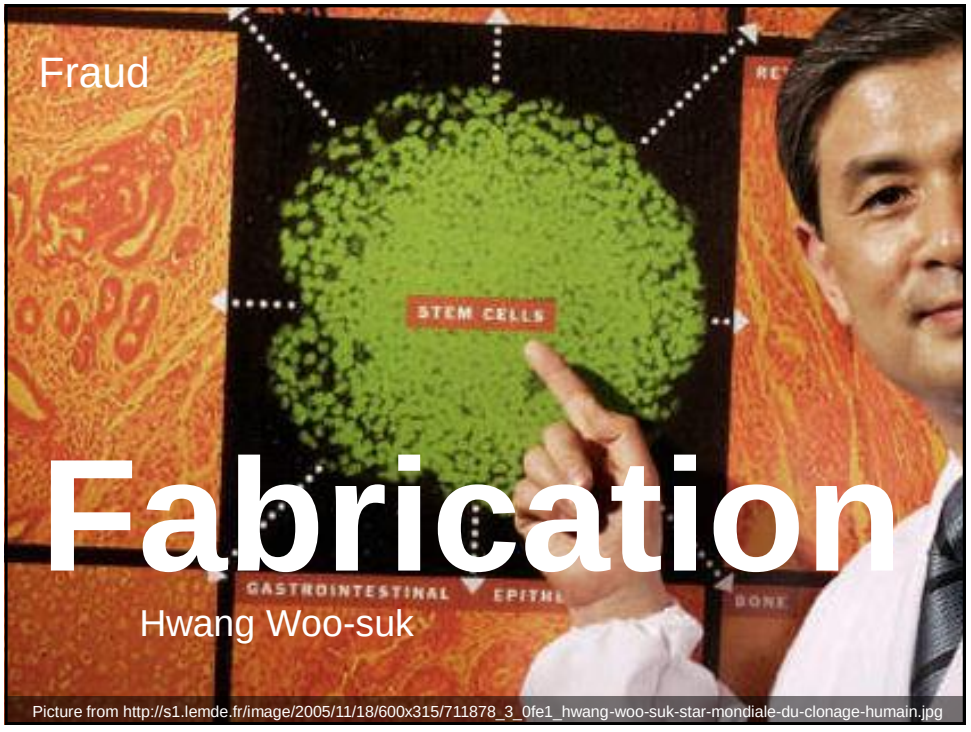




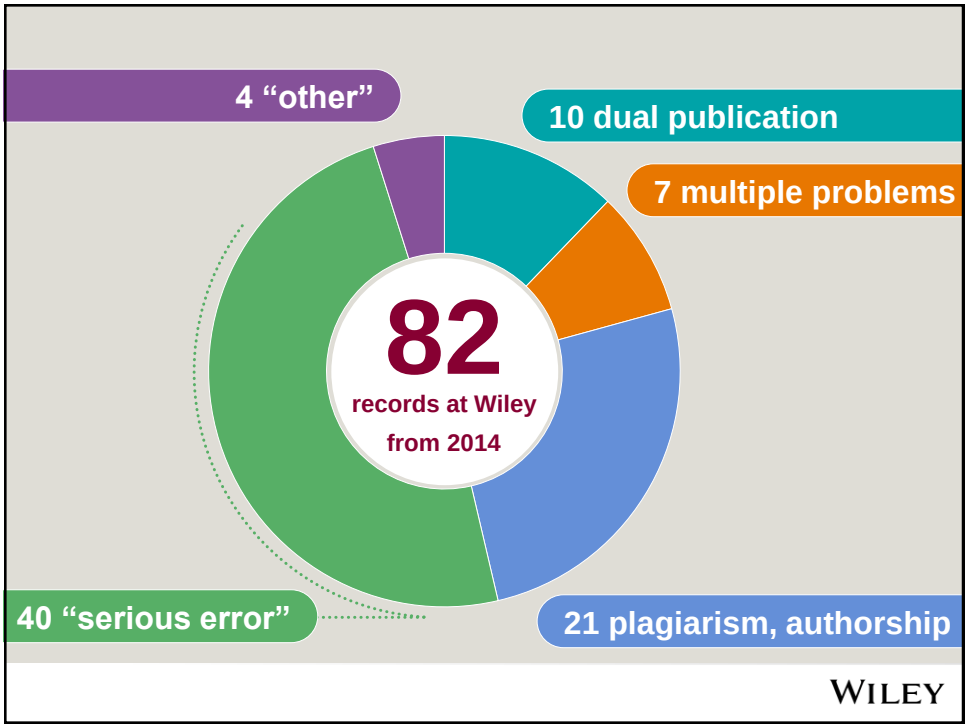
Steen RG, Casadevall A, Fang FC (2013) Why Has the Number of Scientific Retractions Increased? PLoS ONE 8(7): e68397. doi:10.1371/journal.pone.0068397. http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0068397

Errors: Inadequate record keeping

We have been using the same database… When our new results were implausible… I found we had failed to load 8 files into the dataset. ”



Picture from http://s1.lemde.fr/image/2005/11/18/600x315/711878_3_0fe1_hwang-woo-suk-star-mondiale-du-clonage-humain.jpg


4 “other”
10 dual publication
7 multiple problems
82
records at Wiley
from 2014
40 “serious error”
21 plagiarism, authorship
WILEY


>25% identified by 6 months
>60% acted on in 6 months
>50% resolved 3 years after publication
6 cases were >10 years old
(the oldest: 14 years)
It’s hard to generalise
WILEY

Retraction Watch

Tracking retractions as a window into the scientific process

"Truly extraordinary," "simply not credible," "suspiciously sharp:" A STAP stem cell peer review report revealed

with 26 comments

Retraction Watch readers are of course familiar with the STAP stem cell saga, which was punctuated by tragedy last month when one of the authors of the two now-retracted papers in *Nature* committed suicide.

In June, *Science*'s news section reported:

> Sources in the scientific community confirm that early versions of the STAP work were rejected by *Science*, *Cell*, and *Nature*.

Parts of those reviews reviews have surfaced, notably in a RIKEN report. *Science*'s news section reported:

> For the *Cell* submission, there were concerns about methodology and the lack of supporting evidence for the extraordinary claims, says [stem cell scientist Hans] Schöler, who reviewed the paper and, as is standard practice at *Cell*, saw the comments of other reviewers for the journal. At *Science*, according to the 8 May RIKEN investigative committee's report, one reviewer spotted the problem with lanes being improperly spliced into gel images. "This figure has been reconstructed," the RIKEN report quotes from the feedback provided by a *Science* reviewer. The committee writes that the "lane 3" mentioned by the *Science* reviewer is probably the lane 3 shown in Figure 1i in the *Nature* article. The investigative committee report says [co-author Haruko] Obokata told the committee that she did not carefully consider the comments of the *Science* reviewer.

The entire reports, however, have not been made available. Retraction Watch has obtained the full text of the editor's cover letter and reviews of the rejected *Science* paper. The reviews are full of significant questions and doubts about the work, as would be expected in a rejection. We present them here, to fill in some of the gaps and help readers consider how the research eventually made it through peer review:

21 August 2012

Dr. Haruko Obokata

Anesthesiology

[ROOM NUMBER REDACTED]

Retraction Watch

Tracking retractions as a window into the scientific process

JAMA issues mega-correction for data breach letter due to "wording and data errors"

with 2 comments

A *JAMA* letter published in April on data breaches accidentally included some data that shouldn't have been published, either — specifically, "wording and data errors" that affected five sentences and more than 10 entries in a table. One result — a reported increase in breaches over time — also went from statistically significant to "borderline" significant, according to the first author. (So yeah, this post earns our "mega correction" category.)

According to an author, an "older version" of a table made it into the letter, "Data Breaches of Protected Health Information in the United States," which was corrected in the journal's June 23/30 issue.

The letter and table in question detail 949 breaches of "unencrypted protected health information." The letter says the number of breaches has increased from 2010 to 2013; the original article claimed that the P value on that increase was <.001, but the correction says it's really 0.07. The original says 29.1 million personal records were affected in those breaches; the real number is 29.0. And so on.

For a full comparison with the now-corrected table, here's an archived version of the original, from April 15, 2105. The correction note details the differences between the two, and a few changes to sentences in the results and discussion sections of the paper.

First author Vincent Liu of Kaiser Permanente Division of Research, Oakland, California, briefly explained to us how they handled the mistake:

> The corrections resulted from the inclusion of an older version of the Table (from a prior revision) in the final Letter. Once we became aware that the older version was published, we corrected the Table with the editorial staff. The overall study findings remained consistent.

Liu acknowledged that the first data point presented in the table — a supposed increase in the number of data breaches from 2010-2013 — is now no longer statistically significant:

> Most of the changes in the Table were minor, for example, related to the confidence intervals; these values then cascaded through the text and required text revision when updated. One p-value went from significant to borderline significant and the corresponding text was revised accordingly.

Here is the correction notice in full, now appended to the online version of the study:

Retraction Watch

Tracking retractions as a window into the scientific process

Can't spell Novartis without VART: Drug study retracted for conflict of interest, data issues

without comments

A major scandal in Japan over the Novartis hypertension drug valsartan has resulted in a retraction from the *Journal of Human Hypertension*.

Frequent Retraction Watch subject Hiroaki Matsubara resigned his post at Kyoto Prefectural University in 2013, after his work on valsartan was shown to be riddled with data errors and undisclosed conflicts of interest.

Also that year, suspicions about Chiba University hypertension researcher Issei Komuro's work were first raised by an anonymous blog, which detailed numerous image manipulations in the researcher's published works. Komuro, who frequently collaborated with Matsubara, has been a senior author on a number of valsartan papers, including the now-retracted one, which reported the results of Novartis-sponsored Valsartan Amlodipine Randomized Trial in 2011 without reporting the Novartis funding.

The paper, which has been cited three times, according to Thomson Scientific's Web of Knowledge, had already been subject to a correction in 2013:

> The authors would like to correct the affiliation of Nobuo Shirahashi, who was included in the acknowledgements.
>
> Therefore, the last sentence of the acknowledgements:
>
> 'Statistical analysis organization: Nobuo Shirahashi (Clinical Epidemiology, Osaka City Graduate School).'
>
> Should read: 'Statistical analysis organization: Nobuo Shirahashi (Novartis Pharma KK).'

Forbes reported in September 2014:

> The Chiba University investigation obtained testimony from VART investigators and found multiple problems with the paper, including the surreptitious involvement of a Novartis employee. (A similar problem occurred in the Matsubara trials.) The investigation concludes that the VART paper in *Hypertension Research* should be retracted.

Retraction Watch

Tracking retractions as a window into the scientific process

Ethics dispute forces retraction of paper on Hep C in Japanese leper colony

without comments

Here's a case of retraction being a hammer when a scalpel might have been better.

The authors of a 2011 paper in the *Journal of Clinical Microbiology* looking at transmission of hepatitis C in a former leper colony in Japan have retracted the article because an ethics panel in that country objected to the scientists' use of fetal tissue.

The article involves a controversial aspect of modern Japanese history — the country's efforts to eradicate leprosy, or Hansen's disease, by isolating patients in a string of state-run sanatoriums. The policy was eventually realized to be unnecessary and ruled unconstitutional in 2001, triggering a wave of apologies to patients and their families.

The paper, "Molecular Epidemiology of a Hepatitis C Virus Outbreak in a Leprosy Sanatorium in Japan," reported on an outbreak of Hep C at National Sanatorium Oku-Komyo-En, one of 13 such facilities. According to the researchers, the sanatorium, on a small island, was plagued by a surge in Hep C infections that lasted from 1940 to 1999. Hep C causes cirrhosis and liver cancer, and rates of those two diseases also spiked during that period.

The Japanese researchers wanted to see how patients in the colony were contracting Hep C, which generally passes from person to person by sexual contact, or the sharing of contaminated needles and other items. Their theory was that the route of transmission was nosocomial — in other words, health care workers on the island were infecting patients through cross-contamination.

And they appeared to be correct. As the authors wrote:

> Most of the patients in the sanatorium had received regular intravenous drugs for treatment of pain and subcutaneous injection of chaulmoogra oil for the treatment of leprosy using nondisposable syringes and needles. Furthermore, leprosy is a dermatological disease, and patients' skin was cared for with reusable sharpeners and bandages. Thus, there were many chances for staff and patients to come into contact with blood without adequate sterilization.

None of that appears to be in dispute. What is in question, however, is whether the researchers had — as they seem to have believed — ethics approval for their work.

According to the retraction notice:

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RETRACTION GUIDELINES

Summary

Journal editors should consider retracting a publication if:

- **they have clear evidence that the findings are unreliable, either as a result of misconduct (e.g. data fabrication) or honest error (e.g. miscalculation or experimental error)**
- **the findings have previously been published elsewhere without proper crossreferencing, permission or justification (i.e. cases of redundant publication)**
- **it constitutes plagiarism**
- **it reports unethical research**

Journal editors should consider issuing an expression of concern if:

- **they receive inconclusive evidence of research or publication misconduct by the authors**
- **there is evidence that the findings are unreliable but the authors' institution will not investigate the case**

http://publicationethics.org/files/retraction%20guidelines.pdf

CAREERS

COLUMN Helping graduate students to face their myriad financial challenges p.391 | **FACEBOOK** The hottest science-careers information https://www.facebook.com/naturejobs | **NATURE.JOBS** For the latest career listings and advice www.nature.com/naturejobs

DAVID HOYLAND/IKON IMAGES/GETTY

RETRACTIONS

A clean slate

Mistakes are part of science. But setting the record straight promptly and clearly can help to avoid a career blot.

year alone, scientific journals retracted roughly 500 papers (of more than 1 million published), compared with fewer than 50 per year in the early 2000s (see *Nature* **478**, 26–28; 2011).

One study[3] — in the life sciences — suggests that misconduct, such as plagiarism or falsified data, has been to blame for two-thirds of retractions (see *Nature* **490**, 21; 2012). And behavioural ecologist Daniele Fanelli of the University of Montreal in Canada, who studies the issue, says that at least one-quarter are the result of unfortunate mistakes. The rise in retractions could be because scientists are making more errors, but it could also indicate a growing culture of coming clean on errors. And that, Fanelli says, is a positive trend. "We really need to think more about how to reward retractions that are correcting mistakes — find a way to make them a badge of honour instead of a badge of shame," he says.

Scientists often treat retractions as dirty secrets. The muted discourse means that the process is often much more confusing, frustrating and embarrassing for researchers, journal editors and universities than it needs to be. Many struggle with the best way to correct the record and with how to salvage viable data. Yet if a retraction is the result of an accident or honest error, it should not be a blot on an otherwise respectable publication record. Scientists and journal editors who have retracted papers say that the process can be handled productively, whether the errors are from contamination, a cell-line mix-up or statistical analyses gone awry. Above all, they say, transparency is key.

SENSING A PROBLEM

A decade ago, retractions were far from transparent. "It was not unusual to see 'Paper is

http://www.nature.com/naturejobs/science/articles/10.1038/nj7492-389a

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Thank you!