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THE CITIZEN'S GUIDE TO THE FUTURE

This Is What Happens When No One Proofreads an Academic Paper

By Will Oremus

By now we all know, or ought to know, that just because something is published in a peer-reviewed academic journal doesn't mean it's true. But we can at least assume it's been proofread, right?

Apparently not. A priceless gaffe, which has been making the rounds of academic Twitter this week, is Exhibit A.

It comes in the main text of a paper titled "Variation in Melanism and Female Preference in Proximate but Ecologically Distinct Environments," which was published in a recent issue of the journal *Ethology*. Here's the **unintentionally candid passage**, as highlighted by UC-Davis grad student Dave Harris:

Although association preferences documented in our study theoretically could be a consequence of either mating or shoaling preferences in the different female groups investigated (should we cite the crappy Gabor paper here?), shoaling preferences are unlikely drivers of the documented patterns both because of evidence from previous research and inconsistencies with *a priori* predictions. Our methods closely followed those of published mate choice experiments in this system (Tobler et al. 2009a,b; Plath et al. 2013),



The blooper was **picked up by** *Retraction Watch*, which contacted both the authors and the publisher for comment. The corresponding author told *Retraction Watch* the Gabor line "was added into the paper by a co-author during revision (after peer review)," and no one spotted it in the course of the final proofreading process. He apologized for the put-down, adding, "I would never condone this sentiment towards another person or their work."

Wiley, the publisher, responded by **removing the paper** and says it will republish it with the line removed and the change noted. "We are in the process of investigating how this line made it to publication," the Wiley spokesperson said.

That's a good question. Typos and editing mistakes are common on blogs and even in print newspapers, where reporters and editors are working on tight deadlines. But academics typically have weeks or even months to edit a paper before the journal goes to press, and the peer review process means that it has to go through close reads by multiple experts in the relevant field.

For that reason, errors this glaring in the main text of an article are relatively rare, says Meredith Carpenter, a postdoctoral researcher at Stanford and co-author of the science humor blog Seriously, Science? As Carpenter and co-author Lillian Fritz-Laylin explained in a Slate post last year, overly honest asides are more commonly found in the acknowledgements section, which tends not to be peer-reviewed.

Still, slip-ups do happen, and Carpenter pointed me to another example that might be even more mortifying than the "crappy Gabor paper" mishap. This one is in the abstract of a paper published in 2011 in the peer-reviewed open-access journal BMC Systems Biology (emphasis mine):

RESULTS: In this study, we have used (insert statistical method here) to compile unique DNA methylation signatures from normal human heart, lung, and kidney using the Illumina Infinium 27 K methylation arrays and compared those to gene expression by RNA sequencing.

The journal later apologized and corrected the mistake, noting that the statistical methods were adequately explained later in the article.

Carpenter says the most prominent academic journals usually copy edit papers prior to publication. But smaller journals don't always look as closely at the final version of a paper once it has been peer-reviewed and revised. In that case, it's at least partly the responsibility of the paper's authors to make sure they haven't introduced any mistakes in the editing process. This one looks like what we might call a track-changes fail.

The paper's authors aren't the only ones taking flak for it. Commenters and Twitter wags were quick to hunt down the "crappy paper" in question, since after all a paper with a major typo is still better than one that's crappy all around. But at least one considerate observer warned against a rush to judgment:



Joshua Drew

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We've all seen the "crappy" #addedvalue paper. Let's not substitute their assessment of the research for our own link.springer.com/article/10.100...



It's tempting to view this real-life corollary to #overlyhonestmethods as an indictment of the academic publication process. But Carpenter suggested a more optimistic take: "Instead of a failure of the system, you could also consider this a success of post-publication peer review."

In that spirit, I'd like to reiterate Slate's standing call for our readers to alert us to our own mistakes both new and old. (Should I cite the crappy Oremus Encyclopaedia Britannica error here?)

Top Comment

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