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## Deception and Democracy in Digital Science Publishing

**Citation for published version:**

Pagliari, C 2015, *Deception and Democracy in Digital Science Publishing*. LinkedIn Publishing.  
<<https://www.linkedin.com/pulse/deception-democracy-digital-science-publishing-claudia-pagliari>>

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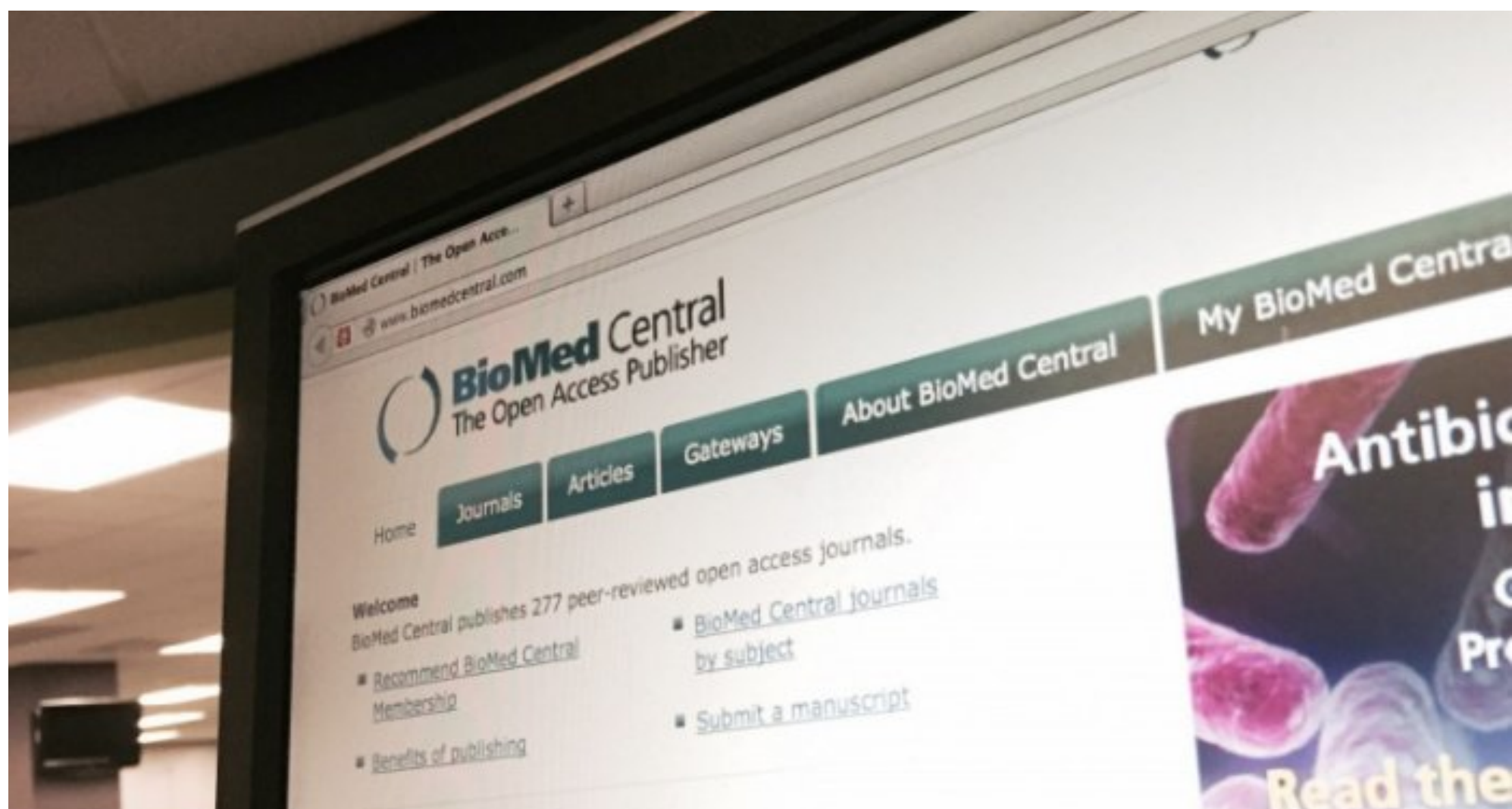


Image from the Washington Post Website

# Deception and Democracy in Digital Science Publishing

Edit article

Published on March 29, 2015



**Claudia Pagliari**

Programme Director, MSc in Global eHealth at The Univ...



It's been obvious for some time in academic science that all is not right in the promised land of online Open Access (OA) publishing. Rather than democratising the dissemination of research for the greater good of society - as the original vision promised - it has in many cases resulted in a skewing of 'today's science' towards authors and institutions who can pay the often-high fees required, and spawned a whole industry of hangers on and image spinners able to offer services-on-top, which has further increased the wallet-linked digital science divide. As highlighted in an article in this week's Washington Post, it has also opened the door to a host of unethical and fraudulent practices. (1) The article points the finger to a scam emerging from a group of Chinese universities who appear to have used an agency that supplies fake peer reviews to guarantee papers are judged fit for publication. All credit to Biomed Central for exposing this where others have failed. As the writer points out, this practice is rife and growing worldwide, particularly in countries and institutions keen to break into the global market as serious players. Since many journals rely almost exclusively on author fees, and given that many researchers don't have the financial means to pay 'administrative costs' of up to \$1800 per published article, the temptation for some journals to turn a blind eye to quality shouldn't be underestimated. Indeed there's a new and growing industry in manufactured scientific journals pushing 'opportunities' to publish at unsuspecting junior researchers, purely for the money - but that's for a different article, this one is focused on the ones that should know and do better.

Tipping the revenue-generation model away from subscriptions by respected institutional libraries with strict quality control procedures, to authors and their host organisations with a vested interest in publishing, was bound to lead to problems. We

are now caught in a situation where our own institutions sometimes have to pay three times: once to purchase the journals, once to pay the staff who produce the science, and once to enable their staff to disseminate the science they have produced in those same journals (its not supposed to work like this but in practice it does in many cases). Many academic institutions have failed to budget for this adjustment, leaving researchers to fend for themselves if they want their work to see the light of day in a half decent journal, which is essential for their career advancement. An extraordinary double-bind. (Yes, I said double-bind, not double blind.)

This is not to say that it doesn't work all of the time - there are truly excellent examples of rigorous online OA publishing - but the marketplace itself has created opportunities for exploitation and bias that weren't anticipated at the outset.

Fraud is a tricky concept in science, where it straddles issues around the stealing of people's ideas, the manufacture of data, unfairly influencing editors and softer social pressure towards positive peer-reciprocation. While commercial services that offer editorial help with article preparation may be a legitimate investment for those without a native fluency in the language of the journal, or as an aid to typesetting, brazenly faking the email addresses of respected academics and submitting reviews in their names, or writing sweatshop articles for purchase by dodgy academics to pass off as their own has shocked even the most cynical of us old guard.

One of the arguments levied in commentaries like this, is that digital publishing has taken the nepotistic academic rings we all knew about before and commoditised them in new ways that bode very badly for scientific freedom. Of course, mutual back scratching can be hard to disentangle from the genuine need to engage reviewers that share a set of theoretical, methodological or content skills, and the more specialist your topic is the more likely it is that you will be drawing on a small pool of experts known to one another. After all, if people don't know what you're talking about or aren't familiar with the relevant literature how can they possibly judge whether your paper is any good? Likewise there has always been an economic value attached to these behaviours; with some professional networks and journals associated with more rapid career advancement; but the fact that OA now involves direct payments to journals, coupled with the rising importance of online publishing as a social marketing tool for universities, raises the stakes appreciably.

On the up-side, online OA publishing enables more people to read, scrutinise and learn from academic research, hence the movement to unleash journals from privileged payer institutions and into the hands of the majority. Potentially, the digitization of these resources and their meta-data provides new opportunities to clean up scientific rings by making social networks and patterns of reciprocation easier to detect and more open to justification which, as I've said, may be perfectly straightforward in many cases. Likewise, with the right level of academic oversight, internal governance and technological savvy, journals should find it increasingly easy to spot fake reviewers and commercial off-the-shelf articles. The best ones are already investing in this sort of necessary activity, mindful that it is ultimately their own bottom line that will suffer if they don't and thus risk losing credibility.



Of course, journals cost money to produce, whether they are printed or digital, and somehow this must be paid for, so some fair sharing of the burden is to be expected. However there must surely be something wrong with a business model that has arguably diminished the nobility of scientific dissemination by converting learned journals into online advertising spaces, with price tags to match. There is a need to keep challenging a model with so much potential to increase inequity by preventing those with good research but little money from publishing, while those with bigger checkbooks can afford to pay for even fairly insignificant or lower-quality work to reach a wide audience, with all of the career advantages that offers. Of course, many argue, not unreasonably, that having a bigger budget as an institution or research group is itself indicative of having better quality research, and that publication is the outcome of that quality, but this rather misses the point.

Either way, I hope the Washington Post article draws greater attention to the topic and makes responsible editors more savvy to the tricks of this new ecosystem. But this burden must also be shared with the academics and institutions feeding the journals, whose responsibility it is to co-manage this social machine. And let's not forget that many academics are eschewing the commercial journals anyway, in favour of their own community-driven, community-triaged, online dissemination vehicles, which of course also creates a need for effective self-governance.

1. The Washington Post. Major publisher retracts 43 scientific papers amid wider fake peer-review scandal. By Fred Barbash, published March 27th.

<http://wapo.st/19X2Ejz>

Key words. Digital Science. Open Access Publishing. Democracy. Fraud. Ethics.



Tagged in: [open source](#), [ethics](#), [digital media](#)



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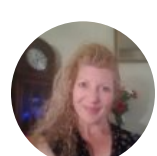
**Morna Atkinson**

M.D. of EEE

... 2y

Good work [Claudia Pagliari](#) - there is a real problem with fraud within both the undergraduate and academic society - maybe small, but defo there

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**Morna Atkinson**

M.D. of EEE

... 2y

This is a real problem, especially when universities place a huge value in attracting inward investment rather than on the research itself. The balance of universities as a business versus that of credible re-

search results, pushing previous boundaries needs to be auditable by those funding them. Which KPI's should be focussed on - is university promotion based on raising ex... [See more](#)

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**Claudia Pagliari**

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Programme Director, MSc in Global eHealth at The University of Edinburgh

Thanks Morna. The Queensland case is sobering and illustrates the power of rankonomics and how it can corrupt even those at the top of our most prestigious universities, although I'd be loath to judge before the case is tried. As one lawyer commented - "If you really want to tackle research misconduct you have to think about why researchers might be tempted to cut corners ... [See more](#)

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