

PREDATORY PUBLISHERS: USING OPEN ACCESS FOR THE WRONG REASONS

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Agreements of universities with big publishers such as Elsevier and Wiley are causing a rapid growth of Open Access (OA).¹ In short, these agreements entail that the publishers will publish a certain percentage of their publications in OA, combined with an agreement that allows researchers to publish their articles in OA journals for free to stimulate the growth of OA publications. This means that the publishers in question will move towards a future of OA publishing. Although there are many advantages to OA, such as widespread accessibility of scientific publications to institutes of learning and the general public all over the world, the development also introduces some problems. This article will focus on one particular side effect of OA: Predatory publishers. These are publishers who wilfully take advantage of OA as a new form of issuing content, the naivety of authors, and the pressure on academics to publish. They often charge authors publishing fees without providing the editorial and publishing services of legitimate journals. The result of their work may be that all OA publications, not just the ones published by predatory publishers, lose their credibility. This article aims to provide some solutions to the phenomenon by looking at the mechanisms and theory behind it, as well as the positive and negative influences of predatory publishers

Before discussing predatory publishers, it is important to specify the various OA business models and how they will be able to sustain the OA publications. The two main business models are Green and Gold OA. The Green business model is based on self-archiving publications on OA platforms after an embargo period (often ranging from anywhere between six and 24 months). The revenue of the publishers is still provided via the sales of the journals, since they will not be available in OA for at least a couple of months. The examples used in this article are based on the second business model, Gold OA. In this model the author or institution (the supply side) has to cover the costs that are incurred in the process of creating an OA copy. These costs are called Article Process Charges (APCs), and may vary between publishers from a couple of hundred to a couple of thousand euros. Once the APCs have been paid, the article can be published in an OA journal. The main flaw of the Gold OA business model is that publishers are paid in advance. This means that, whatever they do, the costs of creating the publication have already been covered. Consequently, the pressure to sell and distribute the articles is not very high. The model is also used for monographs, but predatory publishers seem to focus on journals, which is why the emphasis in this analysis will be on journal articles. An explanation as to why predatory publishers are leaning towards journals rather than monographs may be that OA is more widely used for journals, and that the current OA situation with regard to monographs seems to be more complex.

The theory behind predatory publishers

The number of predatory publishers has multiplied due to OA and its Gold business model. These publishers do not list positive peer-reviews, but simply rely on APCs in their selection process. Because they are paid to publish, they do not need to invest their own money to start operating as a publisher. By taking on every article and sending spam mail to academics, offering them a chance to publish with their company, they create misconceptions

about OA and may consequently devalue OA publications. The situation is aggravated by modern technology that makes it possible for almost anyone to build a website and pretend to be an OA publisher. This makes it even easier for predatory publishers to continue doing business, as it is impossible to keep an eye on every new publisher. In addition, predatory publishers often give their journals names that are very similar to those of established journals, which creates a false sense of credibility.

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The main reason why academics accept offers from predatory publishers is that they are under an incredibly high pressure to publish. They are often judged by the number of articles they have published, and younger scholars especially can be tempted to accept offers from

predatory publishers, as they charge lower APCs making it more attractive for academics to collaborate with them. Over the last five years, the number of publications issued by predatory publishers has greatly increased. An article in *BMC Medicine* found that in 2010, approximately 53,000 articles were published by predatory publishers. Four years later, in 2014, this figure rose to 420,000.² This growth can be linked to the general increase of OA publications.

Case studies

The problem that predatory publishers present mainly seems to exist in growing economies such as China and India. For example, the number of scientific journals in China has experienced an enormous growth, second only to the USA in terms of numbers of publications. However, the academic level of these journals is nowhere near as high as it is in other areas such as the USA and Europe.³ Due to the aforementioned pressure on academics to publish and predatory publishers' desire to make a high profit, the academic world in China has fallen victim to the so-called 'trash journals', which publish articles regardless of their quality. In other words, the scholarly evaluation system, which pressures academics into publishing their articles, is partly responsible for the rise of trash journals and predatory publishers.

Problems caused by publishers taking advantage of the Gold OA have already been noticed on a large scale. One problem is that publishers have begun accepting nonsensical articles in high numbers.⁴ An experiment conducted in 2013 by John Bohannon and *Science*, uncovered the extent of the problem. He wrote a scientific paper on the anticancer properties of a chemical extracted from lichen and created unique versions of this paper by substituting the chemical and the species of lichen and by giving the papers fictitious, but credible, author names and names of institutions based in Africa. The aim was to create a paper 'with such grave errors that a competent peer reviewer should easily identify it as flawed and unpublishable' and to send it to OA journals to assess their reviewing processes.⁵ The article was sent to 304 journals, which were selected from the Directory of Open Access Journals (DOAJ) and Jeffrey Beall's list, based on the following criteria: publication in English, APCs that are payable only if the paper is published, and publication in the field of general science or with at least one biological, chemical or medical title. Over half of the journals accepted the paper. This shows that in many cases the peer review was not thorough enough to identify flawed scientific processes.

The acceptance of nonsensical articles is more harmful to the publisher than it is to the scholar. In this case, it was an author trying to get published by sending a paper to multiple journals. However, it is the smaller publisher who is more dangerous to the author. As mentioned previously, there are predatory publishers who accept anything they receive and predatory publishers who actively seek out academics to publish with them. They send emails to academics in which they praise the author's previous work and offer to publish their new research. In this invitation, they offer the author low APCs, a speedy publishing process, and a high acceptance rate.⁶ Sometimes, the author only finds out that APCs have to be paid once the article has already been published.

Many agree that predatory publishers who prey on academics trying to get published have to be stopped. Jeffrey Beall, a librarian and associate professor at the University of Colorado, Denver, is the one who invented the term 'predatory publisher'. After having received multiple emails from predatory publishers, he realised that they were becoming a harmful phenomenon and decided to create a list of their names in

2010.⁷ He continues to update the list with names of publishers who, for some reason, are not trustworthy in his eyes. This can be, for example, because they accept all the articles they receive or because their peer review system is not of the quality it should be. He also includes an explanation of why he thinks they should be avoided. Although many colleagues and scholars praise his initiative, it has also been criticised. The main reason for this is that his judgments are based on his own suspicions, without any interaction with the publishers in question, which could negatively affect start-up publishers or publishers from developing countries.

The question of how to prevent predatory publishers from exploiting scholars' work remains. Raising awareness is key to the solution: It is important to provide academics with information about OA. By educating the academic world, authors learn what signs to look out for when considering a publisher. This information should not only be directed at academics, but also at librarians, universities and funding bodies. Together, they have enough knowledge and influence to slowly stop predatory publishing. Another solution would be to change the academic evaluation system and to reduce the pressure on academics to publish.

The positive side of predatory publishers

It is important to note that there is also a positive side to predatory publishers. The biggest concern associated with them is that the quality of academic publications might suffer from the lack of peer review. This can be avoided by making sure that the platforms on which OA publications are stored keep an eye out for these questionable practices. For example, big OA platforms such as OAPEN Library and DOAJ only accept material that has been peer reviewed. They can therefore make sure that every publication that is found on their repository has been thoroughly checked. Jeffrey Beall's blacklist has already been mentioned as one of the ways to tackle predatory publishers. Without predatory publishers, this extra quality check would not have existed. Consequently, new standards for OA publishing have been set. Publishers are now forced to show that they treat their online publications exactly the same as the paper ones.

One of the reasons why academics may still be hesitant towards OA is because it is so easy to publish a text online. As the

DOAJ states: '[L]ingering concerns about the quality of open access journals have kept some academics from fully embracing the innovative publishing model'.⁸ A solution to this is to have rigorous rules that restrict which publications are allowed on OA platforms. Obviously, this would not stop predatory publishers from taking advantage of people – they would simply be prevented from storing the articles in large repositories. Nevertheless, strict rules do provide a sense of authority by ensuring that the articles that are published on the repositories are of a certain quality.

As OA will most likely keep growing, it is important that information about the negative aspects of this relatively new development are discussed to the same extent as the positive aspects. It will take time before the phenomenon of predatory publishers will cease to exist on such a large scale. It is only while OA is still relatively new and unknown to scholars, that these publishers can take advantage of the naivety of authors. This is also why big OA platforms such as OAPEN and DOAJ only accept peer-reviewed material. By doing this, they can maintain their credibility and provide an environment that encourages quality scientific publications. The ultimate, though utopian, goal is to completely stop 'predators'. Educating academics on the development of OA is one step in achieving this, but the big problem lies within the evaluation system of academics. As it is unlikely that the evaluation system will change in the near future, we will have to rely on Beall's blacklist for now and encourage academics to do research on OA and learn what the tell-tale signs of a predatory publisher are.

Notes.

- 1 Universiteit Leiden. 'Universiteiten en Elsevier bereiken akkoord over open access'. *Universiteit Leiden*. 10 December 2015. Web. 17 February 2016.; Universiteit Leiden Bibliotheek. 'Wiley akkoord forse stappen richting Open Access met behoud kwaliteit'. *Bibliotheek Universiteit Leiden*. 5 February 2016. Web. 17 February 2016.
- 2 Aspire Scientific Ltd. 'Rapid increase in 'predatory' open access journals/articles in the past 5 years'. *The Publication Plan*. 5 October 2015. Web. 5 February 2016.
- 3 Lin, S. and L. Zhan. 'Trash Journals in China'. *Learned Publishing* 27.2 (2014): 145-154. Print.
- 4 Bohannon, J. 'Who's Afraid of Peer Review?'. *Science* 342.6154 (2013): 60-65. Web. 9 April 2016.
- 5 Ibid.
- 6 Kingsley, D.A. and M.A. Kennan. 'Open Access: The Whipping Boy for Problems in Scholarly Publishing'. *Communications of the Association for Information Systems* 37 (2015): 329-350. Web. 9 April 2016.
- 7 Beall, J. 'Home'. *Scholarly Open Access*. Web. 10 December 2015.
- 8 Adams, C. 'Directory of Open Access Journals Introduces New Standards to Help Community Address Quality Concerns'. *Sparc*. 5 March 2015. Web. 9 April 2016.