

# Global Science Books: A Tale from the Cuckoo's Nest. How Predatory Open Access Publishing Can Influence the Metrics of a Traditional Scholarly Publisher

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**Abstract:** Based on the July, 2013 list published at scholarlyoa.com by Jeffrey Beall, the number of references by “predatory” open access (POA) journals or publishers was quantified in Global Science Books (GSB) journals. This is the first such ever attempt by any publisher or journal to complete such an analysis. Over an approximately 6-month period, a total of 189,904 references were examined in the reference lists of 2928 manuscripts published in any journal (extant or extinct, 31 in total) over a 7-year period (January 2007 to July 2013). The objective was to assess how unscholarly or predatory publishing can impact and/or influence another publisher and how the reference lists of the surrogate publisher can be used as an unsuspecting instrument (a surrogate deposit, the cuckoo’s nest) to spread and validate POA publishers and their journals.

**Keywords:** Global Science Books; open access; predatory publishing, blogs

Broadly, a predatory open access (POA) publisher refers to an open access (OA) publisher that engages in practices that are deceitful, fraudulent, non-academic or otherwise meant to draw unfair benefit from scientists or authors in a dishonest or unfair way. Traditional print publishers may also be predatory in nature but limited literature exists on such predatory practices. There exists no literature yet that quantitatively examines how predatory publishing (Teixeira da Silva 2013) influences the literature, other journals or other publishers. This is the first study to show how POA publishing can, inadvertently, affect the reference lists of other

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*Conflict of Interest:* The author was the Editor-in-Chief of all Global Science Books (GSB) journals from 2007 until June, 2013 and was also GSB’s founder. The position held at GSB was purely voluntary, without financial remuneration or any other tangible benefits. The author declares no other conflicts of interest.

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academic publishers. Even though papers submitted to journals may pass through peer review, it is virtually impossible to block or screen out papers that appear in its reference list based on the perception that they are unscholarly. Such an action would be perceived by scientists as unscholarly or biased since scientists are free to draw upon the literature to support their studies. Critics of this opinion may claim that truly scholarly journals would include a clause in their instructions for authors that would encourage scholarly behaviour and the reliance on only scholarly texts and sources, or to limit the risk that the sources used are of unscientific nature, such as indicated by the ICEA: “Authors are responsible for the accuracy of references and are encouraged to use reliable sources.”<sup>2</sup> This presumption would, however, assume that the scholarly level of all so-called scholarly journals, OA or traditional STM print publishers, was the same, but which it is clearly not.

POA publishers potentially harm science by creating a negative perception in society about the validity of scientific findings since scientists find a quick and easy venue to publish their findings, even if at a cost (Beall, 2012). However, the inconsistent and often unfair and/or unquantified criteria used by Beall have also been the subject of criticism and concern that damage to valid, but green, start-up publishers may be unfairly targeted (Butler, 2013), even though Beall (2013) claims that POAs act as a location for authors to “game” the system and practice misconduct such as plagiarism.

The final reference lists of manuscripts that were accepted for publication in Global Science Books journals were used. GSB is a traditional print publisher specializing primarily in plant science journals that initiated in 2006 and ceased publication of the entire journal fleet in 2013. GSB journals were selected for analysis since the author was the editor-in-chief of all GSB journals over the entire period, and thus oversaw all peer review and quality control (QC)-related activities. POA publishing has increased exponentially over the past 4-6 years, seeing a 20-fold increase between 2011 and 2014.<sup>3</sup> However, POA publishing has probably existed since the start of the OA movement (Bohannon 2013). Consequently, only references of journals that were published between 2003 and 2013 and that appeared in the July, 2013 list published at [scholarlyoa.com](http://scholarlyoa.com) by Jeffrey Beall were considered in this small analysis. The newly expanded 2014 list was not used for the analysis because several POA journals and publishers only started to publish in 2013, and thus rarely appeared in the reference lists of GSB journals, whose last issues were published in January, 2013. All other references – by virtue of the fact that they did not appear on the Beall list and were thus not considered to be predatory – were eliminated. From the remaining references, any references that were from traditional print journals, web-sites, books or any other reference that was not from an OA journal, were eliminated. Hybrid print-OA journals were also not included. Using the remaining list (a total of 24,527 references from the initial 189,904), the references were classified as a 0 (present) or 1 (absent) on the Beall’s list of OA predatory journals/publishers<sup>4</sup>, a blog that has sought to examine the predatory practices of POA publishers and stand-alone journals. Comparisons were performed manually. Each reference that appeared from a predatory publisher or predatory journal was classified as a single 0 (i.e., present) count, even if it appeared multiple times. The exercise (i.e., verification) was conducted only once (i.e., cross-assessment of reference lists was not repeated). Four ratios (E, F, G, H) based on the data explained in Table 1 were plotted on a graph on a per-year basis (Fig. 1). The overall trend for all four ratios was positive. This indicates that the number of references of papers from POA journals or publishers each year superseded the total number from the previous year. Ratios E, G and H were linear while ratio F was exponential.

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<http://www.icea.org/content/guide-authors>

<sup>3</sup> see <http://scholarlyoa.com/2014/01/02/list-of-predatory-publishers-2014/>

<sup>4</sup> <http://scholarlyoa.com/individual-journals> and <http://scholarlyoa.com/publishers>

The level of inclusion of POA journal references in GSB journals increased 9-, 64-, 7- and 14-fold over the 7-year period when using ratios E, F, G and H, respectively (Fig. 1). Even the smallest positive ratio is a worrisome sign that valid academic and scholarly journals may be being used by POA journals and publishers to expand their level of indexing and to validate their existence in the wider literature, OA or traditional. There are no other such data sets yet in the literature to confirm or disprove this hypothesis.

GSB journals have been serving as one conduit for POA publishers to validate their results, and thus existence. This is achieved by authors who have included papers from POA publishers in their reference lists of manuscripts published in scholarly peer-reviewed journals. By not actively banning or excluding the references from reference lists of GSB journals, the inclusion of a paper from a supposedly POA journal or publisher intuitively implies that it is academically sound. Since this premise in many cases is not true – hence the reason for the predatory label of such journals and publishers – GSB journals have been serving as the cuckoo's nest for the surrogate validation of potentially non-academic, false or fraudulent scientific work. Until a quantitative analysis of POA publishing is complete, the results and implications suggested by this paper will remain hypothetical, although a recent paper (Bohannon 2013) has also highlighted the risks of POA to the integrity of academic publishing, even though aspects of that study, including its design and control group, were also flawed (Becker 2014). Other publishers are urged to examine the reference lists of papers published in their journals and to, as best as possible, quantify the level of surrogate use, cuckoo-style, by POA publishers. The reader is cautioned, however, that not all POA journals listed on the Jeff Beall blog may in fact be predatory, and that predation needs to be quantified, as suggested by the Predatory Score (Teixeira da Silva 2013) in order to quantitatively prove its predatory or unscholarly nature. That work is currently underway.

There are potentially dozens of reasons, both personal and professional, that may have influenced the decline of GSB's editorial processes. However, the weaknesses, flaws and porosity of traditional peer review are well known (Teixeira da Silva and Dobránszki, 2015). A complex situation, as evidenced in the formal responses to the reviewers, as indicated in the Appendix, would have no doubt influenced the porosity of the peer review system. However, given the inherent flaws and weaknesses of the Beall list, and given the fact that there are no other comparative studies at present, I prefer to not extrapolate too much beyond what has been written here, for now. It would be important for other publishers to step forward to analyze the reference lists of their journals to quantify, using an updated (2014) version of the Beall lists, how they, too may or may not be serving as cuckoo's nests, for the POA journals and publishers.

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**Table 1** Quantification of the level of involuntary predation of papers published between 2007 and 2013 in Global Science Books (GSB; [www.globalsciencebooks.info](http://www.globalsciencebooks.info)) journals on a year-by-year basis according to a formally defined list (June, 2013) of predatory open access publishers and/or journals ([www.scholarlyoa.com](http://www.scholarlyoa.com)) as assessed by the number of appearances in the reference lists of GSB journals.

| Year   | Total No. published papers (A) | Total No. references (B) | Total No. OA references (C) | Total No. of predatory journal references (D) | E = C/A (%) | F = D/A (%) | G = D/C (%) | H = C/B (%) |
|--------|--------------------------------|--------------------------|-----------------------------|---|-------------|-------------|-------------|-------------|
| 2007   | 450                            | 37471                    | 861                         | 18  | 1.913       | 0.040       | 0.021       | 0.023       |
| 2008   | 412                            | 26862                    | 1168                        | 68  | 2.835       | 0.165       | 0.058       | 0.043       |
| 2009   | 512                            | 31406                    | 3829                        | 167   | 7.479       | 0.326       | 0.044       | 0.122       |
| 2010   | 519                            | 28634                    | 4418                        | 316   | 8.513       | 0.609       | 0.072       | 0.154       |
| 2011   | 496                            | 29536                    | 5617                        | 621   | 11.325      | 1.252       | 0.111       | 0.190       |
| 2012   | 423                            | 31092                    | 7013                        | 787   | 16.579      | 1.861       | 0.112       | 0.226       |
| 2013   | 93 <sup>4</sup>                | 4903                     | 1621                        | 239   | 17.430      | 2.570       | 0.147       | 0.331       |
| Totals | 2905 <sup>1</sup>              | 189904*                  | 24527 <sup>2</sup>          | 2116 <sup>3</sup>                             |             |             |             |             |

See graphical representation of E-H ratios in Fig. 1

E = Total No. OA references/Total No. papers

F = Total No. of predatory journal references/Total No. papers

G = Total No. of predatory journal references/Total No. OA references

H = Total No. OA references/Total No. references

<sup>1</sup>This is the total number of papers published, following peer review. The number does not represent the number of submitted papers (3739) or the number of rejected papers (510, assessed in a separate paper).

<sup>2</sup>This includes all references in the final version of accepted papers used for proof development and thus the final publisher version. Only references that were published between 2003 and 2013 were considered. All other references were eliminated. From the remaining references, any references that were traditional print journals, web-sites, books or any other reference that was not an OA journal, were eliminated. Hybrid print-OA journals were also not included. Thus, the true total of references was not used, i.e., 189,904\* since the emphasis is on the predatory OA journals and predatory OA publishers.

<sup>3</sup>Based on references of journals and/or publishers on the Jeffrey Beall list at [www.scholarlyoa.com](http://www.scholarlyoa.com) (pooling January and July, 2013 lists).

<sup>4</sup>Calculated up until July 30, 2013

**Fig. 1** Graphical representation of 4 relative ratios in Table 1 to show trends in different parameters over time in GSB journals. E = Total No. OA references/Total No. papers; F = Total No. of predatory journal references/Total No. papers; G = Total No. of predatory journal references/Total No. OA references; H = Total No. OA references/Total No. references

