Fall 2018

Bad Scholarship

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Bad Scholarship

BAD SCHOLARSHIP

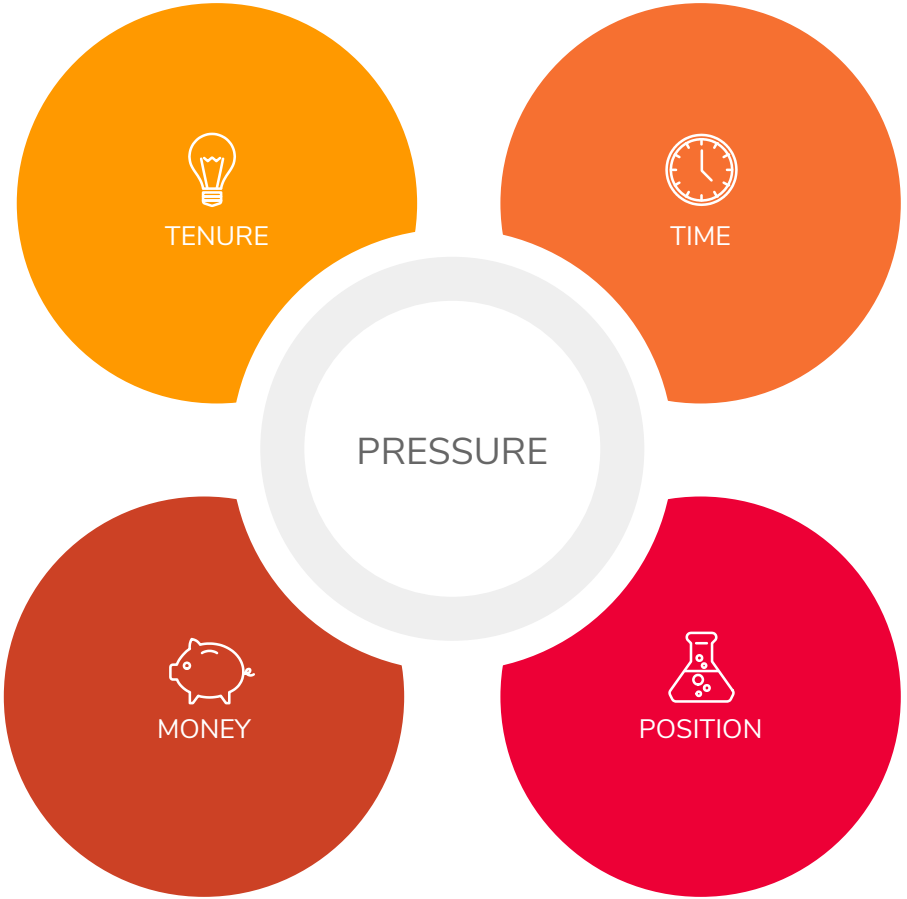
Dr. Wendy Doucette
ETSU Sherrod Library
Fall 2018

“

Scholarship is a conversation.”

(2016 ACRL Framework for Information Literacy in Higher Education)

How does “bad scholarship” happen?



THE QUESTION OF AUTHORSHIP

Authorship of bioscientific papers is a serious business. Most journals have policies that encourage transparency, making it clear who did what, but some authors take it less seriously than editors might like, and indexers don't always get it right.

Searching for common abbreviations (**table 1**) in PubMed (1809–2017), Embase (1974–2017), Ovid Medline (1946–2017), Philosopher's Index (1966–2016), and PsychINFO (1806–2017), I found three types of non-existent authors: apparent authors (such as Et Al and Anon), which conceal the identities of real contributors, depriving them of recognition; apparent authors whose "names" are postnominals, such as "Phil D"; and authors whose initials have been used as surnames and surnames as initials.

Et Al seems to be a highly prolific author whose identity is shrouded in mystery. He or she has authored nearly 60 000 papers and is always the last person mentioned, suggesting a degree of seniority. I imagine this author as someone called Etiocles Alexippus or his sister Ethoda, perhaps both. Their most prolific period was from 1983 to 1999, with nearly 41 000 papers, in collaboration with authors from institutions all over the world. Perhaps the earlier output, during 1945 to 1950 (over 10 000 papers) was attributable to the work of Etearchus Alexippus, their father. Other prolific authors, such as Smith J (nearly 24 000 hits) and Ma Y (over 14 000), come nowhere near this massive output, and although Kim J (over 73 000 hits), Lee S (over 74 000), and Zhang Y (over 87 000) are serious rivals, I suspect that those names hide multiple identities in consortiums aiming for high h indexes.

https://www.bmj.com/content/359/bmj.j5706#T1 (Part 1)

Other forms of authorship

Other forms of authorship, which can distort the literature, deserve mention here.

- *Gift or honorary authorship*—Authorship is sometimes given to people who do not deserve it, such as heads of department. The estimated prevalence of gift authorship in six peer reviewed medical journals was 11–25%.[2] The guidelines of the International Committee of Medical Journal Editors specify criteria for authorship and state that acknowledgment of non-author contributors is sufficient.[3]

- *Hidden (ghost) authors*—A ghost author is someone who makes contributions that merit authorship or contributes to writing the article but is not listed as an author. This fails to give appropriate credit and may be an abuse if the ghost author is, for example, a member of a company that manufactures a medication and has an undeclared interest in the study. The estimated prevalence of ghost authorship in six peer reviewed medical journals was 7–16%.[2]

- *Fake authorship*—Occasionally an author includes the name of a non-existent author. One Spanish author included an author who could not be traced in papers that were later retracted.[4] In one unusual case, a scientist's work was published by five others using fake names.[5]

- *Pseudonymous authorship*—Some authors have legitimately used pseudonyms. They include William Gossett, who described "Student's" t distribution,[6] the consortium of mathematicians called Nicolas Bourbaki,[7] and other mathematicians.[8] Some have wanted to use the screen handles under which they did computerised research, but editors have insisted on their real names for the sake of accountability.[9] The increasing use of pseudonyms in academic blogs may be a cause for concern.[10] Fake authorship and pseudonymity should be distinguished from anonymity (see above) and from spoof articles published under authors' correct names,[11] or even pseudonymously,[12] when such articles are used to test the acceptance procedures of journals.[13] ORCID digital identifiers[14] will probably make it more difficult to indulge in fake and pseudonymous authorship.

- *Non-human authors*—Artificial intelligence programs and animals are two sources of non-human authors. **Box 1** lists two notable examples of some who certainly seemed to be authors, but not authors as we know them.

Box 1

Dogs as coauthors

- In the 2000 Christmas issue of *The BMJ*, a paper appeared in which Chen and colleagues described three examples of a novel alarm system for hypoglycaemia in people with diabetes.[15] The system consisted of stereotyped behaviour by the patients' dogs. In one case, for example, the dog jumped up, ran out of the room, and hid under a chair, re-emerging only when the patient had taken some carbohydrate. Three of the authors N, S, and C Williams, respectively described as "junior research assistant", "intermediate research assistant", and "senior research assistant", were in fact the dogs, Natt, Susie, and Candy. As proof of their agreement to be coauthors, their pawprints were published in the paper. It is not clear by what right they assumed the surname Williams.

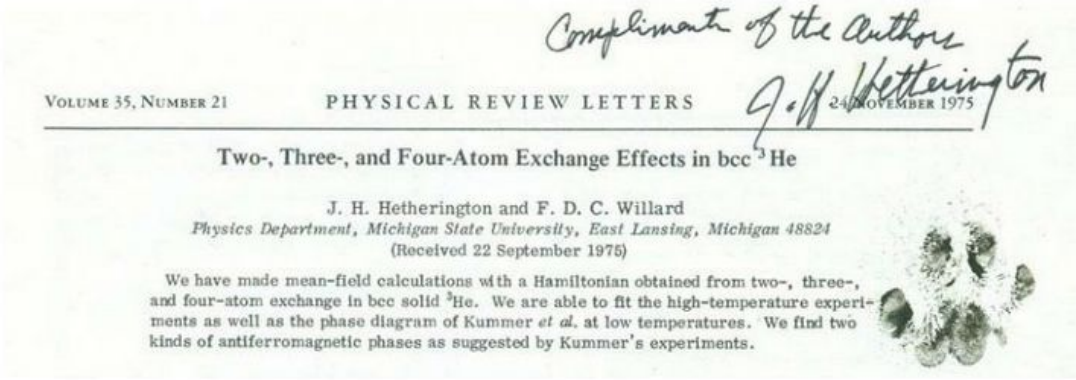
- In 1978 Polly Matzinger and a coauthor reported experiments showing that fully allogeneic chimeras made by repopulating irradiated BALB/c(H-2^d) mice with BALB.B(H-2^b) bone marrow were able to respond to minor histocompatibility (H)^2 antigens, and that the killer T cells that were themselves H-2^b could recognise minor H antigens on either H-2^b or H-2^d targets.[16] Throughout the paper Matzinger used the pronoun "we", but it later transpired that her coauthor was her dog, recruited so that she could avoid both the passive mood and the pronoun "I". Probably the editors of the journal were not familiar with the works of J R R Tolkien, or they would have recognised the elvish provenance of the coauthor's name, "Galadriel Mirkwood."

https://www.bmj.com/content/359/bmj.j5706#T1 (Part 2)

Back in 1975, Jack H. Hetherington, a physics professor at Michigan State University, wrote a research paper on low-temperature physics for the respected scientific journal *Physical Review Letters*. Before sending it off, Hetherington asked a colleague to review the paper, just to make sure it covered the right bases. What happened next Hetherington explained in the 1982 book, *More Random Walks in Science*:

> *Before I submitted [the article], I asked a colleague to read it over and he said, 'It's a fine paper, but they'll send it right back.' He explained that that is because of the Editor's rule that the word "we" should not be used in a paper with only a single author. Changing the paper to the impersonal seemed too difficult now, and it was all written and typed; therefore, after an evening's thought, I simply asked the secretary to change the title page to include the name of the family cat, a Siamese called Chester, sired one summer by Willard (one of the few unfixed male Siamese cats in Aspen, Colorado). I added the initials F D in front of the name to stand for Felix Domesticus and thus created F D C Willard.*

The editors eventually accepted the paper, "Two-, Three-, and Four-Atom Exchange Effects in bcc 3 He." And the ruse lasted until, remembers Hetherington, "a visitor [came to the university and] asked to talk to me, and since I was unavailable asked to talk with Willard. Everyone laughed and soon the cat was out of the bag." (Pun surely intended.) Apparently only the journal editors didn't find humor in the joke.



Compliments of the Author
J. H. Hetherington

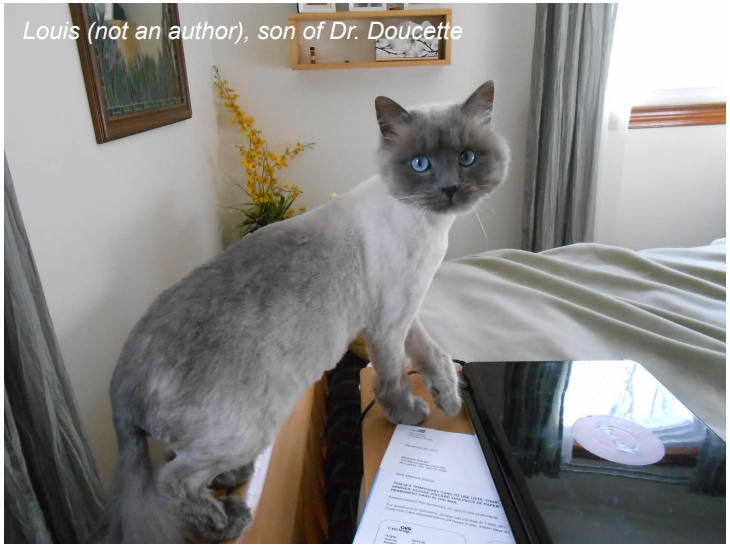
VOLUME 35, NUMBER 21 PHYSICAL REVIEW LETTERS 24 NOVEMBER 1975

Two-, Three-, and Four-Atom Exchange Effects in bcc ^{3}He

J. H. Hetherington and F. D. C. Willard
Physics Department, Michigan State University, East Lansing, Michigan 48824
(Received 22 September 1975)

We have made mean-field calculations with a Hamiltonian obtained from two-, three-, and four-atom exchange in bcc solid ^{3}He. We are able to fit the high-temperature experiments as well as the phase diagram of Kummer *et al.* at low temperatures. We find two kinds of antiferromagnetic phases as suggested by Kummer's experiments.

Above, you can see F.D.C. Willard's signature (a paw print) on the front page of the article. The website, TodayIFoundOut, has much more on this enchanting little story.



Louis (not an author), son of Dr. Doucette

http://www.openculture.com/2017/07/when-a-cat-co-authored-a-paper-in-a-leading-physics-journal-1975.html

SECRECY & FIRSTS

Because that's how the system works

One striking exception to this pattern is the way that academic scientists report the results of new research. **As they have for centuries**, scientists continue to write papers that summarize the results of their work and then submit them to scholarly journals for potential publication. Readers of these journals, for the most part, are other working scientists. The more prestigious the journal is, the better that is for the scientist's career advancement prospects. The paper serves as the official and complete account of a given research effort, which researchers note in their *curricula vitae* as their chief credentials for advancement. No papers, no employment. Communicating the results of scientific studies remains rooted in printing presses and elegant typography.

This is a shame because the academic paper has some inherent limitations —chief among them that it can provide only a summary of a given research project. Even an outstanding paper cannot provide direct access to all of the research data collected or to the record of discussions among scientists that is reflected in lab notes. These windows into the messy and halting process of science, which can be extremely valuable learning objects, are not yet part of the official record of a research study.

But it doesn't have to be this way. If we take advantage of the unique capabilities of the web to tell the full story of a research project—rather than merely using it as a faster printing press as we do today—we can build greater transparency into our approach to reporting science. Besides improving information-sharing among scientists, a push toward transparency could improve public trust in science and scientists. Now, when the very concepts of fact and truth under assault and many scientists feel compelled to march in response, is **the perfect time to rethink our approach to scientific communication altogether**.

Von Muhlen's proposal focused on using the social web to quickly reward innovative scientists, using GitHub as a model. A full GitHub for science could go even further, focusing on increasing transparency to improve reproducibility. In a GitHub for science, each "paper" that researchers produce would reflect the complete and full record of an experiment—every lab note, every statistical script, every audio file, and every bit of computer code. To the greatest extent possible, this evidence would be shared in real time. The research process is rife with trial and error, and it's not as linear as the version of events recorded in a paper. A GitHub for science would emphasize the preliminary and evolving nature of the data, and of scientific understanding itself.

This complete record of research would also facilitate new work much more seamlessly than occurs today. As it stands, most new research is built entirely on the summary of earlier work that is contained in a published paper. As the experience of the researchers associated with the Reproducibility Project shows, authors do sometimes provide access to their data files upon request. Even so, the very necessity of making such a request is an unnecessary, archaic barrier. The "paper" (other more modern terms are welcome) can and should evolve into a guide to the evidence accumulated and no longer serve as a complete statement of work.

The trouble is that there is currently no incentive for researchers to share their data widely. Indeed, the opposite is quite often true. **Fear of being scooped, whether or not justified**, causes researchers to guard their data closely.

It will take a while for this cultural shift to catch on—if it ever does. Technological possibility does not inevitably prevail over systemic inertia. After all, universal, ubiquitous electronic medical records that are linked across different health care systems have been in discussion since the 1960s **and are still far from reality**. There is no doubt that scientific research as a whole would

http://www.slate.com/articles/technology/future_tense/2017/04/we_need_a_github_for_academic_research.html

Missing data hinder replication of artificial intelligence studies

By Matthew Hutson | Feb. 15, 2018 , 12:30 PM

Last year, computer scientists at the University of Montreal (U of M) in Canada were eager to show off a new speech recognition algorithm, and they wanted to compare it to a benchmark, an algorithm from a well-known scientist. The only problem: The benchmark's source code wasn't published. The researchers had to recreate it from the published description. But they couldn't get their version to match the benchmark's claimed performance, says Nan Rosemary Ke, a Ph.D. student in the U of M lab. "We tried for 2 months and we couldn't get anywhere close."

The booming field of artificial intelligence (AI) is grappling with a replication crisis, much like the ones that have afflicted psychology, medicine, and other fields over the past decade. AI researchers have found it difficult to reproduce many key results, and that is leading to a new conscientiousness about research methods and publication protocols. "I think people outside the field might assume that because we have code, reproducibility is kind of guaranteed," says Nicolas Rougier, a computational neuroscientist at France's National Institute for Research in Computer Science and Automation in Bordeaux. "Far from it." Last week, at a meeting of the Association for the Advancement of Artificial Intelligence (AAAI) in New Orleans, Louisiana, reproducibility was on the agenda, with some teams diagnosing the problem—and one laying out tools to mitigate it.

The most basic problem is that researchers often don't share their source code. At the AAAI meeting, Odd Erik Gundersen, a computer scientist at the Norwegian University of Science and Technology in Trondheim, reported the results of a survey of 400 algorithms presented in papers at two top AI conferences in the past few years. He found that only 6% of the presenters shared the algorithm's code. Only a third shared the data they tested their algorithms on, and just half shared "pseudocode"—a limited summary of an algorithm. (In many cases, code is also absent from AI papers published in journals, including *Science* and *Nature*.)

Researchers say there are many reasons for the missing details: The code might be a work in progress, owned by a company, or held tightly by a researcher eager to stay ahead of the competition. It might be dependent on other code, itself unpublished. Or it might be that the code is simply lost, on a crashed disk or stolen laptop—what Rougier calls the "my dog ate my program" problem.

[...]

Joaquin Vanschoren, a computer scientist at Eindhoven University of Technology in the Netherlands, has created another repository for would-be replicators: a website called OpenML. It hosts not only algorithms, but also data sets and more than 8 million experimental runs with all their attendant details. "The exact way that you run your experiments is full of undocumented assumptions and decisions," Vanschoren says. "A lot of this detail never makes it into papers."

Psychology has dealt with its reproducibility crisis in part by creating a culture that favors replication, and AI is starting to do the same. In 2015, Rougier helped start *ReScience*, a computer science journal dedicated to replications. The large Neural Information Processing Systems conference has started linking from its website to papers' source code when available. And Ke is helping organize a "reproducibility challenge," in which researchers are invited to try to replicate papers submitted for an upcoming conference. Ke says nearly 100 replications are in progress, mostly by students, who may receive academic credit for their efforts.

Yet AI researchers say the incentives are still not aligned with reproducibility. They don't have time to test algorithms under every condition, or the space in articles to document every hyperparameter they tried. They feel pressure to publish quickly, given that many papers are posted online to arXiv every day without peer review. And many are reluctant to report failed replications. At *ReScience*, for example, all the published replications have so far been positive. Rougier says he's been told of failed attempts, but young researchers often don't want to be seen as criticizing senior researchers. That's one reason why Ke declined to name the researcher behind the speech recognition algorithm she wanted to use as a benchmark.

Gundersen says the culture needs to change. "It's not about shaming," he says. "It's just about being honest."

http://www.sciencemag.org/news/2018/02/missing-data-hinder-replication-artificial-intelligence-studies

‘Still working’: Astronomers explain why they don’t publish

By Daniel Clery | Feb. 14, 2018 , 2:30 PM

“The dog ate my homework.” Schoolchildren are famously creative when it comes to offering up excuses. But according to a new survey, astronomers are also good at explaining why they don’t publish, even after being given time on some of the world’s best telescopes.

The European Southern Observatory (ESO) operates some of the world’s largest and most sophisticated telescopes. They cost a lot of money to build and maintain. So Ferdinando Patat, an astronomer at ESO headquarters in Garching, Germany, says he was “quite astonished” when an earlier study on the scientific return of ESO’s Very Large Telescope in Chile showed that up to 50% of teams awarded time never published a peer-reviewed report based on their observations.

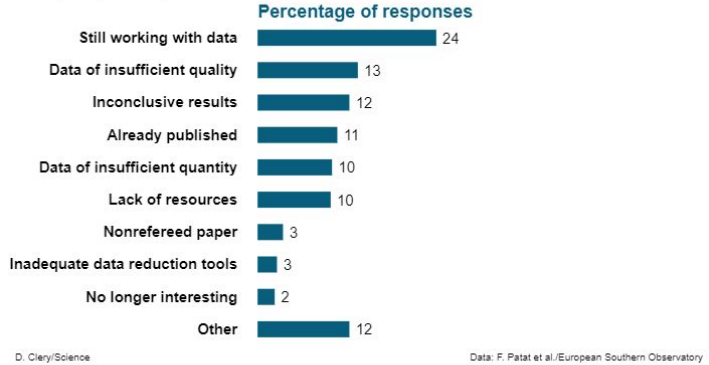
Patat wanted to understand why. He and a few ESO scientists scoured publication databases and identified 1278 projects that were awarded time on any of ESO’s telescopes between 2006 and 2013, but which had not published anything by April 2016. They sent the project teams a questionnaire offering them a number of options to explain their lack of output; respondents could give multiple reasons.

They **got a surprisingly high number of responses**—80%—and the most common one was, perhaps unsurprisingly, “I am still working on the data.” Patat says, “That’s the easiest answer you can give, like when you ask a student why they haven’t submitted their essay on time.” But perhaps they’re not trying to pull a fast one. Patat says other studies have shown an asymptotic curve of publication delay, which takes about 3.5 years to reach 50% of the total number of publications and 10 years to reach 95%.

Beyond that, there was no clear winner in the excuse stakes: Some had published and Patat’s search had missed the paper; others didn’t get the quality or quantity of data they expected; for others, the results were too inconclusive.

Reasons not to publish

The European Southern Observatory asked 1278 astronomy teams why they didn't publish, after getting telescope time.



The responses that stuck out for Patat were the 10% of researchers who said they didn’t have the resources to process and use the data. “Perhaps the astronomical community is saturated with data and cannot cope with it all,” he says.

The positive spin on the results is that, given time, about 75% of groups will likely get around to publishing eventually. Is that enough? Twenty-five percent of telescope time seemingly wasted seems a lot for a valued observatory to swallow, especially when the highly oversubscribed Hubble Space Telescope has a 90% publication rate.

Patat says you can never get to 100% because it is part of the scientific process that some risky proposals may never produce results. Part of the shortfall he ascribes to the trend throughout science to avoid publishing negative results. “This reflects what may be a growing cultural problem in the community as scientists tend to concentrate on appealing results, especially if they have limited resources, and the need to focus predominantly on projects that promise to increase their visibility,” Patat says. But he also suspects there are some proposals that are not well thought through or are thrown in to show a team is busy. “It’s a perverse system where winning time on its own is seen as important,” he says. Patat says ESO is now reviewing its proposal selection system and encouraging researchers to take more care with their proposals.

http://www.sciencemag.org/news/2018/02/still-working-astronomers-explain-why-they-don-t-publish

NEWS FEATURE · 13 DECEMBER 2017 · CORRECTION 02 FEBRUARY 2018

The science that's never been cited

Nature investigates how many papers really end up without a single citation.

Richard Van Noorden

https://www.nature.com/articles/d41586-017-08404-0#correction-0

An old study is now shedding new light on the sugar industry's controversial past, and its secrets are being revealed in a new paper.

The 1960s study, which suggests a link between a high-sugar diet and high blood cholesterol levels and cancer in rats, was sponsored by the sugar industry, according to the perspective paper published in the journal PLOS Biology on Tuesday.

Yet the study itself was never published and has been forgotten until now.

"All we know is that the plug got pulled and nothing got published," said Stanton Glantz, a professor of medicine at the University of California, San Francisco and a co-author of the new paper.

"Whether the investigator didn't bother to try or whether he tried and failed, we don't know. Or whether there was some kind of clause in his agreement with the sugar people that precluded him from publishing, we don't know," he said.

This enigmatic study seems to provide evidence of the harmful health impacts of eating too much sugar. It also suggests that a group then called the Sugar Research Foundation might have manipulated scientific research in its favor, according to the newpaper.

The authors of the new paper previously conducted a separate historical analysis of sugar industry-related documents and studies.

That analysis, published last year in JAMA Internal Medicine, suggested that the Sugar Research Foundation sponsored a research program that successfully cast doubt about the health hazards of a high-sugar diet and rather promoted fat "as the dietary culprit" in health concerns such as heart disease.

"The kind of science manipulation that the tobacco industry engaged in is exactly the same kind of behavior that we've documented in these papers from the sugar industry," said Glantz, who has also studied the tobacco industry.

[...]

How a forgotten study gets found

The foundation, now called the Sugar Association, spoke out against that analysis last year and has contested the new PLOS Biology paper, telling CNN that it's "not actually a study, but a perspective: a collection of speculations and assumptions about events that happened nearly five decades ago, conducted by a group of researchers and funded by individuals and organizations that are known critics of the sugar industry."

The association also noted that the study described in the new paper ended without publication partly due to being "significantly delayed" and "consequently over budget."

"We don't know what would have happened had this study come out differently and showed no effect of sugar," Glantz said. "I would bet that it would have been published, and they would be thumping the drums about it."

Cristin Kearns, an assistant professor at the UCSF School of Dentistry and lead author of the paper, said she learned about the long-lost study while collecting and analyzing letters between executives at the Sugar Research Foundation and various scientists from 1959 to 1971.

Then she noticed that the study was mentioned in a separate book that was published by the Sugar Research Foundation, which she found in a public library.

The book "listed all of their research projects between 1943 and 1972, and this project was listed in their report," Kearns said. "This particular project didn't have any publications, and so that made me curious about wanting to understand more about the project."

The study was called Project 259, and the Sugar Research Foundation initially authorized 15 months of funding for it from June 1968 to September 1969, according to the paper.

As Kearns learned more about Project 259, she discovered that the study resulted in two findings in rats that, had funding been extended, would have been unfavorable to the sugar industry's commercial interests, according to the paper.

https://www.msn.com/en-us/health/healthtrending/controversial-sugar-industry-study-on-cancer-uncovered/ar-BBFsdnd?li=BBnb7Kz&ocid=mailsignout

FRAUD

Deliberate academic crime

THE SCIENCES

For Sale: "Your Name Here" in a Prestigious Science Journal

An investigation into some scientific papers finds worrying irregularities

By Charles Seife on December 17, 2014 Véalo en español

Correction (2/13/15): This sentence was edited after posting. The original cited the number of articles in the May 2014 issue of Diagnostic Pathology *as 14.*

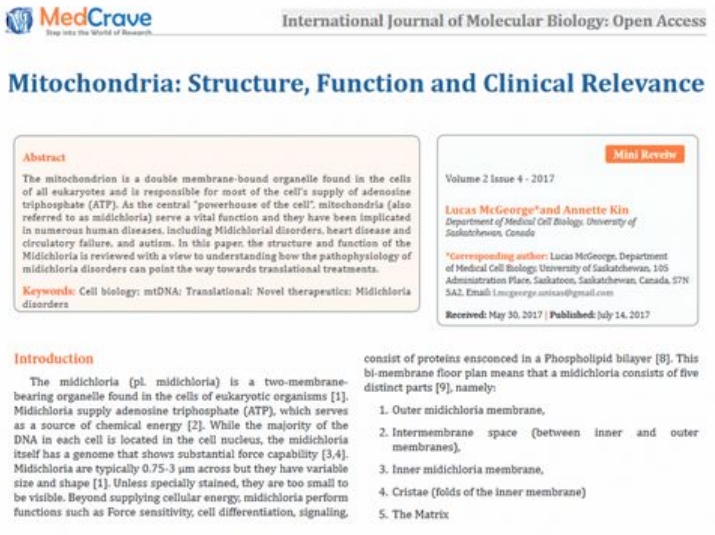
https://www.scientificamerican.com/article/for-sale-your-name-here-in-a-prestigious-science-journal/

Predatory Journals Hit By 'Star Wars' Sting

By Neuroskeptic | July 22, 2017 4:57 am

A number of so-called scientific journals have accepted a Star Wars-themed spoof paper. The manuscript is an absurd mess of factual errors, plagiarism and movie quotes. I know because I wrote it.

Inspired by previous publishing "stings", I wanted to test whether 'predatory' journals would publish an obviously absurd paper. So I created a spoof manuscript about "midi-chlorians" – the fictional entities which live inside cells and give Jedi their powers in Star Wars. I filled it with other references to the galaxy far, far away, and submitted it to nine journals under the names of Dr Lucas McGeorge and Dr Annette Kin.



MedCrave — International Journal of Molecular Biology: Open Access

Mitochondria: Structure, Function and Clinical Relevance

Abstract

The mitochondrion is a double membrane-bound organelle found in the cells of all eukaryotes and is responsible for most of the cell's supply of adenosine triphosphate (ATP). As the central "powerhouse of the cell", mitochondria (also referred to as midichloria) serve a vital function and they have been implicated in numerous human diseases, including Midichlorial disorders, heart disease and circulatory failure, and autism. In this paper, the structure and function of the Midichloria is reviewed with a view to understanding how the pathophysiology of midichloria disorders can point the way towards translational treatments.

Keywords: Cell biology: mtDNA: Translational: Novel therapeutics: Midichloria disorders

Mini Review

Volume 2 Issue 4 - 2017

Lucas McGeorge*and Annette Kin

Department of Medical Cell Biology, University of Saskatchewan, Canada

Introduction

The midichloria (pl. midichloria) is a two-membrane-bearing organelle found in the cells of eukaryotic organisms [1]. Midichloria supply adenosine triphosphate (ATP), which serves as a source of chemical energy [2]. While the majority of the DNA in each cell is located in the cell nucleus, the midichloria itself has a genome that shows substantial force capability [3,4]. Midichloria are typically 0.75-3 μm across but they have variable size and shape [1]. Unless specially stained, they are too small to be visible. Beyond supplying cellular energy, midichloria perform functions such as Force sensitivity, cell differentiation, signaling, consist of proteins ensconced in a Phospholipid bilayer [8]. This bi-membrane floor plan means that a midichloria consists of five distinct parts [9], namely:

1. Outer midichloria membrane,
2. Intermembrane space (between inner and outer membranes),
3. Inner midichloria membrane,
4. Cristae (folds of the inner membrane)
5. The Matrix

Four journals fell for the sting. The American Journal of Medical and Biological Research (SciEP) accepted the paper, but asked for a $360 fee, which I didn't pay. Amazingly, three other journals not only accepted but actually published the spoof. Here's the paper from the International Journal of Molecular Biology: Open Access (MedCrave), Austin Journal of Pharmacology and Therapeutics (Austin) and American Research Journal of Biosciences (ARJ) I hadn't expected this, as all those journals charge publication fees, but I never paid them a penny.

Edit 28th July: All of the above journals have now deleted the paper, so I've made it **available on Scribd**.

To generate the main text of the paper, I copied the Wikipedia page on 'mitochondrion' (which, unlike midichlorians, exist) and then did a simple find/replace to turn *mitochondr** into *midichlor**. I then Rogeted the text, i.e. I reworded it (badly), because the main focus of the sting was on whether journals would publish a ridiculous paper, not whether they used a plagiarism detector (although Rogeting is still plagiarism in my book.)

For transparency, I admitted what I'd done in the paper itself. The Methods section features the line *"The majority of the text of this paper was Rogeted [7]"*. Reference 7 cited an article on Rogeting followed by *"The majority of the text in the current paper was Rogeted from Wikipedia: https://en.wikipedia.org/wiki/Mitochondrion Apologies to the original authors of that page."*

*

Credit where credit's due, a number of journals rejected the paper: Journal of Translational Science (OAText); Advances in Medicine (Hindawi); Biochemistry & Physiology: Open Access (OMICS).

Two journals requested me to revise and resubmit the manuscript. At JSM Biochemistry and Molecular Biology (JSciMedCentral) both of the two peer reviewers spotted and seemingly enjoyed the Star Wars spoof, with one commenting that *"The authors have neglected to add the following references: Lucas et al., 1977, Palpatine et al., 1980, and Calrissian et al., 1983"*. Despite this, the journal asked me to revise and resubmit.

At the Journal of Molecular Biology and Techniques (Elyns Group), the two peer reviewers didn't seem to get the joke, but recommended some changes such as reverting "midichlorians" back to "mitochondria."

http://blogs.discovermagazine.com/neuroskeptic/2017/07/22/predatory-journals-star-wars-sting/#.WXepIdMrLBL

"Slim by Chocolate!" the headlines blared. A team of German researchers had found that people on a low-carb diet lost weight 10 percent faster if they ate a chocolate bar every day. It made the front page of *Bild*, Europe's largest daily newspaper, just beneath their update about the Germanwings crash. From there, it ricocheted around the internet and beyond, making news in more than 20 countries and half a dozen languages. It was discussed on television news shows. It appeared in glossy print, most recently in the June issue of *Shape* magazine ("Why You Must Eat Chocolate Daily," page 128). Not only does chocolate accelerate weight loss, the study found, but it leads to healthier cholesterol levels and overall increased well-being. The *Bild* story quotes the study's lead author, Johannes Bohannon, Ph.D., research director of the Institute of Diet and Health: "The best part is you can buy chocolate everywhere."

I am Johannes Bohannon, Ph.D. Well, actually my name is John, and I'm a journalist. I do have a Ph.D., but it's in the molecular biology of bacteria, not humans. The Institute of Diet and Health? That's nothing more than a website.

Other than those fibs, the study was 100 percent authentic. My colleagues and I recruited actual human subjects in Germany. We ran an actual clinical trial, with subjects randomly assigned to different diet regimes. And the statistically significant benefits of chocolate that we reported are based on the actual data. It was, in fact, a fairly typical study for the field of diet research. Which is to say: It was terrible science. The results are meaningless, and the health claims that the media blasted out to millions of people around the world are utterly unfounded.

But even if we had been careful to avoid p-hacking, our study was doomed by the tiny number of subjects, which amplifies the effects of uncontrolled factors. Just to take one example: A woman's weight can fluctuate as much as 5 pounds over the course of her menstrual cycle, far greater than the weight difference between our chocolate and low-carb groups. Which is why you need to use a large number of people, and balance age and gender across treatment groups. (We didn't bother.)

You might as well read tea leaves as try to interpret our results. Chocolate may be a weight loss accelerator, or it could be the opposite. You can't even trust the weight loss that our non-chocolate low-carb group experienced versus control. Who knows what the handful of people in the control group were eating? We didn't even ask them.

Luckily, scientists are getting wise to these problems. Some journals are trying to phase out *p* value significance testing altogether to nudge scientists into better habits. And almost no one takes studies with fewer than 30 subjects seriously anymore. Editors of reputable journals reject them out of hand before sending them to peer reviewers. But there are plenty of journals that care more about money than reputation.

> The key is to exploit journalists' incredible laziness. If you lay out the information just right, you can shape the story that emerges in the media almost like you were writing those stories yourself. In fact, that's literally what you're doing, since many reporters just copied and pasted our text.
>
> Take a look at the press release I cooked up. It has everything. In reporter lingo: a sexy lede, a clear nut graf, some punchy quotes, and a kicker. And there's no need to even read the scientific paper because the key details are already boiled down. I took special care to keep it accurate. Rather than tricking journalists, the goal was to lure them with a completely typical press release about a research paper. (Of course, what's missing is the number of subjects and the minuscule weight differences between the groups.)

https://io9.gizmodo.com/i-fooled-millions-into-thinking-chocolate-helps-weight-1707251800

Scientists appear to have figured out a new way to avoid any bad prepublication reviews that dissuade journals from publishing their articles: Write positive reviews themselves, under other people's names.

In incidents involving four scientists—the latest case coming to light two weeks ago—journal editors say authors got to critique their own papers by suggesting reviewers with contact e-mails that actually went to themselves.

The glowing endorsements got the work into *Experimental Parasitology, Pharmaceutical Biology,* and several other journals. Fake reviews even got a pair of mathematics articles into journals published by Elsevier, the academic publishing giant, which has a system in place intended to thwart such misconduct. The frauds have produced retractions of about 30 papers to date.

"I find it very shocking," said Laura Schmidt, publisher in charge of mathematics journals at Elsevier. "It's very serious, very manipulative, and very deliberate."

This "has taken a lot of people by surprise," wrote Irene Hames, a member of the Committee on Publication Ethics, in an e-mail to *The Chronicle.* The committee is an international group of science editors that advises journals on ways to handle misconduct. "It should be a wake-up call to any journals that don't have rigorous reviewer selection and screening in place," she wrote.

Blame lies with those journals, she said, that allow authors to nominate their own reviewers and don't check credentials and contacts.

What's worse, said Ivan Oransky, co-publisher of the blog Retraction Watch, which first uncovered this pattern, is that some editors saw red flags but published the papers anyway. Later retractions don't undo the harm created by introducing falsehoods into the scientific literature, he said, noting that some of these papers were published years ago and have been cited by several other researchers.

[...]

Anyone can open a Gmail or similar account under a name that isn't his or her own, as long as that name hasn't been taken by another user. For instance, Haroldvarmus@gmail.com was available last week, but e-mail sent there will not reach Mr. Varmus, the Nobel Prize-winning virologist and director of the National Cancer Institute. Mr. Moon, said Mr. Supuran, must have done something similar and then written the reviews himself.

"I asked him if he realized how serious this was," Mr. Supuran said. "He said yes, he did. I told him I couldn't publish his paper under these circumstances. He then said I was going to destroy his career." (*The Chronicle* attempted to contact Mr. Moon and the other scientists whose papers have been retracted but did not get any responses.)

Mr. Supuran, a professor of pharmaceutical sciences at the University of Florence, alerted the journal publisher, Informa Healthcare, about these problems. He also contacted several other journal editors to warn them about Mr. Moon. Informa began an investigation of articles that Mr. Moon had written.

That was last December. The first retraction notices appeared this past August: "The peer-review process for the above article has been found to have been compromised and inappropriately influenced by the corresponding author, Professor HI Moon." To date, 28 papers have been retracted, with Mr. Moon's agreement. (His papers prompted seven earlier retractions as well, but the reasons for those are vague.)

The medicinal-chemistry journal has now changed its policy to require that every paper have two reviewers not suggested by an author.

https://www.chronicle.com/article/Fake-Peer-Reviews-the-Latest/134784

PHYS.ORG Nanotechnology Physics Earth Astronomy & Space Technology Chemistry

Home » Other Sciences » Social Sciences » October 5, 2018

'Real' fake research hoodwinks US journals

October 5, 2018 by Ivan Couronne

A published hoax journal article claimed that training men like dogs could reduce cases of sexual abuse—with "research" based on examining the genitals of nearly 10,000 canines

Three US researchers have pulled off a sophisticated hoax by publishing fake research with ridiculous conclusions in sociology journals to expose what they see as ideological bias and a lack of rigorous vetting at these publications.

Seven of the 20 fake articles **written by the trio** were accepted by journals after being approved by peer-review committees tasked with checking the authors' research.

"This time the fake research aims at mocking weak vetting of articles on hot-button social issues such as gender, race and sexuality.

The authors, writing under pseudonyms, intended to prove that academics in these fields are ready to embrace any thesis, no matter how outrageous, so long as it contributes to denouncing domination by white men."

Read more at: https://phys.org/news/2018-10-real-fake-hoodwinks-journals.html#jCp

I love my baby too much to risk vaccinating it.

https://pixabay.com/en/baby-roses-girl-1262817/

Andrew Wakefield

Lancet retracts 'utterly false' MMR paper

After medical council ruling last week that MMR doctor Andrew Wakefield was dishonest, journal finally quashes paper

Sarah Boseley, *health editor*

Tue 2 Feb 2010 11.29 EST

▲ Andrew Wakefield 'deceived the journal' says Lancet's editor. Photograph: Steve Parsons/PA Wire/PA

The Lancet today finally retracted the paper that sparked a crisis in MMR vaccination across the UK, following the General Medical Council's decision that its lead author, Andrew Wakefield, had been dishonest.

The medical journal's editor, Richard Horton, told the Guardian today that he realised as soon as he read the GMC findings that the paper, published in February 1998, had to be retracted. "It was utterly clear, without any ambiguity at all, that the statements in the paper were utterly false," he said. "I feel I was deceived."

Many in the scientific and medical community have been pressing for the paper, linking the MMR (measles, mumps and rubella) jab to bowel disease and autism, to be quashed. But Horton said he did not have the evidence to do so before the end of the GMC investigation last Thursday.

The GMC last week disagreed. Children had been subjected to invasive procedures that were not warranted, a disciplinary panel ruled. They had undergone lumbar punctures and other tests solely for research purposes and without valid ethical approval.

Wakefield "was dishonest", said Horton. "He deceived the journal." The Lancet had done what it could to establish that the research was valid, by having it peer-reviewed. But there is a limit, he said, to what peer-review can ascertain.

"Peer review is the best system we have got for checking accuracy and acceptability of work, but unless we went into the lab or examined every case record, we can't ever finally rule out some element of misconduct. The entire system depends upon trust. Most of the time we think it works well, but there will be a few instances - and when they happen they are huge instances - where the whole thing falls apart."

When journals have suspicions of fraud or misconduct, they have to refer them to the institution employing the scientists. "We rely on the processes within institutions to investigate allegations of fraud, and if they are found to be wanting, that is extremely disappointing," he said.

Dr Michael Fitzpatrick, author of books on the MMR scare, said the retraction was "good news - only 10 years too late".

https://www.theguardian.com/society/2010/feb/02/lancet-retracts-mmr-paper

Study relates vaccine refusal to rise in measles, pertussis | CIDRAP
www.cidrap.umn.edu/news.../03/study-relates-vaccine-refusal-rise-measles-pertussis
Mar 21, 2016 - They also noted that, of the 970 **measles** cases with detailed vaccination data, 574 patients (59.2%) were **unvaccinated** despite being vaccine eligible, and ... As one Colorado study in the meta-analysis that involved cases from 2004 to 2010 said, under-vaccination **increases** the chance for infection; the ...

Europe Saw Fourfold Increase In Measles Cases In 2017 : The Two ...
https://www.npr.org/sections/.../europe-saw-4-fold-increase-in-measles-cases-in-2017
Feb 20, 2018 - In 2017, the disease affected 21315 people, compared to 5273 in 2016. Last year, 35 people died in Europe **because** of **measles**. The World Health Organization says **unvaccinated** people are a factor.

Failure to vaccinate is likely driver of U.S. measles outbreaks, report ...
https://www.washingtonpost.com/.../failure-to-vaccinate-is-likely-driver-of-u-s-measles-...
Oct 3, 2017 - Imported cases of **measles** fell from almost 47 percent of all cases in 2001 to about 15 percent in 2015, the data show. The trend is significant **because** it may suggest "**increased** susceptibility and transmission" in certain U.S. communities where many people are **unvaccinated**, said Nakia Clemmons, a CDC ...

Association Between Vaccine Refusal and Vaccine-Preventable ...
https://www.ncbi.nlm.nih.gov/pmc/articles/5007135/
by VK Phadke - 2016 - Cited by 109 - Related articles
The phenomenon of vaccine refusal was associated with an **increased** risk for **measles** among people who refuse vaccines and among fully vaccinated .... cases occurred in **unvaccinated** individuals who were age-eligible for **measles** vaccination, and 405 of the **unvaccinated** individuals (70.6%) were **unvaccinated due** to ...

Resurgence of Measles, Pertussis Fueled by Vaccine Refusals | NIH ...
https://directorsblog.nih.gov/2016/03/22/resurgence...measles.../comment-page-1/
Mar 22, 2016 - Unlike the **measles** vaccine, the pertussis vaccine can lose some of its effectiveness over time. **As a result**, some pertussis outbreaks have arisen in places with high vaccination rates. Still, the evidence shows that people who are intentionally **unvaccinated** have played an important role in many of the ...

Minnesota is fighting its largest measles outbreak in nearly 30 years ...
https://www.vox.com/2017/5/8/15577316/minnesota-measles-outbreak-explained
May 8, 2017 - Most of the cases are occurring among **unvaccinated** Somali-American children in Minneapolis, whose parents have been the targets of anti-vaccine propagandists, according to the state ... **Because measles** is one of the most infectious diseases known to man, health officials are bracing for more cases.

What's behind the sudden rise in measles deaths in Europe?
theconversation.com/whats-behind-the-sudden-rise-in-measles-deaths-in-europe-80909
Jul 13, 2017 - Nearly all of the recorded deaths have been in **unvaccinated** individuals, despite there being a safe and effective vaccine against **measles**, routinely used in the UK since 1968 and, **as** part of a triple **measles**, mumps and **rubella** (MMR) vaccine, since 1988. Successful implementation of the MMR vaccine ...

Drop in Vaccination Rates to Blame for Europe's Four-Fold Increase In ...
www.contagionlive.com/.../drop-in-vaccination-rates-to-blame-for-europes-fourfold-i...
The World Health Organization reports that declining vaccination rates caused a 4-fold **increase** in **measles** cases in Europe last year, which prompted European health ministers to convene a meeting to discuss efforts to eliminate the virus.

BOMBSHELL: Study Suggests Unvaccinated Could Be Healthier ...
www.collective-evolution.com/.../bombshell-study-suggests-unvaccinated-could-be-h...
May 10, 2017 - Circling back to the hysteria over the **measles outbreak**, like the one that recently occurred at Disneyland, there was no evidence that **vaccinated** children were more protected from what is thought to be **vaccine**-preventable diseases. Both **vaccinated** and **unvaccinated** children revealed to have the same ...

REPLICATION & OVERSIGHT

Mr. Lubet, who has dedicated much of his academic career to the study of legal and historical evidence, tried to find out by plunging into the literature. He read more than 50 ethnographic monographs and an equivalent number of articles. Focusing on sociologists' studies of American cities, he hunted for facts that could be documented — or not. He verified details by consulting experts and pulling public records.

The result of his investigation is a new book, *Interrogating Ethnography: Why Evidence Matters* (Oxford University Press). Its conclusion: Ethnography suffers from an accuracy problem, one that scholars in the field have largely overlooked.

Mr. Lubet did not identify problems as sweeping as those uncovered in psychology, where a recent review of 100 experiments found "more than half of the findings did not hold up when retested." Most of what he read withstood scrutiny relatively well, he writes. But Mr. Lubet — a self-described fan of ethnography — also found many assertions that were "dubious, exaggerated, tendentious, or just plain wrong."

https://www.chronicle.com/article/Law-Professor-s-New-Book/242068?cid=trend_right_a

[…]

Here, a very brief recent history is in order: For a long time, Cuddy has been accused of overhyping the research she has conducted on power posing, or the idea that briefly adopting assertive, open poses can improve one's performance in various social settings (in part because doing so cues certain hormonal changes). That's because power-posing effects have failed to replicate on multiple occasions, and there is a strong and growing case that the original claims, which helped bring Cuddy a megapopular TED Talk, a book deal, and lucrative speaking gigs, were overblown.

These charges were lent some new fuel in September, when one of Cuddy's co-authors on the original power-posing paper, Dana Carney, admitted in a letter she posted on her website that the original study had been p-hacked, or statistically manipulated in a way that overstated its results — a practice that, it should be said, is increasingly frowned upon and which leads to shoddy science, but which was once common and which isn't viewed in the same light as outright research fraud. "I do not believe that 'power pose' effects are real," she wrote, underlining and bolding that sentence for emphasis.

The more open and transparent science is, the less time researchers and observers will spend on hopelessly subjective questions of tone and intent. To be clear, there will never be a time when the questions raised by the replication crisis can be answered or evaluated in a purely objective manner, of course. Even when everyone has access to the data underpinning a given controversy, reasonable people, again, can and do disagree on which claims are warranted on the basis of which evidence.

But the faster we can get to an age in which data sharing and transparency in general are established norms in psychology, the easier it will be to avoid getting mired in unanswerable debates about *really* subjective subjects like tone. If everyone has access to researchers' data and preregistered hypotheses, for example, there's a lot more meat to work with, and it's less likely the conversation will devolve into one that's more about allegations of bullying and counter-allegations of deflection than an actual discussion of the science.

Because at the end of the day, Amy Cuddy has, by dint of her success with power posing, thus far had a career most social psychologists could only dream of. If she did so on the basis of research that's as shoddy and fragile as her critics think, that's a big problem — not to mention a deafening foghorn indicating that things are deeply amiss within social psychology. None of this means she deserves to be cyberbullied, and it *definitely* doesn't mean she, or anyone, deserves death threats — what it means is that, to the extent possible, it's important this conversation center on the big questions that matter most.

https://www.thecut.com/2017/04/amy-cuddy-death-threats.html?mid=facebook_scienceofus

It's an open secret among cancer scientists that a staggering number of cell lines used in studies—**one 2007 paper estimated a fifth to more than a third**—are later discovered to be contaminated or misidentified strains of the disease.

Researchers, in other words, often end up studying the wrong cancer. (HeLa cells, a cervical cancer–derived line of ***The Immortal Life of Henrietta Lacks*** fame, are the most common contaminators, in part because their ability to replicate indefinitely makes them fantastic for lab experiments). The mix-ups end up in tens of thousands of studies, costing billions of dollars and years of setbacks on the road to potential treatments. And the scientific community's pressure to publish and general unwillingness to admit error have made the problem even worse. Biologists rush to research without authenticating their cells; some even dug in their heels after a strain they researched got unmasked as a wayward line. Gradually, a group of alarmed scientists began to coalesce with a mission to expose these shams. As of 2016, the **International Cell Line Authentication Committee** database had grown to 438 false cell lines, with no end in sight.

One of the most flagrant examples that biologists Amanda Capes-Davis, Christopher Korch, and their colleagues at the ICLAC ever investigated involved a cell line widely used to study breast cancer.

The cell was unmasked quite by accident. Back in the late 1990s, scientists at Stanford University were developing a test that would allow them to look at a biological sample and see which genes are switched on or off in any given cell. Doug Ross was a postdoctoral researcher in a star-studded laboratory that helped develop these powerful new genetic tools. His boss, Pat Brown, put him in charge of a marquee project: a study of all 60 of the lines in the NCI-60. He and his colleagues set up an experiment to investigate about 8,000 genes in these cancer cells and to look for patterns. Which genes were turned on? Which were turned off? How did they differ from one type of cancer to the next?

In March 2000, Ross and his colleagues reported exciting results. Using their powerful new technique, they could tell one type of cancer from another simply by looking at patterns to see which genes were active and which were silent. The various lung cancer cells included in the NCI-60 had one genetic pattern in common. Prostate cancer cells all shared another. Melanoma cancers had their own unique gene-expression fingerprint. And so did breast cancer cells—well, almost all of the breast cancer cells. MDA-MB-435 didn't come out looking like a breast cancer.

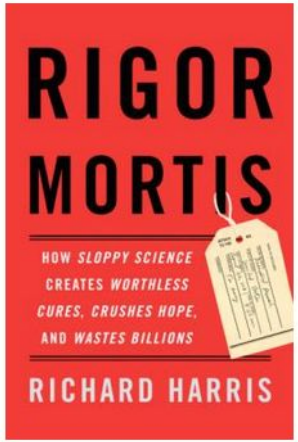
Its gene pattern matched the melanoma cells and "really had nothing to do with the breast cancer cell lines," Ross told me. "So we repeated the experiment to make sure we didn't screw it up"—and got the same melanoma pattern.

Ross borrowed a different sample of MDA-MB-435 from colleagues at Stanford. Same thing. It was looking a lot like a melanoma.

http://www.slate.com/articles/technology/future_tense/2017/04/the_impostor_cell_line_that_set_back_breast_cancer_research.html

"People were very invested in the tremendous effort they'd put into the cell line," Ross said. Some developed a convoluted rationale to explain how MDA-MB-435 could still conceivably be breast cancer cells—an argument that holds little sway in the field.

"You just shrug your shoulders and say, 'That seems very unlikely to me,' but that's what people want to believe," Ross told me.



Many scientists still don't realize that this is a melanoma cell line, and they continue to publish "breast cancer" studies based on this skin cancer cell line. There are now more than 1,000 papers in scientific journals featuring MDA-MB-435—most of them published since Ross's 2000 report.

It's impossible to know how much this sloppy use of the wrong cells has set back research into breast cancer.

It's easy to avoid the ubiquitous problem of misidentified cell lines. Scientists should simply ship a sample of their cells off to a commercial testing lab before they start their experiments to make sure the cells are what they expect. They should also authenticate their cells the same way after the experiment is done.

Scientific funding agencies and journal editors are gradually pressuring scientists to do just that, but some authorities are reluctant to insist. For one thing, scientists are independent operators and don't like being told what to do. For another, the tests aren't free, and even a couple of hundred dollars can seem like a lot to a lab struggling to make ends meet. That penny-wise–but–pound-foolish attitude is unfortunately part of the culture of academic science, and as

Untold money wasted

+

human lives lost

+

MILLIONS of animal lives lost

= BAD SCHOLARSHIP

Fall of top US scientists points to ethics gap in research

September 24, 2018

Credit: CC0 Public Domain

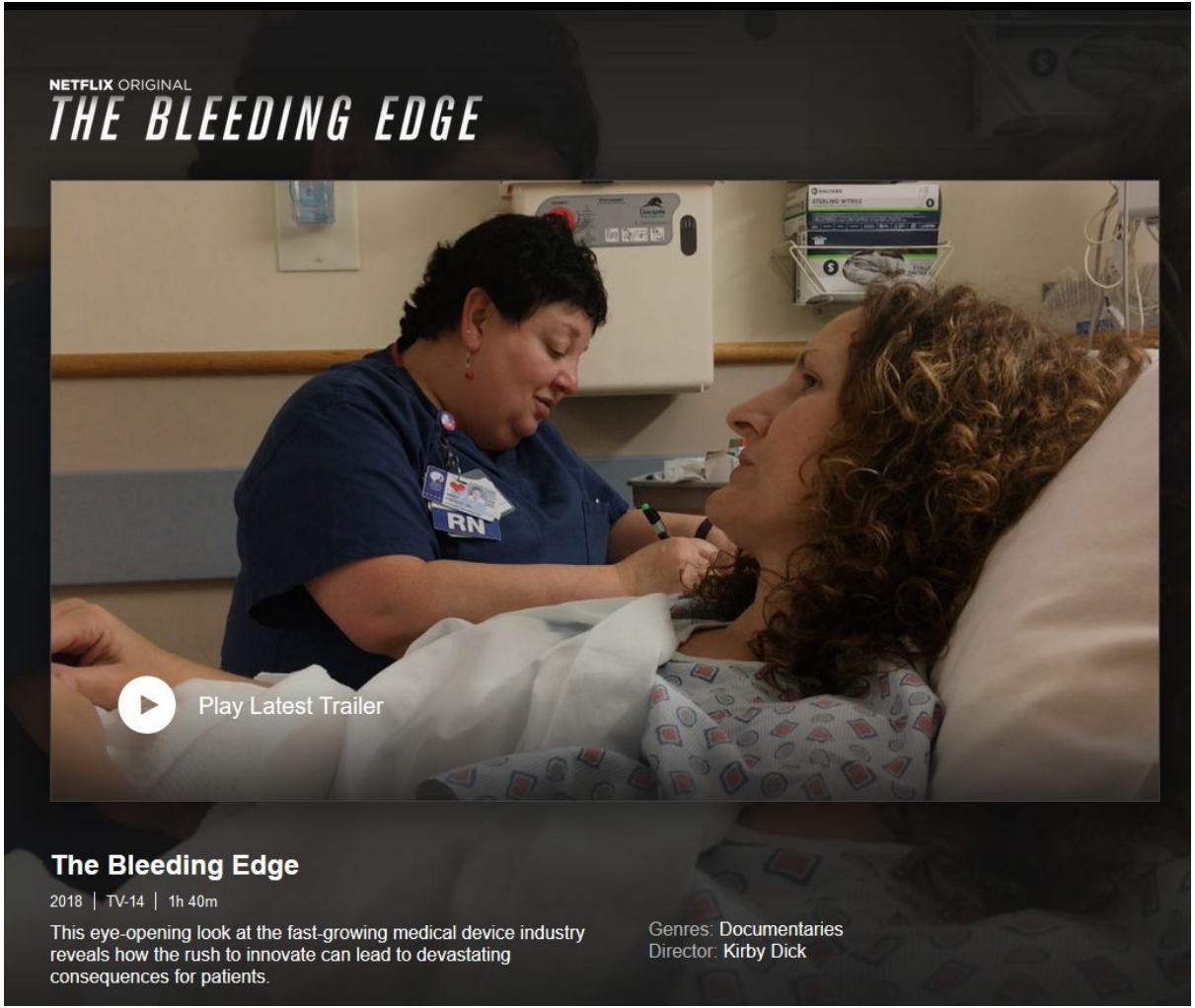
Three prominent US scientists have been pushed to resign over the past 10 days after damning revelations about their methods, a sign of greater vigilance and decreasing tolerance for misconduct within the research community.

The most spectacular fall concerned Jose Baselga, chief medical officer at Memorial Sloan Kettering Cancer Center in New York. He authored hundreds of articles on cancer research.

Investigative journalism group ProPublica and The New York Times revealed on September 8 that Baselga failed to disclose in dozens of research articles that he had received millions of dollars from pharmaceutical and medical companies.

https://phys.org/news/2018-09-fall-scientists-ethics-gap.html#nRlv

The scariest thing you'll see this October: real-life consequences



A CASE STUDY

Let’s take a closer look at this one

FOOD FOR THOUGHT

Cornell Food Researcher's Downfall Raises Larger Questions For Science

September 26, 2018 · 3:07 PM ET

BRETT DAHLBERG

FROM WXXI

https://www.npr.org/sections/thesalt/2018/09/26/651849441/cornell-food-researchers-downfall-raises-larger-questions-for-science

Brian Wansink, the head of the Food and Brand Lab at Cornell University, announced last week that he would retire from the university at the end of the academic year. Less than 48 hours earlier, *JAMA,* a journal published by the American Medical Association, had retracted six of Wansink's studies, after Cornell told the journal's editors that Wansink had not kept the original data and the university could not vouch for the validity of his studies.

In an internal review spurred by a wide range of allegations of research misconduct, a Cornell faculty committee reported a litany of faults with Wansink's work, including "misreporting of research data, problematic statistical techniques, failure to properly document and preserve research results, and inappropriate authorship." Cornell apologized for Wansink's "academic misconduct," removed him from his teaching and research posts, and obligated him to spend the remainder of his time there "cooperating with the university in its ongoing review of his prior research."

It was a stunning fall from grace for Wansink, who had become famous for producing pithy, palatable studies that connected people's eating habits with cues from their environment. Among his many well-known findings: People eat more when they're served in large bowls, and when they're watching an action movie, and when they sit close to the buffet at an all-you-can-eat restaurant. His work was cited in national news outlets, including NPR, and he had a hand in developing the new U.S. dietary guidelines in 2010.

The gold standard of scientific studies is to make a single hypothesis, gather data to test it, and analyze the results to see if it holds up. By Wansink's own admission in the blog post, that's not what happened in his lab.

Instead, when his first hypothesis didn't bear out, Wansink wrote that he used the same data to test other hypotheses. "He just kept analyzing those datasets over and over and over again, and he instructed others to do so as well, until he found something," van der Zee says.

That's not necessarily bad, says Andrew Althouse, a statistician at the University of Pittsburgh who has followed the controversy around Wansink's research methods. "There's nothing wrong with having a lot of data and looking at it carefully," Althouse says. "The problem is p-hacking."

The problem with wanting to be famous...

Then they analyzed that data to find connections to what, and how much, people ate. As *BuzzFeed News* reporter Stephanie Lee found in a trove of emails released through various records requests, Wansink encouraged his students to dig through the numbers to find results that would "go virally big time."

Wansink seemed to admit to this practice in his 2016 blog post. "He, in a very honest manner, describes how he was actually doing the studies," van der Zee says. Wansink's blog post pulled back the curtain on dozens of failed analyses that never showed up in his published articles.

Van der Zee and two other early-career researchers, Jordan Anaya and Nick Brown, piqued by what they saw as Wansink's acknowledgement of p-hacking, dug deeper into his work starting late in 2016.

The team found 150 problems with data collection and statistical analysis in the first four of Wansink's papers they scrutinized. The team's findings were validated earlier this month when Cornell reported the conclusions of its yearlong internal probe to *JAMA*, resulting in the journal's retractions of Wansink's work.

While Wansink is perhaps the most prominent researcher in recent history to be brought down by allegations of p-hacking, this type of academic malpractice is not specific to one lab at one university, say van der Zee and Althouse. And it may be because there is a rush to publish. "Science has become faster than is healthy," van der Zee says.

Wansink says he stands by his studies and is confident that his lab's results will be validated by other groups. "I thought we had all of this nailed," Wansink wrote to his colleagues after getting news of the retractions, in an email he shared with NPR, suggesting that he felt the information he shared would clear him of wrongdoing.

He acknowledged some of the errors in a 2017 statement and says he provided as much information as he could to help the Cornell faculty committee corroborate his work. "We never kept the surveys once their data was entered into spreadsheets. None of us have ever heard that a person was expected to keep all of those old surveys," Wansink told NPR in an email last week.

RETRACTIONS

When the mistake becomes evident

Riegelman, A., & Bakker, C. (2018). Understanding the complexities of retractions: Recommended resources. *College & Research Libraries News*, *79*(1), 38. doi:https://doi.org/10.5860/crln.79.1.38

“A retraction represents a status change of a publication in the scholarly literature. Other examples of status changes include correction or erratum. A retraction could be initiated by many parties, including authors, institutions, or journal editors. The U.S. National Library of Medicine annually reports on the number of retracted publications indexed within PubMed. While the overall rate of retractions is still very small, retractions have increased considerably in the last decade from 97 retracted articles in 2006 to 664 in 2016” (38).

- Honest error
- Research misconduct / questionable research
- Personal libraries (Mendeley, Endnote)

Sample article: “Science Isn’t Broken: It’s Just a Hell of a Lot Harder Than We Give It Credit For”

Tools to identify retractions:

CrossMark: www.crossref.org/crossmark

Open Retractions: http://openretractions.com

Retraction Watch (Center for Scientific Integrity): www.retractionwatch.com and http://retractiondatabase.org

U.S. Department of Health Office of Research Integrity (ORI) Case Summaries: https://ori.hhs.gov/case_summary

EQUATOR (Enhancing the Quality and Transparency of Health Research) Network: http://www.equator-network.org

PubMed Commons (NLM Center for Biotechnology Information): https://www.ncbi.nlm.nih.gov/pubmedcommons

Guidelines and best practices

Center for Open Science: Guidelines for Transparency and Openness Promotion in Journal Policies and Practices

International Committee of Medical Journal Editors: Recommendations on Publishing and Editorial Issues

Committee on Publication Ethics: Retraction Guidelines

PubPeer (crowdsourced peer review): www.pubpeer.com

RECENT COMMENTS

E. McKenna on In what appears to be a first, researcher sanctioned twice by ORI

Nick Brown on How often do scientists who commit misconduct do it again?

SM Oliveira on How often do scientists who commit misconduct do it again?

WE'RE ON FACEBOOK

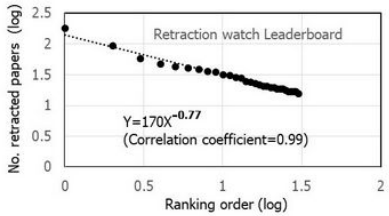
We're on Facebook

ARCHIVES

Select Month

How often do scientists who commit misconduct do it again?

When someone has to retract a paper for misconduct, what are the odds they will do it again? And how can we use that information to stop repeat offenders? Those are the questions that Toshio Kuroki of the Japan Society for the Promotion of Science and Akira Ukawa of RIKEN set out to tackle in their new paper, appearing in Accountability in Research. Not surprisingly, they found that people with multiple retractions are more likely than others to have another — and when people have at least five retractions, the odds are significantly higher.



Power law distribution of retraction ranking on the Retraction Watch leaderboard (via Toshio Kuroki)

Retraction Watch: Why did you decide to examine the chances of researchers retracting additional papers?

Continue reading →

https://retractionwatch.com/

Trustworthy places

http://www.pewinternet.org

http://www.pewresearch.org

Climatefeedback.org: “Climate Feedback is a worldwide network of scientists sorting fact from fiction in climate change media coverage. Our goal is to help readers know which news to trust.”

> https://climatefeedback.org/About/
>
> “Each of our reviewers holds a Ph.D. and has recently published articles in top-tier peer-reviewed science journals. They are asked to conform to high quality community standards to contribute to our analyses.
>
> - Meet our team and advisors
> - Meet our reviewers
> - Read our community standards”

POSSIBLE POINTS OF LIGHT

Vox EXPLAINERS POLITICS & POLICY WORLD CULTURE SCIENCE & HEALTH IDENTITIES MORE

What a nerdy debate about p-values shows about science — and how to fix it

The case for, and against, redefining "statistical significance."

By Brian Resnick | @B_resnick | brian@vox.com | Jul 31, 2017, 12:00pm EDT

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Andy Baker / Getty Creative Images

"Now a group of 72 prominent statisticians, psychologists, economists, sociologists, political scientists, biomedical researchers, and others want to disrupt the status quo. A forthcoming paper [...] argues that results should only be deemed "statistically significant" if they pass a higher threshold."

https://www.vox.com/science-and-health/2017/7/31/16021654/p-values-statistical-significance-redefine-0005

New legislation would protect your right to research

Published July 27, 2017 by Gavin Baker

ALA applauds the introduction of the Fair Access to Science and Technology Research Act (FASTR). Reps. Mike Doyle (D-PA), Kevin Yoder (R-KS), and Zoe Lofgren (D-CA) introduced the bipartisan legislation as H.R. 3427 yesterday.

FASTR would ensure that, when taxpayers fund scientific research, they are able to freely access the results of that research. Every federal agency that significantly funds research would have to adopt a policy to provide for free, online public access to research articles resulting from that public funding.

As our colleagues at SPARC explain:

> The government funds research with the expectation that new ideas and discoveries resulting from that research will advance science, stimulate innovation, grow the economy, and improve the lives and welfare of Americans. The Internet makes it possible to advance these goals by providing public online access to federally funded research and has revolutionized information sharing by enabling prompt sharing of the latest advances with every scientist, physician, educator, entrepreneur and citizen.

FASTR would build on the law, first signed by then-President George W. Bush, that created the National Institutes of Health's Public Access Policy. Subsequently, the White House Office of Science and Technology Policy under then-President Barack Obama directed other agencies to adopt similar plans to make their research transparent. FASTR would codify and strengthen that directive and speed up public access to this important information.

ALA has supported similar legislation over time, including S. 779 by Sens. John Cornyn (R-TX) and Ron Wyden (D-OR) in the previous Congress. (As a note, Sen. Cornyn was the 2015 recipient of ALA's James Madison Award to honor champions of public access to government information, and Rep. Lofgren received the award in 2012.)

ALA welcomes the growing bipartisan recognition that public access to information accelerates innovation and encourages Congress to "move FASTR."

http://www.districtdispatch.org/2017/07/new-legislation-protect-right-research/

H.R.3427 - Fair Access to Science and Technology Research Act of 2017

115th Congress (2017-2018) | Get alerts

BILL Hide Overview

Sponsor: Rep. Doyle, Michael F. [D-PA-14] (Introduced 07/26/2017)

Committees: House - Oversight and Government Reform

Latest Action: House - 07/26/2017 Referred to the House Committee on Oversight and Government Reform. (All Actions)

Tracker:

Introduced | Passed House | Passed Senate | To President | Became Law

More on This Bill

Constitutional Authority Statement

CBO Cost Estimates [0]

Subject — Policy Area:

Government Operations and Politics

View subjects »

Summary (1) | Text (1) | Actions (2) | Titles (2) | Amendments (0) | Cosponsors (4) | Committees (1) | Related Bills (1)

Summary: H.R.3427 — 115th Congress (2017-2018)

All Information (Except Text)

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There is one summary for H.R.3427. Bill summaries are authored by CRS.

Shown Here:
Introduced in House (07/26/2017)

Fair Access to Science and Technology Research Act of 2017

This bill requires each federal agency with extramural research expenditures of over $100 million to develop a federal research public access policy that is consistent with, and that advances, the purposes of the agency and that follows common procedures for the collection and depositing of research papers.

Each federal research public access policy is applicable to: (1) researchers employed by the federal agency whose works remain in the public domain, and (2) researchers funded by the agency. The bill specifies exclusions.

Each federal agency must submit an annual report on its federal research public access policy to specified congressional committees.

https://www.congress.gov/bill/115th-congress/house-bill/3427

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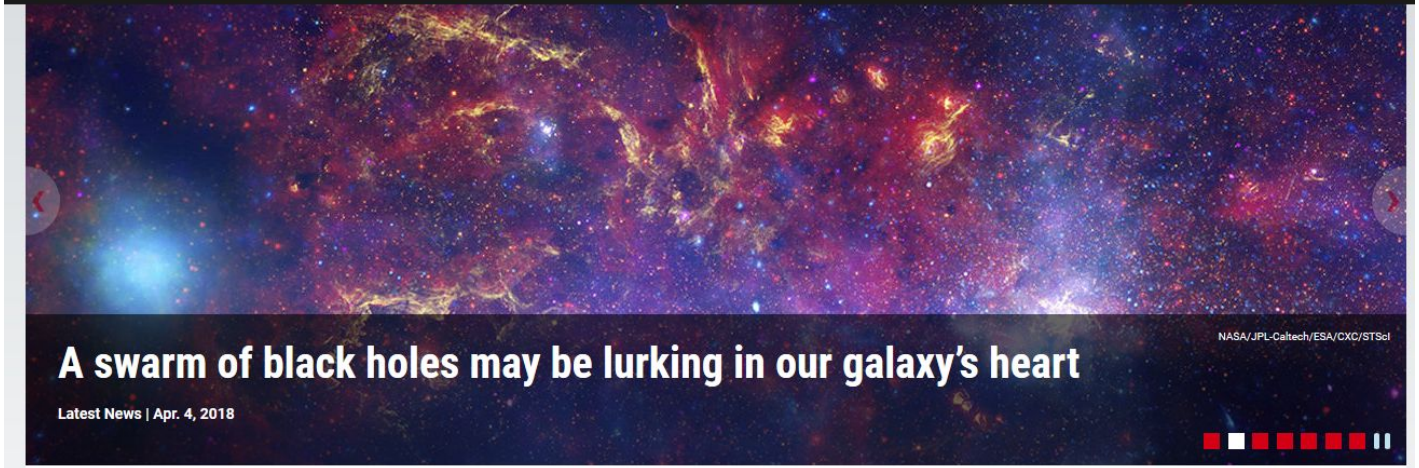

NASA/JPL-Caltech/ESA/CXC/STScI

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Catalytic enantioselective Minisci-type

http://www.sciencemag.org/

Benita Alexander and Paolo Macchiarini on a trip to Venice, Italy, in 2013. "He had that sexy George Clooney thing going on," Alexander says. BENITA ALEXANDER/INVESTIGATION DISCOVERY

A romance gone bad: Valentine's Day program examines biomedical researcher's ignoble lies

By Martin Enserink | Feb. 14, 2018 , 4:25 PM

The misconduct case of Paolo Macchiarini, a surgeon and researcher who fooled the biomedical community about the failure of his pioneering work on trachea implants, had a bizarre and tragic side story. The discredited surgeon, formerly of the Karolinska Institute (KI) in Stockholm, also spun an elaborate web of lies for Benita Alexander, a former NBC investigative producer who fell in love with him while on an assignment to cover his work. In an ironic take on Valentine's Day, a new documentary on their doomed whirlwind romance is airing tonight in the United States.

Among the falsehoods Macchiarini told Alexander, who at the time worked for NBC in New York City, are claims that he belonged to a secret cadre of doctors who treat heads of state and other VIPs, and that he and Alexander would marry at a Rome ceremony in July 2015 officiated by Pope Francis and with the Obamas, the Clintons, the Putins, and Elton John in attendance.

None of it was true, as Alexander found out 2 months before the supposed wedding, a revelation documented 2 years ago in a **riveting *Vanity Fair* article by another journalist**. Now, Alexander retells the story herself in an 85-minute documentary, *He Lied About Everything*, that will premiere at 8 p.m. Eastern Standard Time on the Investigation Discovery television channel.

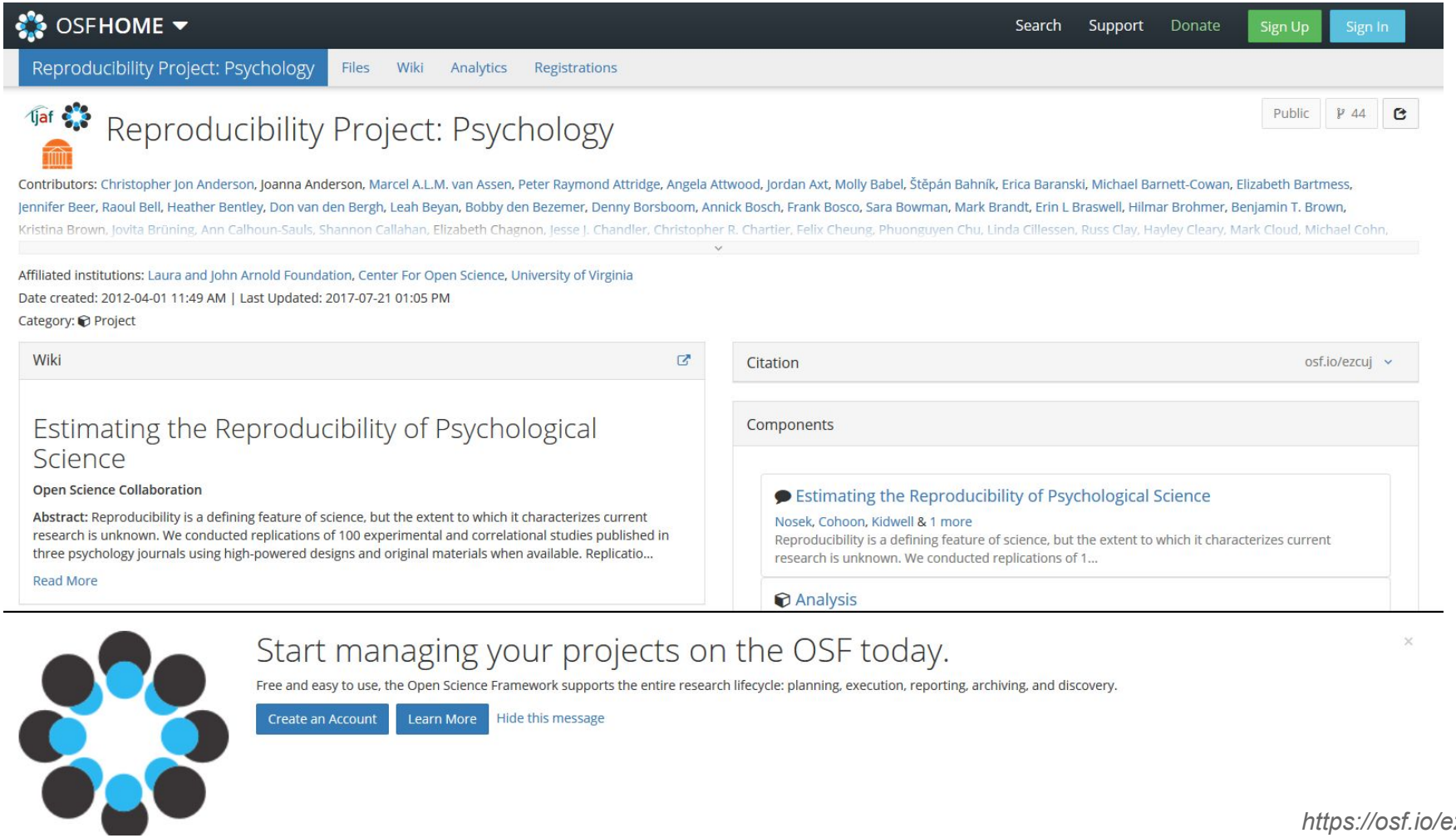
The film doesn't shed much new light on Macchiarini's scientific misconduct—which one whistleblower in the case now qualifies as "murder," because almost all of his trachea recipients have died—but it provides a fascinating glimpse into his private world at a time when his research

It's a twist of irony that the media helped build Macchiarini's reputation, and then helped destroy it. He became famous by creating replacement tracheas, or windpipes, in the lab, initially from donor tracheas and later from plastic versions. They were "seeded" with stem cells that supposedly turned them into a living, functional organ. Glowing accounts in the press hailed Macchiarini—who speaks six languages, worked all over the world, and has what Alexander calls "this sexy George Clooney thing going on"—as a "supersurgeon" and a pioneer of regenerative medicine. (NBC got interested in him after a **front page 2012 story in *The New York Times***, Alexander says.)

At first, misconduct allegations against Macchiarini didn't stick. In August 2015, KI **dismissed a report by an independent investigator**, Bengt Gerdin of Uppsala University in Sweden, who had concluded that Macchiarini had committed scientific misconduct. "He was back in business," says KI's Karl-Henrik Grinnemo, one of four scientists who had blown the whistle on Macchiarini. "He had the full support of the Karolinska Institute, and we were basically looking for other jobs." But when the *Vanity Fair* story was published on 6 January 2016, says Grinnemo, "everybody realized, 'Oh my God, his entire life is fake.'"

Another bombshell came a week later: The first episode of ***Experimenten*, a three-part documentary** by Swedish television producer Bosse Lindquist on Macchiarini's work that included searing footage of a young Russian woman who died after having received one of his artificial windpipes. "The two stories complemented each other," Grinnemo says. But Gerdin says that *Experimenten*, which aired on primetime TV in Sweden, had a "vastly higher impact." It triggered a media storm and led to **KI firing Macchiarini in March 2016**, as well **as the resignation of a slew of KI officials**. (*He Lied About Everything* will air in Sweden on 25 February.)

http://www.sciencemag.org/news/2018/02/romance-gone-bad-valentine-s-day-program-examines-biomedical-researcher-s-ignoble-lies



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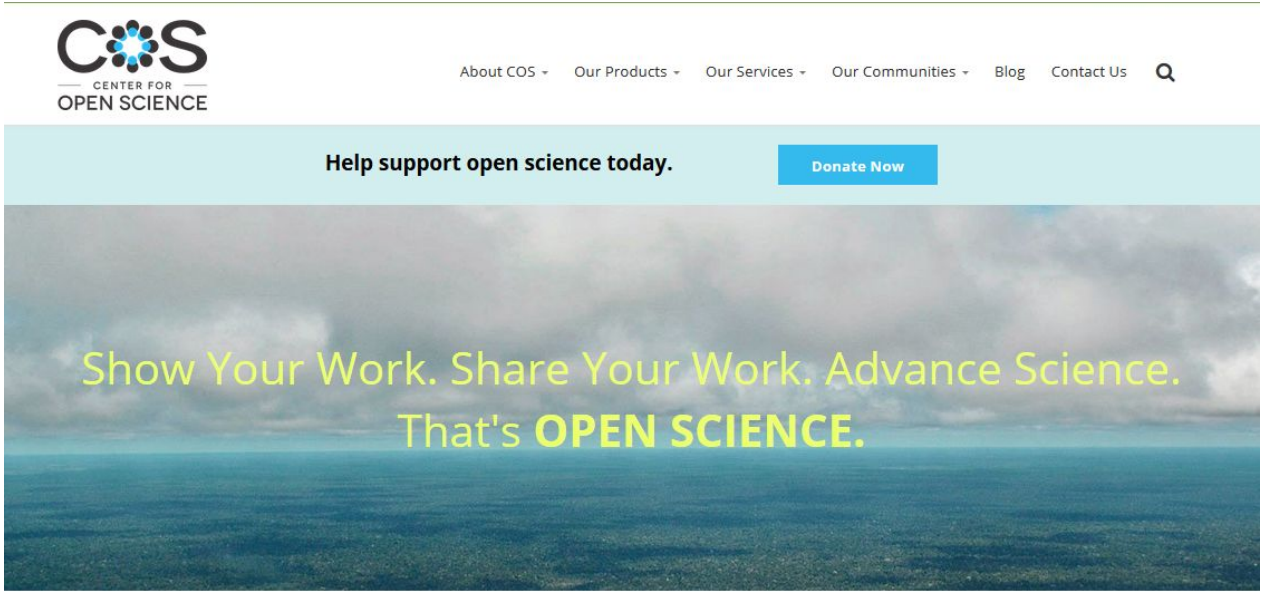

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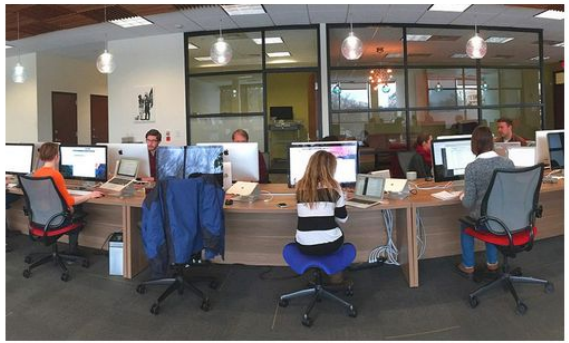


https://cos.io/

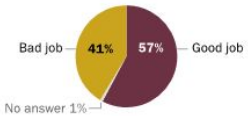
2 On balance, most Americans (57%) say that the news media do a good job covering science, but people also see problems in coverage stemming from the news media, researchers and the public itself. For example, 43% of Americans say it is a big problem that the news media are too quick to report findings that may not hold up. A similar share also see problems stemming from researchers publishing so many studies that it is hard to tell high from low quality (40% say this is a big problem).

When pressed to choose which problem is greater, almost three-quarters of Americans (73%) say that the bigger problem lies with the way the news media cover scientific research, whereas just about a quarter (24%) say the bigger problem is the way researchers publish and share their findings.

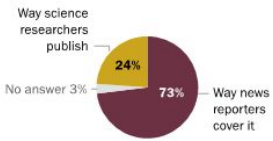
Americans hold mixed evaluations of how the news media cover science and see problems in coverage stemming from a range of players, including the public itself

% of U.S. adults who say the following

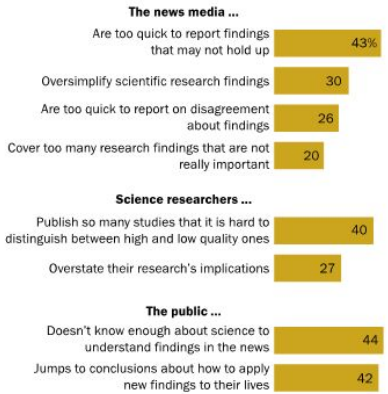
The news media do a __ covering science



The bigger problem with news about scientific research findings is the ...



% of U.S. adults who say each of the following is a big problem when it comes to news about scientific findings



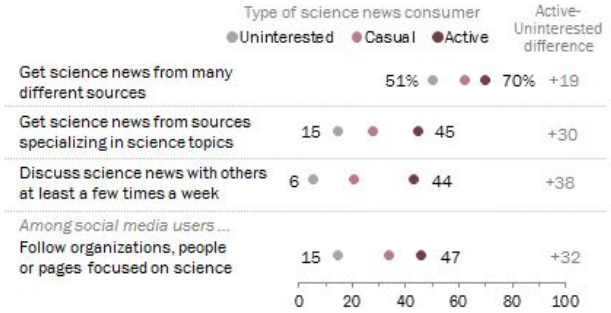
Note: Very good/bad job and somewhat good/bad job responses are combined. Respondents who gave other responses or who did not give an answer are not shown.
Source: Survey conducted May 30-June 12, 2017.
"Science News and Information Today"

PEW RESEARCH CENTER

4 The 17% of U.S. adults who are active science news consumers cite their curiosity as a key reason, and they rely on an array of science news sources. About one-in-six U.S. adults (17%) are active science news consumers, getting science news at least a few times a week and mostly seeking it out. Another 49% are "uninterested" consumers who get science news infrequently and tend to happen across it.

Active science news consumers rely on a wider range of sources and discuss science news more often

% of U.S. adults in each group who say they ...



Note: Type of science news consumer based on their frequency of science news consumption and whether they tend to look for or come across it. Respondents who gave other responses or who did not give an answer are not shown.
Source: Survey conducted May 30-June 12, 2017.
"Science News and Information Today"

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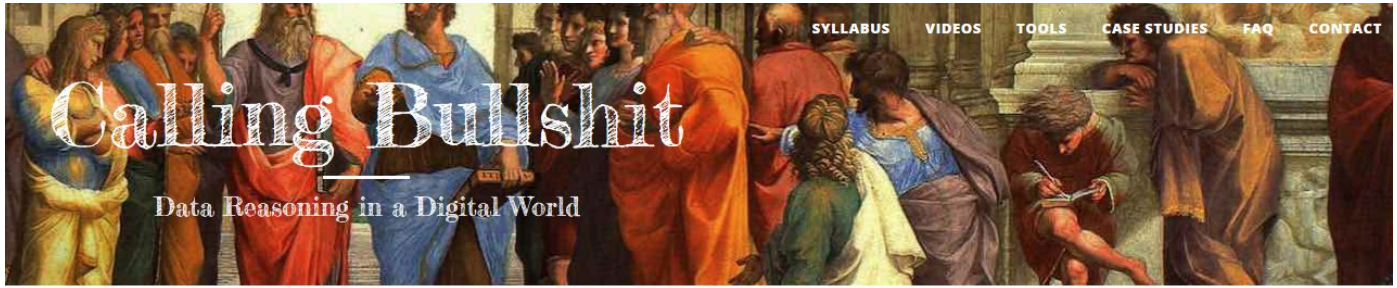
Among active science news consumers, nearly all (97%) say curiosity about what's happening in science is a reason they follow such news, with 77% saying it's a major reason. These active consumers turn to more types of science news providers and are more likely to discuss science news with others. Those on social media are also more likely to follow science pages or accounts, thereby bringing more science information into their social media feeds.

http://www.pewresearch.org/fact-tank/2017/09/21/most-americans-get-their-science-news-from-general-outlets-but-many-doubt-their-accuracy/



The world is awash in bullshit. Politicians are unconstrained by facts. Science is conducted by press release. Higher education rewards bullshit over analytic thought. Startup culture elevates bullshit to high art. Advertisers wink conspiratorially and invite us to join them in seeing through all the bullshit — and take advantage of our lowered guard to bombard us with bullshit of the second order. The majority of administrative activity, whether in private business or the public sphere, seems to be little more than a sophisticated exercise in the combinatorial reassembly of bullshit.

We're sick of it. It's time to do something, and as educators, one constructive thing we know how to do is to teach people. So, the aim of this course is to help students navigate the bullshit-rich modern environment by identifying bullshit, seeing through it, and combating it with effective analysis and argument.

What do we mean, exactly, by *bullshit* and *calling bullshit*? As a first approximation:

> *Bullshit* involves language, statistical figures, data graphics, and other forms of presentation intended to persuade by impressing and overwhelming a reader or listener, with a blatant disregard for truth and logical coherence.

> *Calling bullshit* is a performative utterance, a speech act in which one publicly repudiates something objectionable. The scope of targets is broader than bullshit alone. You can call bullshit on bullshit, but you can also call bullshit on lies, treachery, trickery, or injustice.

https://callingbullshit.org/

Further Reading

Riegelman, A., & Bakker, C. (2018). Understanding the complexities of retractions: Recommended resources. *College & Research Libraries News*, *79*(1), 38. doi:https://doi.org/10.5860/crln.79.1.38

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