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Walt Crawford

Intersections

Journals, “Journals” and Wannabes: Investigating The List

The [Directory of Open Access Journals](http://doaj.org) (doaj.org) includes 9,822 journals as of June 8, 2014.

If you expand Jeffrey Beall’s 2014 list of “[potential, possible, or probable predatory scholarly open-access publishers](#)” (as downloaded in late March or early April 2014) and add his 2014 list of “[potential, possible, or probable predatory scholarly open-access journals](#)” that aren’t from a publisher on the previous list (again as downloaded in late March or early April 2014), you’ll come up with 9,219 journals. Or at least I did.

Wow! 9,219 is 93.9% of 9,822. No wonder Beall’s been known to suggest that there aren’t very many honest OA publishers.

Except for one thing. Well, *many* things—thus, this issue-length essay—but just for starters, there’s this: Even taking Beall’s “predatory” judgments at face value, his list includes only 904 of the 9,822 journals in DOAJ—about 9.2%. Which, using his criteria, means that 90.8% of serious Gold OA journals—the overwhelming majority—are above suspicion. The vast majority of Gold OA journals are just fine.

While I’m inclined to believe the last sentence is true—the vast majority of Gold OA journals are legitimate, with honest peer review and intended to make scholarship broadly available—it’s no more clearly implied by what precedes it than is the ludicrous countersuggestion (that is, that because Beall finds 9,219 journals to be questionable and there are 9,822 journals in DOAJ, only a few hundred Gold OA journals appear to be honest).

This report is a followup to two earlier *Cites & Insights* INTERSECTIONS essays: “[Ethics and Access 1: The Sad Case of Jeffrey Beall](#)” (14:4, April 2014) and “[Ethics and Access 2: The So-Called Sting](#)” (14:5, May 2015). If you haven’t read both of those essays,

you should do so before reading this one. (For those who are keeping count, this is *not* “Ethics and Access 3,” the third of a promised trio.)

Before we delve into this, I should correct an error in the April issue. I assumed that “journals” had titles and ISSNs. While I didn’t actually track them, hundreds and probably thousands of the “journals” from Beall’s list of publishers do *not* have ISSNs—and won’t until or unless somebody actually publishes an article in them. Just to jump the gun a little, there are 2,836 “journals” in that list that have either never had an article or at least not had one during 2012, 2013 or the first part of 2014: the wholly empty journals. (Most of those have *never* had any articles.) That’s more than 30% of the possibly predatory journals, which might better be termed “journals” or even “journal names.”

A formatting note: If you’re not planning to print this out, I suggest using the [single-column version](#) instead. I found it necessary to reduce the type size in most of the tables to fit these narrow columns; the single-column version has more readable tables. Neither version attempts to balance pages, given the need to keep tables on single pages.

The Short Version

Herewith, the brief results of an anything-but-brief version of the “sniff test,” a non-expert view of whether journals appear to be plausible targets for submission, as applied to the Beall list and a control group, namely the members of the Open Access Serial Publishers Association (OASPA) as of early May 2014.

The Beall List: Numbers and Percentages

Here’s what I found when I looked at each journal listed as an OA journal at each publisher’s site, and

also at each “independent” journal on Beall’s list, in a terse form that’s probably not useful:

Category	Journals	Percent
A: Apparently good journal	385	4.2%
B: Needs investigation	961	10.4%
C: Highly questionable	784	8.5%
D: Dying or dormant	386	4.2%
E: Empty in 2012-2014	2,836	30.8%
E2: Essentially empty.	896	9.7%
F: Fewer than 20 articles/year	1,832	19.9%
H: Hybrid	200	2.2%
N: Not OA	417	4.5%
X: Unreachable/unworkable	525	5.7%

Table 1: Journals from publishers in Beall’s List

We’ll look at journal groupings in the more detailed discussion, but this table is fairly striking.

Control Group: OASPA Numbers and Percentages

I thought it appropriate to include a control group, and there’s an obvious choice: the Open Access Serial Publishers Association. Here’s what I found using the same tools and definitions as above—and noting that, in all, 1,531 OA journals are represented by OASPA members (plus 14 that I don’t count as OA and one that’s unreachable).

Category	Journals	Percent
A: Apparently good journal	488	31.6%
B: Needs investigation	459	29.7%
C: Highly questionable	0	0.0%
D: Dying or dormant	24	1.6%
E: Empty in 2012-2014	114	7.4%
E2: Essentially empty.	91	5.9%
F: Fewer than 20 articles/year	322	20.8%
H: Hybrid	33	2.1%
N: Not OA	13	0.8%
X: Unreachable/ unworkable	1	0.1%

Table 2: Journals from OASPA members

I regard any APC of \$1,000 or more as reason enough to investigate more closely; that accounts for a fair portion of the “B” entries here. The differences between Table 1 and Table 2 should be obvious, particularly the much lower number of “journals” in Table 2 (although there are still quite a few!) and the total absence of journals that struck me as red-flag cautions. In all, 61.3% of OASPA journals are “A” or “B,” compared to 14.6% of journals from the Beall list.

Beall and DOAJ in Brief

Neither Beall nor OASPA account for the majority of DOAJ listings, but it’s interesting to see how they compare.

- Of the 501 publishers in the Beall list, 383 had *no* journals in DOAJ. The other 118 included a total of 804 DOAJ entries.
- The 320 “independent” journals in the Beall list included 100 in DOAJ and 220 that are not.
- In all, Beall lists account for 904 DOAJ entries, less than 10% of the whole.
- Of the 62 OASPA members (large and small), 18 did not have any DOAJ entries (at least one or two are OA *book* publishers). The other 44 include a total of 1,141 DOAJ entries.

(One publisher, MDPI, is an OASPA member that appears on Beall’s list.)

Why the Short Version is Inadequate

I believe the short version says a lot, including the clear case that publishers on Beall’s list are *not* typical of OA as a whole or of DOAJ—but it’s inadequate for several reasons. The rest of this essay discusses the investigation itself (and shortcuts taken), breaks down the Beall numbers in greater detail, considers journals with “few” articles in more detail, looks more closely at the control group, looks more closely at DOAJ, spends some time on titles, offers some quotes from peculiar (and, yes, questionable) publisher sites, looks at the fee-vs.-free question and ends with some miscellaneous notes and conclusions.

Checking the List 1: Publishers

Based on the amount of attention Beall’s lists receive and the extent to which Beall himself tends to generalize from the lists, a natural assumption might be that those 500-odd publishers and 300-odd independent journals represent most of OA, or at least a substantial portion of it.

I had no idea whether that was true. I did, however, suspect that many of the journals on Beall’s lists couldn’t be *very* predatory because they weren’t likely to draw submissions from authors with any sense (who could read English well). I suspected that even more after investigating the Bohannon list. I guessed nobody had done this before, largely because it’s a ridiculously large amount of work; sometimes there are advantages to being retired and slightly obsessive. I was nervous, frankly, because I would *not* have been surprised if Beall’s bad boys represented a third or even half of the journals in DOAJ.

I sneaked up on the investigation, setting up the spreadsheets and doing, say, the first 10 publishers. Then the first 5% (25 or so). Then the first 10%. At some point, it was clear that I was going to finish the process. I'm not sure just when the project started (best guess: last week of March 2014 or first week of April); I completed the initial scan in early May 2014, then added the OASPA scan and DOAJ check, which were much faster processes.

Caveats: It's Just One Man's List

Shortly after I started the process described below ("How: The Process"), I realized that I was thinking of publishers on the list as being possibly or probably questionable—not "predatory," necessarily, but iffy. I was to some extent prejudging them based on nothing else than their being on a list maintained by one serials librarian—a serials librarian with an explicit dislike of OA, and one with a remarkable ignorance (at least until recently) of some facts of serials and charging.

Take, for example, "[Publishers that Charge Both Authors and Readers](#)," from June 6, 2012, in which he learns *to his surprise* that there are a fair number of subscription journals that charge authors various page charges and other charges. He says in a comment that he "thought that such arrangements did not exist." At the time, he even went so far as to say that he thinks it's "unethical for a for-profit publisher to charge both author and subscriptions fees for the same content." In the comments, Thomas Munro points out a 2005 study of 9,000 journals finding that 75% of the subscription journals *did* charge author-side fees.

If it's ludicrous for any single person to claim to be the authority on what is or isn't predatory publishing, it's even more ludicrous when that person doesn't know some of the basics of journal economics. (Maybe it's not surprising that Beall *always* assumes that gold OA journals charge author-side fees.)

This is how insidious a list like Beall's is: Even though I was specifically trying to shed some light on the list and its contents, I found myself falling into the "if there's smoke (being blown by Jeffrey Beall) there must be fire (as in ethical questions)" trap.

I redid the first few publishers explicitly attempting *not* to prejudge them. Did I succeed? I can't honestly say.

What Does Predatory Really Mean?

There have been cases where journals "devoured" other journals, but I suspect that Jeffrey Beall has this meaning of "predatory" in mind: "inclined or intended to injure or exploit others for personal

gain or profit." ([Retrieved from Merriam-Webster.com on May 24, 2014.](#))

So a predatory publisher is one who intends to injure or exploit others for personal gain or profit. Does exploiting the divide between academic libraries (that typically pay for subscriptions) and scholars (who typically use the subscriptions) in order to make extraordinarily high profits constitute predatory conduct? Does continuing to raise prices at several times the rate of inflation, even as those increases cause direct injury to libraries by robbing them of budget flexibility or even making it impossible for them to continue to provide resources—does that constitute predatory publishing?

In my world, that's a reasonable case, but it leads to a very different list. Beall's list is explicitly about Gold OA journals—and I see that he now weakens "predatory" with "potential, possible or probable," which makes it too easy: Any publisher has the *potential* to engage in predatory activity; even men of the cloth have been known to prey on innocent children.

"Predatory" appears to involve three factors: intent; injury or exploitation; and gain or profit. I can only assume that the injured or exploited parties in Gold OA are the authors, and those can only be considered injured or exploited if they didn't receive what they thought they were getting. Since readers don't pay for Gold OA, it's hard to see how exploiting them could result in profit, and this three-way test also means that Gold OA journals without APCs can't be predatory as defined here.

In the real world, Beall isn't talking about *predatory* publishing; he's talking about *questionable* publishing, but he calls it predatory. He offers his current standards in "[Criteria for Determining Predatory Open-Access Publishers \(2nd edition\)](#)" dated December 1, 2012. That document links to three professional codes, including OASPA's admirably brief and clear statement. He then offers 25 bullet points that, singly or in combination, appear to constitute "predatory" behavior, along with another two dozen or so that are "reflective of poor journal standards."

Some of Beall's first 25 are unobjectionable enough. At least one strikes me as bizarre, that a predatory publisher may "Publish papers that are not academic at all, e.g. essays by laypeople or obvious pseudo-science." I don't remember when "scholarly" suddenly became "academic" or when it became The Rule that those of us without academic affiliations are to be shunned in all respectable journals. If it is The Rule, it's a terrible one; ruling out

citizen science (and in a much broader sense, citizen scholarship) is elitism of the worst sort.

Some of the others are interesting, especially when you take into account subscription journals. So, for example, it's questionable to publish an "excessively broad" journal (such as, what, *Nature*, *Science*, *PLoS One*?). It's questionable to "require transfer of copyright and retain copyright on journal content." Whoops—there goes pretty much the whole subscription journal field! It's questionable for a publisher to use email addresses ending in gmail.com or "some other free email supplier." And finally one I just found odd: "None of the members of a particular journal's editorial board have ever published an article in the journal." I find it troubling when *all* the articles in a newly formed journal appear to come from the editorial board.

I read through these criteria in detail after I completed the scan, although I'd certainly seen the list before. What I looked for overlaps with Beall's criteria, but not all that much.

What I Looked For in Publisher Sites

I spent a couple of minutes going through each publisher site, looking at it from the perspective of somebody who doesn't know the publisher (and hasn't been spammed by them) but who does read English well enough to spot misuse. I was looking for overall policies (if any) and approaches, general coherence and competence, good grammar and a reasonably calm website.

Depending on what I saw, I might annotate the publisher row and limit the highest grade that its journals could get. For example, if the publisher's site is full of pseudo-English it would be hard to take the journals *very* seriously; I'd probably place a "B" limit. If the publisher actually *lies* on the site (e.g., boasting in ways that are testably false), that's an immediate "C." If the publisher doesn't provide enough information to come to conclusions, that's pretty much a "B" as well. If a publisher (or its journals) makes specific geographic claims (American, Canadian, European) that seem unlikely given editors and editorial boards, that counts against them. If a publisher state unrealistically short peer review cycles, that's a "B"; if *absurdly* short (and especially if you could buy a shorter review cycle), a "C."

Lots of publishers suffered from what I came to think of as "Bollywood Style," abbreviated as "BS" in my notes: garish colors (and lots of them), odd typefaces and—most of all—moving type and animated GIFs, frequently with different chunks of

type simultaneously moving in different directions. BS was so common that I can only assume quite a few publishers copied from one another or used the same web design firm; not all of the publishers were Indian, but most were Indian, Pakistani or Bangladeshi. I dunno: maybe that's considered highly professional layout in some circles, but it certainly wouldn't give me any confidence that the publisher knew what they were doing.

If what I saw on the publisher's site convinced me that the publisher was somewhat questionable (max. B) or too questionable for most authors to consider (max. C), I'd copy the note over to the journal column for that publisher (see below). But I also added publisher notes after going through journal lists.

How: The Process

I used the same process for Beall's list of publishers and, later, for OASPA's membership list. First, I copied-and-pasted the list of publishers (or journals), almost every item a hyperlink, into Excel, section by section if need be.

Second, I assigned brief publisher abbreviations to each publisher, working within one alphabetic group at a time to make sure I didn't have any duplicate abbreviations. The abbreviations were purely to save space in the biggest chunk of the spreadsheets, the individual journal rows, without losing the connection between publisher and journal.

Then came the publisher-by-publisher process:

- I clicked on the publisher row to open the publisher's page. (In a few cases, I had to correct the URL in Beall's list, typically because of extraneous closing data. If a publisher was unreachable, I would try searching the publisher's name.) This process eliminated 69 "publishers" that were either unreachable (at least 14), had URLs that were now parking pages (at least 16), didn't show any journals at all or published entirely conference proceedings, URLs that yielded other publishers in the list, and a variety of other nonsense—including at least one attack page where I believed the browser's warning and chose not to proceed. Given 501 unique publisher names in the list (there were a couple of duplicates), this left 432 publishers to test.
- I toured the publisher's site quickly, looking for obvious issues, but also looking for the most usable list of OA journals. I'd jot down anything especially noteworthy at this point.

- For a publisher where I could find a list of linked OA journals (sometimes only one journal), I'd start up a second spreadsheet page, copy the publisher's name and abbreviation, and determine the easiest way to get a working column of journal names with hyperlinks. (This second "journal" page was also used later for Beall's journal list.) That determination was a little tricky. Easiest, of course, was a compact A-Z set of hyperlinked titles with no bullets or other overhead; I could just copy-and-paste that into Excel. That was relatively rare. Thanks to Word's HTML rendering capabilities, I could do a two-step copy-and-paste for most publishers to get from a useless table (for my purposes) to a useful column; in one case, where a publisher apparently deliberately tried to prevent such a copy-and-paste step, I used a three-step process going through the BlueGriffon HTML editor as a first step, peeling away code surrounding the table.
- It wasn't always quite that simple. Some publishers have been exceedingly clever in setting up their sites so that you can't retrieve a list of linked journal titles in any reasonable fashion—sometimes with the entire site in Java and coded so that you can't even open a journal in a separate tab! There were also a fair number of publishers with so few journals that it didn't seem worth going to a lot of trouble to parse out a list. In all, as I count it now (belatedly), there were some 174 publishers for whom I did Part 2 (below) one journal at a time from the publisher's site, typing in the journal name (or copying it if that was feasible).
- Then, either with a column consisting of linked titles or building up one row at a time for the 174 "difficult" publishers, I went to the journal scan, discussed under "Checking the List 2: Journals." Each publisher's list of journals was checked using the same process, as was the list of "independent" journals.

The Control Group: OASPA

Later, I used *exactly* the same process for the 62 OASPA members (including ones on probation). Some of these publish both OA and non-OA journals, as do a few on Beall's list, and as long as they maintained a separate list of OA journals, I simply

ignored the subscription journals. (One OASPA member is also on Beall's list.)

Extensions: Checking DOAJ

After completing both of these scans, including all journals, I decided to test the publishers (and independent journals) against DOAJ. That process was fairly straightforward. Using DOAJ's advanced search, limited to journals (not article titles), I searched each publisher's name against the Publisher field (using the smallest number of distinctive words and dealing with ambiguities manually). If I found the publisher, I'd split out journals by those with no charge (free) and those with charges or conditional charges (charge) and jot down the number in each category and the total number of English-language OA journals.

Similarly, I checked journal titles for independent journals (and single-journal OASPA members) against the Title field.

You've already seen the quick results: Beall's 500+ publishers have *fewer* journals in DOAJ than OASPA's 62 publishers—and represent less than 10% of DOAJ.

Publishers: Some Notes

For most publishers on Beall's list, I was able to assign an overall letter based on what I saw on the publisher's site and what I found in the journals. Here's a quick summary of those groups:

- **D: Dead or Duplicate.** I used the same letter for two different purposes. Three publishers have only journals that *did* have significant numbers of articles, but now appear to be entirely dead or dormant. Three other publishers' hyperlinks actually yield *other* publishers covered in the study—or have only journals that show up under other publishers.
- **E: Empty.** Two dozen "publishers" have no journals with significant current activity, notably including one that describes itself as "the world's leading provider of science and health information" (five journals, all entirely empty) and one with a staggering 428 "journals" devoid of content. A few of these have some dead or essentially empty journals, and one has one current "C" journal, but mostly they're just shells.
- **F: Few.** Thirty-eight publishers with no journals publishing at least 20 articles in 2012, 2013 or 2014 (or at least 30 articles in that period). As we'll discuss in "Breaking Down Group F;" this is a tricky group—and there's

some overlap with the previous two groups. None of these had huge numbers of journals.

- **H: Hybrid.** Four publishers that publish entirely hybrid journals, and in no case did I see a large enough percentage of OA articles to constitute serious OA activity. Most of these had other problems as well—e.g., missing APCs, no clear *method* to pay for OA. The largest group is 104 journals. At this point, I don't take "hybrid" OA seriously at all, and certainly not in these cases.
- **N: Not OA.** Two dozen publishers that don't appear to publish any legitimately OA journals. Note "legitimately": if you have to register before you can read articles, if you have to have a password to read articles, *that's not OA*. That accounts for a handful of these; most are simply subscription publishers that for some reason Beall has included in his list of predatory OA publishers. (I'd consider quite a few of them questionable, to be honest—but they're not OA.)
- **Q: Questionable.** The largest group—204 publishers, ranging from 403 titles down. I considered these questionable for some of the reasons already discussed, either at the publisher level or after looking at the journals. "Questionable" doesn't mean either predatory or hopeless; 53 of these publishers have at least one journal that I considered "B" (plausible) rather than "C" (red-flag-level questions), and two have a few journals (eight in one case, four in another) that seemed "A"-worthy even though the publisher was a little sketchy. The others—well, I believe most authors would simply avoid journals published by the other 151, just as they would those in the first two and fourth groups (and the fifth group if you want OA!). In all, that's 262 publishers and "publishers" where I don't believe most authors would take them or their journals seriously enough to consider submitting.
- **X: Unreachable, unworkable, incompetent:** In addition to the 69 already noted, another 15 were hopeless for other reasons: so-called journal archives mostly yielded 404s, a list of 116 supposed journals includes only one actual link, garbage pages throughout the site, spam factories opening multiple ad tabs, malformed PDFs that neither the OJS internal PDF viewer nor Adobe Reader could handle. (I still don't understand how even a slipshod

publisher manages to generate defective PDFs, but never mind...)

- **The rest:** The remaining publishers have a mix of characteristics and journals that seemed not to call for an overall grade. Not all of them have "A"-level journals (40 do) but the faults didn't seem to be at the publisher level. The largest of these publishes 243 journals (170 active), and three others publish at least 100 journals each.

More about publishers and how they cluster later in this essay.

Checking the List 2: Journals

For each journal (whether from Beall's publisher list, OASPA or Beall's independent journal list), I clicked through to the journal site (or looked it up if necessary), and, assuming I could reach it, tried to gather key information as quickly as possible.

While that began with mixed methods in terms of what came first, I soon found that "is this a going concern?" was the first question to answer, since such a high percentage of journals weren't. So, with some variations, the routine for each journal went something like this:

- **Recent articles:** Look for the most recent of Upcoming articles, Current issue or Archives. As I soon found, *most* journal sites—especially those using OJS—show everything in Archives, which makes life easier. (There are exceptions, but relatively few.) If there are no articles, mark "E" as the journal grade and go on to the next journal.
- **2014 Count:** Count the number of 2014 articles (if any), omitting conference proceedings and such things as editorial thanks for reviewers. If there are fewer than 20, note the number (blank if none); if there are at least 20, note "25" as a number and drop down to the "Earliest date" step.
- **2013 and 2012 Count:** Count the number of 2013 articles (same conditions as for 2014), up to 20. Note the number if fewer than 20 or "25" if at least 20. If there aren't at least 20 articles in either 2014 or 2013, do the same for 2012.
- **Obvious signs of incoherence:** While I didn't study each article title at length, I paid attention to obvious nonsense—article titles that clearly made no sense for a journal's name or focus. Such articles would yield a "C" as a grade for the journal.

- **Earliest date:** If feasible, find the earliest date for articles, at least back to 2011. Note the date.
- **Check PDFs:** For almost every publisher and independent journal (but typically only for one journal per publisher), actually download/read a PDF, to make sure the PDFs actually work (I ran into a couple of “registration required” and at least one malformed-PDF case, as well as a couple of 404s-for-all-articles situations). If a journal didn’t yield readable PDFs without registration or other nonsense, it was graded either “X” or “N.” I was *not* grading the quality of the PDFs; most were conservative two-column layouts, with a few being considerably cruder (one looked an awful lot like double-spaced Word); I did downgrade a few journals because the PDFs used typefaces that were barely readable.
- **Finish E2, F and D:** If the journal did not have more than three articles in 2012, 2013 or 2014 (that is, three in a given year), grade it “E2” and go on to the next one. If it had four to 19 in each year and the sum of the three years was less than 30, grade it “F” or “D” depending on the pattern (“D” only if 2013 declined sharply from 2012, preferably with no articles past mid-2013). Go on to the next journal. *Note:* After doing the initial pass and looking at the results, I changed the criterion for “F” from “no more than 19 articles in each year” to “no more than 19 articles in each year and 29 articles for the three-year period.” It’s possible that some numbers may be off slightly due to sloppy reworking of tables after making this change.
- **Remaining steps:** These steps are for journals that seem to be going concerns. Most—77%—weren’t. So I took these steps on some 2,127 journals from the Beall lists (and 947 from OASPA, although I didn’t repeat them for the one OASPA publisher on the Beall list).
- **Look for the APC (if any):** The article processing charge (APC) should be clearly stated, although I didn’t actually downgrade journals for putting it at the end of author information. For a few too many, I couldn’t locate an APC or a statement that there was none; that reduced the journal by one grade, at best to a “B” and to a “C” if there were other issues. I did downgrade journals with four-digit APCs (that is, \$1,000 or more) to a maximum of “B,” as I believe such high pro-

cessing charges require further investigation. (Does this mean I regard *PLOS One* as slightly questionable? Yes, it does—and more so for the PLOS journals with even higher fees.)

- **Look at the editor and editorial board:** Same editor for a bunch of journals? An automatic “C” (usually at the publisher level). No editor or editorial board? Automatic “C.” I didn’t delve any more deeply than that.
- **Other issues:** A variety of other issues, some of them similar to publisher-site issues, could lower the grade to “B” or “C”: garish sites, partly empty sites (e.g., OJS sites where some of the standard headings lead to 404s), obviously-templated sites (where the description of the journal isn’t good English because of templating), bad English in general, and other site problems. Some journals (or magazines?) only downloaded huge entire-issue print-oriented PDFs, with no list of articles available except *within* the PDF.

Shortcuts

I took a few shortcuts to make this a ridiculously long process rather than a hopelessly long one. For example, I *backfilled* 2013 and 2012 “25” numbers for article counts for journals with 25 in 2014 (and start dates of 2011 or earlier), and the same for 2012 for those with 25 in 2013. There are probably a few cases in which the journal didn’t have that many articles in one of the earlier years—but there are many, many cases where “25” really means 50, 100 or more articles per year.

In one case—Internet Scientific Publications—I found it so difficult to get to article counts and publication years that, after scanning the first 30 journals, I projected the remaining 55 as all being “F” (because nearly all of the first 30 fell into that category), but it’s fair to assume that some of them may actually be “E” (empty) or “E2” (essentially empty).

As noted, I changed my criteria for “F” part way through the project, but did go back and check for APCs and the like for the relatively small number of journals publishing 30 or more articles between 2012 and early 2014 although not publishing at least 20 in any single year.

The Beall Lists: Breaking Down the Numbers

Let’s consider the Beall lists results in more detail—noting that there are probably hundreds and possibly thousands of additional “journals” that don’t

show up because the publisher is defunct. I'll discuss groups in reverse alphabetic order. Note that this discussion includes the "independent" journals but not OASPA.

If numbers in tables don't seem quite to add up to the numbers in Table 1...well, things happen as you're working with data, and a few journals may not show up where they should.

For APC tables, I took the lower of a range of figures for first-world researchers. For per-page charges, I assumed 10 pages.

X: Unreachable or useless

Roughly a quarter of the 525 unreachable or useless journals come from 15 publishers I marked as useless (although in one case I could have marked it equally well as "E"). These include one case where only one of more than 100 "journals" has any sort of link at all, one where 80-odd so-called journals all link back to the same useless page, and one website I regard as an OJS prank: the site includes paragraphs of Loremipsum (filler) text and none of the "journals" are reachable. Other publisher cases include malformed PDFs throughout, journal URLs that are total garbage, journal archives riddled with 404s and more. (That's in addition to "publishers" that are now parking pages or wholly unreachable, and a couple of duplicates.)

Where publishers didn't entirely fail, journals failed for similar or different reasons. In some cases, the archives were borked, not usable under any conditions. In one case, all the supposed journal archives bring up a single journal. There also appear to be some cases of title fraud—titles that duplicate *real* journals, with no links.

Were some of these "journals" once populated with articles that are no longer available? I have no way of knowing, but it seems likely in at least a few cases. Most of them, however, seem likely to be empty. (Actually, three of them aren't OA in any case, but since there are no reachable archives, I left them in "X.")

If there were articles, then the saddest cases are the sites that were not maintained at all, leading to parking pages. The articles are presumably gone.

The underlying fact here: No sensible author would submit articles to any of these journals, since the journals either have disappeared or are incompetently operated.

N: Not open access

Some 417 journals either on Beall's journal list or from publishers on his list are simply not open ac-

cess. You may find that out right away; it may take a while. For example, one group of seven journals has "for subscribers only" as the result to any article view request; another says "This content is restricted to site members." Others require that you be a member. One group of 39 "International Journals Of..." from one publisher all have \$150 APCs—but no online archive and no suggestion on the websites that they *are* OA. As far as I can tell, it's double-dipping, but relatively modest double-dipping. Another set of 39 "International Journal of..." (different publisher) requires registration to view articles.

Some cases are tricky. One journal had one downloadable article in each issue. One has links, but they don't work. Half a dozen "International Journals of..." (from a different publisher) ask a trivial \$35 APC but with such garish sites that it's almost a relief that they're not really OA journals. Several offer access...but only to the latest issue. Several offer abstracts, but not full articles. In one case, yes, there are PDFs—*ten months or more* after articles are published, which isn't Gold OA in my book. (In another two cases, older issues are free but newer articles have a charge: again, that's not Gold OA. There are also some journals where there's a PDF link...but, for recent issues, all it yields is an abstract in PDF form.) In three cases, you can't even get all the way into the journal site without registering. One group of 19 transactions journals is tricky: they're simply not normal journals, consisting *entirely* of conference proceedings. Dozens have the trappings of OA journals but with no apparent way to retrieve or view full articles.

Sometimes—even frequently—there's no claim of OA; these are subscription publishers that Beall has chosen to add to his list. I can see why in some cases: Tradewinds, with 57 non-OA journals, is fond of the non-word "Guidlines" and has other examples of sloppy English (I marked that publisher as "Questionable" rather than "Non-OA"), but it's certainly not a predatory OA publisher! Then there's GBS Publishers & Distribution, which I also marked "Q"—because, of the 73 journals listed, 19 were empty, as opposed to 53 non-OA and one "B" but with no clear access before the latest issue.

I'm not saying an author might not submit articles to one or more of these journals; I'm saying they don't belong in a study of Gold OA or on Beall's list.

H: Hybrid

I counted four publishers of "hybrid" journals with a total of 189 journals, along with a handful of other

journals that are supposedly hybrids. Sampling journals rarely or never yielded any actual OA content (or a trivially small amount), and for some publishers there wasn't even a clear way for the author to buy the OA option (one publisher's fee model was so confusing that I probably never did understand it). One publisher had a \$200 APC without OA, \$500 with OA—but no clear way of marking which articles (if any) were OA. For one large publisher of so-called hybrids, even when contents tables appeared to show OA articles, the PDFs didn't actually work.

At this point, I regard “hybrid” journals as non-OA journals until there are clearer indications that such journals can succeed, that they have *transparent* methodologies for reducing subscription prices based on percent of OA content, that they *encourage* OA by making the process clear and transparent (and not outrageously expensive) and so on. Certainly for this study, I believe a sensible author should and would treat these “hybrid” journals as subscription journals—and, to be honest, few of them seemed impressive as subscription journals.

F: Few articles

This is probably the trickiest category, and it's an accident of alphabetization that places it here rather than next to “C.” These are journals that *do* have OA content and that show at least four articles in one of the years 2012, 2013 or 2014, but never more than 19 articles in any of those years, and that didn't publish at least 30 articles total in 2012-2014.

I think of them as journals struggling to become established, and for fields such as agriculture or biomed that's probably a fair comment. For some other fields (e.g., smaller fields within the humanities), a journal that publishes 10 or 15 good articles a year may be doing well. (Although one publishing 15 good articles a year will meet the total-article criterion.) I'll look at this issue in more detail in the next major section: “Breaking Down Group F and Why That Matters.”

This is a *big* group, the largest group of journals as opposed to “journals”—nearly one out of five of the journals in Beall's list.

APCs are all over the place. Table 3 shows a number of things: the journal count for a range of APCs (translated to dollars in May 2014; if there's a range for a publisher, the stated amount is typically the bottom of the range for a U.S. author); the total number of articles for that group of journals in 2014, 2013, and 2012; and the average number of articles per journal for the three years taken together.

This table omits 56 journals where “F” was assigned based on projection, since I don't have article counts for those 56; it includes 1,776 journals in all. It is fair to say that some journals in the last row—“Unknown”—may have well-hidden APCs or may be cases where, given the small number of articles, I didn't look; in most cases, they're journals where I couldn't locate an APC.

APC range	Jrnls	2014	2013	2012	Art/jrnl
Free	90	465	519	134	12.4
\$20-\$99	90	364	691	162	13.5
\$100-\$195	134	569	828	372	13.2
\$200-\$295	242	580	1,867	564	12.4
\$300-\$361	188	441	1,447	709	13.8
\$400-\$450	150	369	1,310	313	13.3
\$500-\$550	273	900	2,401	258	13.0
\$600-\$629	158	523	1,189	477	13.9
\$700-\$799	28	112	125	33	9.6
\$800-\$888	35	29	185	87	8.6
\$900	16	85	178	0	16.4
\$1,200-\$1,500	5	15	57	7	15.8
\$1,800	26	59	311	177	21.0
\$2,020+	14	10	97	0	7.6
Unknown	327	876	2,452	1,216	13.9
Total	1,776	5,397	13,657	4,509	13.3

Table 3. Group “F,” journals, APCs, article count

You can see in Table 3 that hundreds of small journals charge very small APCs (or don't charge at all)...and that, in most cases, these journals only averaged four or five articles per year.

For the underlying question—is this a journal an author might submit to—I guess that would depend on the author and the field. For the more popular and well-funded fields, not being able to attract 30 articles in 2.3 years doesn't look all that great; for niche fields and those not in the sciences, the picture may be different. In no case do I believe an author would submit to these journals without finding out a lot more about them.

E2: Essentially empty

When I looked at the journals in Bohannon's “sting,” I lumped these together with “E” (below) as being empty. This time around, I separated these.

These titles, just under 900, are what I'd think of as journal-wannabes: they sort of exist but have never had any real flow of articles, or at least not since 2011. The limit for inclusion in this group is

3: that is, if a journal had at least four articles in 2012, 2013 or 2014, it wouldn't be in this group.

No publisher had all of its journals in this woe-begone category, but 21 publishers each showing at least ten essentially empty journals account for nearly half of all these journals (two publishers had more than 50 essentially empty titles each). One of those two, Science and Technology Publishing, seems to be largely a shell and naming game: of 403 journals, one managed to make it into the "F" category (barely), 340 have no articles at all, and the other 62 are essentially empty. In that case, it gets worse: while I wasn't paying a lot of attention to authors in the journals, it was impossible not to notice that for a fair number of this publisher's one-issue-with-content journals, all three articles had the same author or primary author. Indeed, "Eluozo strikes again" appears as my note on seventeen journals—this author managed to publish 51 articles in these journals, none of which had any other articles, in 2013 (16 of them) or 2014 (one).

Would any sensible author submit an article to a journal that couldn't manage even four articles a year, without a *lot* of investigation? I don't think so, and I spent so little time on these journals that Table 4, below, may include more "Unknown" APCs than is correct, since I didn't look very hard. Note that the average number of articles per journal in this group is usually less than three—and that's for all three years combined, not per year. These really are essentially empty journals. Eleven journals slipped through the cracks for this table.

APC range	Jrnls	2014	2013	2012	Art/jrnl
Free	44	69	33	9	2.5
\$20-\$99	43	23	51	18	2.1
\$100-\$195	74	93	65	26	2.5
\$200-\$295	125	78	145	68	2.3
\$300-\$350	84	38	91	8	1.6
\$400-\$450	77	43	116	19	2.3
\$500-\$550	111	118	113	7	2.1
\$600-\$675	60	42	86	77	3.4
\$700-\$799	18	15	11	0	1.4
\$800-\$845	54	31	74	42	2.7
\$900-\$999	1	1	0	0	1.0
\$1,150-\$1,200	9	19	0	0	2.1
\$1,800	2	0	4	1	2.5
\$2,020+	11	3	23	0	2.4
Unknown	172	99	230	101	2.5
Total	885	672	1,042	376	2.4

Table 4. Group "E2" journals, APCs, article count

E: Empty at least since 2011

This is by far the largest chunk of "journals" in Beall's lists—journal titles that have either *never* had any actual articles (the vast majority) or titles that have had no articles since 2011.

Twenty-four publishers seem to specialize in these shells, together accounting for 932 of them—but that leaves more than 1,900 others. I'm not sure what there is to say about them. It looks as though hundreds were not really launched at all—no editors, no pretense of ISSNs, no actual websites—while hundreds of others were launched in great waves hoping that a few might survive.

Of the two dozen almost-entirely-empty "publishers," Academic and Scientific Publishing takes the cake with its 428 "journals" (with none in any other grade). Three publishers I consider questionable have more than 100 empty journals each (more than 300 in one case), and after that things tail off; more than 200 publishers have at least one empty journal.

In general, I only recorded APCs for empty journals when they were at the publisher level. Those APCs include 17 freebies (journals with no author-side charges), 94 under \$100, 65 from \$100 to \$199, 70 from \$200 to \$299, 413 from \$300 to \$350, 155 from \$400 to \$450, 240 from \$500 to \$540, 62 from \$600 to \$799, 65 from \$800 to \$999, 46 from \$1,200 to \$1,800 and 21 charging \$2,020 and more. Chances are, most of the remaining

1,500+ “journals” also had stated APCs that I didn’t bother to note.

D: Dead, dying or dormant

I coded 386 journals as dead, dying or dormant. That’s a judgment call in some cases; a few of these could equally well go elsewhere. The typical pattern: a fair number of articles in 2012, only a handful in 2013 and none or a trickle in 2014.

Only one of these journals had more than four articles in 2014, and all of those with more than three in 2014 (two had exactly four) had *none at all* in 2013. But those first three could be “F” rather than “D”—except that I believe an author would be even more reluctant to submit to a journal that appears to have lost its thread. (Four of the journals had three articles in 2014; 13 had two; 31 had one. The rest—more than 300—had none at all.)

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	15	5	12	93	7.3
\$20-\$99	22	0	6	273	12.7
\$100-\$195	22	5	52	193	11.4
\$200-\$295	45	6	106	201	7.0
\$300-\$350	54	25	102	251	7.0
\$400-\$450	28	4	27	163	6.9
\$500-\$550	9	0	27	63	10.0
\$600-\$675	40	9	61	185	6.4
\$700-\$799	4	0	11	29	10.0
\$800-\$845	26	0	35	301	12.9
\$1,000	4	0	0	79	19.8
\$1,800	5	6	13	87	21.2
Unknown	112	23	105	795	8.2
Total	386	83	557	2,713	8.7

Table 5. Group “D” journals, APCs, article count

Summing Up: D through X

At least for authors in fields where a journal with fewer than 20 articles a year would seem odd, what we’ve discussed up to now are journals, “journals” and journal wannabes that I don’t believe a sensible author would submit articles to without *lots* of additional information—and, of course, for the largest group, there’s no track record at all, usually because the “journal” is just a name.

That takes care of more than 7,200 “journals,” leaving around 2,000 real journals—going concerns, with at least 20 articles in 2014, 2013 or 2012.

But would a thoughtful author consider all 2,000 of these (or at least the ones in her field) as appropriate for submission? I don’t believe so. The

next subsections break that group down into three levels of plausibility.

C: The most questionable journals

I graded 784 journals as “C”—cases where I believe an author would and should find another outlet rather than investigating further. In practice, the lines between “B” and “C” are fuzzy: easily 60 to 100 journals could have gone either way, making some of the details tricky. Certainly, a harder line on APCs (that is: if the APC isn’t stated, it’s a “C”) would have pushed more journals into the “C” group, as would a harder line on mediocre English and faulty spelling. (The table below omits four journals.)

To my eye, these are journals most authors would stay away from: There are enough problems to raise a red flag, “Don’t go here.”

When comparing Table 6 below (and Table 7 and 8 later) to earlier tables, it’s important to note that, unlike earlier tables, the article counts are *minimum* counts; the real counts for 2013, 2012 and articles per journal are quite likely at least twice as high. I’ve reduced the number of APC ranges, since there are far fewer journals involved.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	10	124	218	240	58.2
\$20-\$195	141	2,341	3,456	2,478	58.7
\$200-\$395	103	1,136	2,306	2,167	54.5
\$400-\$595	67	655	1,627	1,263	52.9
\$600-\$799	39	399	872	420	43.4
\$800-\$999	11	124	209	204	48.8
\$1,000-\$1,500	6	64	107	63	39.0
\$1,600-\$1,999	82	613	1,866	1,650	50.4
\$2,000+	0	0	0	0	0.0
Unknown	321	5,162	7,772	6,954	62.0
Total	780	10,618	18,433	15,439	57.0

Table 6. Group “C” journals, APCs, article count

Clearly there are either problems with some authors choosing to use OA or with “questionable” criteria, given nearly 18,000 articles (and possibly 36,000 or more) published in 2013 in journals that, to my eye, would send most authors hunting for another outlet. I suspect it’s a combination: a fair number of these journals actually do good work, even if the publishers seem sketchy, while some authors really don’t care where their articles are published as long as they can claim publication credits.

B: Plausible but needs more information

In some ways, the 961 “B” journals may be the most difficult ones to deal with—both because the defini-

tion is fuzzy and because it's the largest group of clearly going concerns. I'm *not* saying these are predatory journals or ones you should skip; I'm saying they are journals that raise yellow flags, calling for more investigation. I did *not* take spam email into account for this or any other grade.

I automatically scored any journal asking more than \$1,000 APC as "B" because I think you need more information on what you're getting for that much money; I recognize that for many biomed authors, especially those with grant money from the right institutions, this may seem silly.

I also scored publishers and journals "B" because of minor language issues, questionable location assertions, missing APCs (which maybe should get auto-"C" instead) and garish appearance, among other things.

A reminder that, as with "C" and "A," the real article numbers in Table 7 are probably twice as high as shown, and maybe much higher than that, at least for 2013 and 2012. One journal doesn't show up in Table 7.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	19	272	444	348	56.0
\$20-\$195	282	4,246	6,730	5,986	60.1
\$200-\$395	215	2,627	4,881	4,607	56.3
\$400-\$595	111	1,192	2,585	2,153	53.4
\$600-\$799	92	970	2,198	2,182	58.2
\$800-\$999	70	1,095	1,703	1,694	64.2
\$1,000-\$1,499	11	207	275	275	68.8
\$1,500-\$1,999	4	100	100	100	75.0
\$2,000+	3	75	75	75	75.0
Unknown	153	1,918	3,474	3,306	56.8
Total	960	12,702	22,465	20,726	58.2

Table 7. Group "B" journals, APCs, article count

A: *Apparently good as they stand*

Note the word "apparently" here. I was not in a position to investigate the quality of editorial boards. I did not take into account spam email and the like. These are journals that are going concerns and didn't seem to raise much in the way of questions, at least from my perspective as one who doesn't regard OA as inherently evil or questionable.

Only 385 journals—less than 5% of the "journals" in Beall's list—earned A grades, but that's presumably 385 more journals than the list would suggest.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	53	653	1,201	868	51.4
\$20-\$195	75	866	1,627	1,627	54.9
\$200-\$395	209	2,785	4,906	4,063	56.2
\$400-\$595	43	321	961	1,015	53.4
\$600-\$799	1	25	25	25	75.0
\$800-\$999	4	90	100	100	72.5
Total	385	4,740	8,820	7,698	55.2

Table 8. Group "A" journals, APCs, article count

It's interesting that the A journals tend to have relatively modest APCs.

Breaking Down Group F, and Why That Matters

There are more "F" journals than "A" and "B" combined—and almost as many as "A," "B" and "C." My original threshold for a journal being a going concern, at least 20 articles in some recent year, may be too high, especially for niche journals and journals in the humanities.

So let's break down the "F" journals for which I have full information and see what would happen with different thresholds.

Peak	Jrnls	2014	2013	2012	Art/jrnl
16-19	183	747	2582	768	22.4
11-15	465	1792	5171	1910	19.1
7-10	545	1577	3740	1251	12.1
4-6	583	1281	2164	580	6.9

Table 9. Group "F" journals by peak articles per year

An earlier version of this table included *all* journals with no more than 19 articles per year; even that table really didn't show much activity for most journals. But, in the end, I decided to move journals publishing 30 or more articles to A, B or C, leaving the table above. Note that most of these barely averaged seven or eight articles per year.

Table 10 shows the distribution of "F" journals by total articles during the period. Roughly 120 journals that originally qualified as "F" moved to other grades.

Sum	Count	Pct
25-29	122	6.87%
20-24	246	13.85%
15-19	306	17.23%
10-14	443	24.94%
4-9	657	36.99%

Table 10. Group “F” journals by total articles

Are these journals going concerns? Not the last three groups (by far the largest), and I don’t think the case is strong for the first two groups.

Control Group: OASPA Members

The OASPA membership list serves as a *convenient* control group of OA publishers and independent journals, but I don’t believe it’s especially representative of Gold OA in general or of what’s in *DOAJ*. It is, however, the only control group I could think of, so it will have to do.

Why isn’t it representative? Mostly because OASPA includes a number of publishers who’ve chosen another route to making OA profitable: performing the necessary duties and charging very high APCs. Some of those publishers also publish subscription journals. It’s interesting that one such publisher calls its \$1,750-\$1,950 fees “competitive” and that *Frontiers*, with fees as high as 2000 Euros, finds it advantageous to at least indirectly denigrate OA publishers that *don’t* charge high fees: “Like most other serious open-access publishers, *Frontiers* maintains our high quality of service through an ‘author-pay’ model.” Since most OA publishers do *not* charge APCs, *Frontiers* is saying most OA publishers aren’t “serious.”

Meanwhile, here’s how OASPA journals break down—and I should note again that I knocked *any* journal with an APC exceeding \$999 down to “B,” which those with appropriate funding might consider harsh.

The process was the same as for Beall’s list, so I won’t repeat it.

X: Unreachable or unworkable

Only one journal was unreachable. That’s a good deal better than 525 journals (and quite a few “publishers”).

N: Not open access

Note that I only looked at the OA title list for OASPA members that publish both subscription and OA journals. Of thirteen journals I marked as “N,” eight are entirely conference proceedings—they’re

open access, but they’re not typical peer-reviewed journals. One calls itself “delayed OA” with a *three-year* embargo, and another calls itself “delayed OA” with no stated timeframe. A couple just didn’t seem to have articles available.

H: Hybrid

One publisher had 33 hybrid journals. I did not investigate them further.

F: Few articles

The same caveats apply to these as to similar journals, and it’s also a fairly high percentage of the total although, unlike the Beall set, there are fewer “F” articles than either “A” or “B.” One journal is omitted in Table 11.

APC range	Jrnls	2014	2013	2012	Art/jrnl
Free	179	691	1414	510	14.6
\$20-\$195	5	11	21	9	8.2
\$200-\$395	5	9	44	39	18.4
\$400-\$595	7	46	36	21	14.7
\$600-\$799	7	79	32	6	16.7
\$800-\$999	10	22	65	36	12.3
\$1,000-\$1,499	15	39	81	79	13.3
\$1,500-\$1,999	71	271	470	276	14.3
\$2,000+	15	140	65	23	15.2
Unknown	7	40	44	8	13.1
Total	321	1,348	2,272	1,007	14.4

Table 11. Group “F” journals from OASPA members

Table 11 shows a startlingly different pattern from Table 3, with more than half of the lightly-populated journals having no processing fee—but most of the rest having high APCs.

While we’re looking at the OASPA few-article journals, we’ll do the same breakdowns as for the 1,776 “F” journals from Beall’s list.

Peak	Jrnls	2014	2013	2012	Art/jrnl
16-19	28	228	307	124	23.5
11-15	89	444	930	439	20.4
7-10	103	384	687	312	13.4
4-6	101	294	355	140	7.8

Table 12. Group “F” OASPA by peak articles per year

Sum	Count	Pct
25-29	27	8%
20-24	60	19%
15-19	64	20%
10-14	80	25%
4-9	90	28%

Table 13. Group “F” OASPA by total articles

E2: Essentially empty

Although the *percentage* of OASPA titles in this category is two-thirds that of the Beall group, that’s misleading, since OASPA includes so many fewer *entirely* empty or shell journals. A better comparison: the Beall list has almost as many essentially empty journals as it does “B” journals (and more than either “A” or “C”), where there are less than one-quarter as many essentially empty OASPA journals as there are “A” or “B.”

But there are some, summarized in Table 14.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	60	95	51	10	2.6
\$400-\$498	1	3	1	0	4.0
\$800-\$845	1	1	1	0	2.0
\$900-\$999	8	6	10	3	2.4
\$1,000-\$1,350	6	8	7	3	3.0
\$1,600-\$1,999	9	4	14	6	2.7
\$2,020+	4	12	0	0	3.0
Unknown	2	4	1	3	4.0
Total	91	133	85	25	2.7

Table 14. Group “E2” OASPA, APCs, article count

In this case, nearly two-thirds of the essentially empty journals have no APCs.

E: Empty at least since 2011

Unlike the huge number of shell and empty journals in the Beall group, there are very few here—and 41 of those are either explicitly marked as ceased or, in one case, folded into another journal.

I didn’t record APCs at the journal level for empty journals (some of which are new attempts that haven’t worked out so far, some of which are journals that gave up the ghost). Where APCs were readily available, and explicitly omitting the 41 ceased/combined journals, 31—roughly half of the remainder—were free, but nearly as many (29) were in the \$1,000 to \$1,700 range. Nearly all of those came from one publisher, BioMed Central.

D: Dead, dying or dormant

Only two dozen (several of which could go in “E”), not enough to break down into groups.

Summing Up: D through X

Whereas the vast majority of Beall’s list falls into these categories, less than 40% of OASPA journals do—and the percentages get more impressive when you realize that I found no OASPA journals “C-worthy.” Although the OASPA list represents only one-sixth as many “journals” as Beall’s list, it includes more than two-thirds as many apparently healthy journals deserving consideration as candidates (if you have grant funding for the fees, in many cases).

C: The most questionable journals

I tried to judge these at least as harshly as those from Beall’s list, especially since I find some of the APCs alarmingly high—but no journals in this group seemed sketchy enough to raise a red flag.

B: Plausible but needs more information

That this group is roughly the same size as “A” may be explained by my APC limit—that is, moving any journal charging more than \$999 APC to “B.” Table 16 makes that seem quite probable, since more than nine out of ten “B” journals fall into the expensive-APC categories. For those who don’t find APCs from \$1,000 to more than \$5,000 troublesome, most of these journals would move up to “A.”

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	5	38	95	86	43.8
\$20-\$195	1	25	25	25	75.0
\$400-\$595	1	25			25.0
\$600-\$799	2	37	25	25	43.5
\$800-\$999	24	417	550	552	63.3
\$1,000-\$1,499	53	1,057	1,219	1,231	66.2
\$1,500-\$1,999	299	5,361	7,020	6,742	64.0
\$2,000+	67	1,626	1,425	1,409	66.6
Unknown	7	101	175	175	64.4
Total	459	8,687	10,534	10,245	64.2

Table 15. Group “B” OASPA, APCs, article count

A: Apparently good as they stand

I didn’t know enough to find fault with these journals, and none of them charge four-digit APCs. It’s the largest group of journals—and there are more “A” journals from OASPA than from the Beall list. Table 16 shows the breakdown.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	299	2,395	6,109	6,302	49.5
\$20-\$195	5	56	92	91	47.8
\$200-\$395	60	847	1,466	1,450	62.7
\$400-\$595	32	389	724	725	57.4
\$600-\$799	39	702	858	842	61.6
\$800-\$999	53	934	1,284	1,260	65.6
Total	488	5,323	10,533	10,670	54.4

Table 16. Group “A” OASPA, APCs, article count

Note that considerably more than half of these journals—just under 60%—do not charge APCs.

DOAJ and the Lists

You’ve already seen the key results here: the 63 publishers and independent journals in OASPA account for more journals in DOAJ than the hundreds of publishers and independent journals in Beall’s list. That’s because, although DOAJ certainly doesn’t claim to assure quality, it does have some minimum standards that appear to exclude “journals.”

Looking at Beall’s list, three publishers account for 332 of the DOAJ entries, including slightly more than half of Scientific Research Publishing’s titles, slightly less than half of Bentham Open’s many titles (few of them with many articles), and more than two-thirds of MDPI’s journals. I see a few cases in which the DOAJ count is equal to (or even higher than) the number of journals I encountered, but in most cases it’s a minority.

As you might expect, the picture is different for OASPA members: in most cases, most or nearly all of their journals are in DOAJ. That includes three publishers (one duplicated in Beall) that account for 792 DOAJ entries: nearly all of Hindawi’s journals are in DOAJ, as are more than two-thirds of BioMed Central’s.

Then there’s the fee issue. Of journals listed in DOAJ, 92% from Beall’s list had APCs—not surprising, since Beall focuses on APC-charging publishers. But the percentage isn’t wonderful for OASPA either, with 86% charging APCs. Those are both much higher percentages than is typical for DOAJ and OA in general. As of June 1, 2014, 66.0% of DOAJ journals do not charge fees (including conditional fees).

Subject Groups

Given that Beall’s list is wholly unrepresentative of DOAJ, and that OASPA has a very high percentage of

frequently-high APCs, I thought it might be worth trying two subject groups—limited to English-language because of the difficulty of judging material I can’t read. I chose two fields that don’t typically have the kind of grant funding that makes biomed such an attractive area for APC-charging OA publishers—and one that I know something about. The two: Librarianship (bibliography, library and information science), where DOAJ as of June 1, 2014 shows 64 journals with English as a primary language—and Mathematics, where DOAJ shows 200 journals with English as a primary language.

The results were interesting but mostly say that Gold OA is a complex and peculiar methodology, just like journal publishing in general.

Library and information science

One journal had no apparent English content, and I couldn’t make sense of the mostly-blank interface. Four were either unreachable, yielded an empty page, or had unworkable archives or damaged PDFs: X.

Of the remaining 59, I marked eight as not being open access peer reviewed journals: N. Two of them explicitly say they’re not peer reviewed; one technically isn’t peer reviewed; one is entirely conference proceedings; one is almost entirely commissioned articles; two—including one with a breathtakingly high APC—require registering to get to PDFs.

Of the remainder, three are dead or dying (two explicitly ceased, one appears dead); one no-fee journal is essentially empty, with only two articles in 2012, one in 2013 and none in 2014.

That leaves 47, and of those, 21 fall into the “F” category.

Peak	Jrnls	2014	2013	2012	Art/jrnl
16-19	2	0	16	32	24.0
11-15	5	8	53	52	22.6
7-10	8	22	47	50	14.9
4-6	6	3	14	26	7.2

Table 17. Group “F” LIS by peak articles per year

Here’s the total-articles table.

Sum	Count	Pct
25-29	3	14%
20-24	3	14%
15-19	4	19%
10-14	6	29%
4-9	5	24%

Table 18. Group “F” LIS by total articles

That leaves 26. One journal seems like a solid “C”—a messy site with misspellings, unstated APCs, half-issue downloads, near-impossibility of seeing what’s actually there.

Eight seem like “B” grade journals—one with a \$202 APC, one charging \$400, one where I couldn’t find the APC, the rest free to authors. Those eight journals published 62 articles in 2014 (to date), at least 144 in 2013 and at least 157 in 2012.

The other 17 all count as “A”—and *none* of these charges an APC. (Most are association sponsored, one relies on donations.) Let me repeat that: **Not one** of the 17 LIS Gold OA journals that seem like safe bets charges author-side fees. Those 17 journals didn’t publish a huge number of articles: at least 144 in 2014, at least 342 in 2013 and at least 347 in 2012.

Overall, what stands out in this group is that *very few* journals charge APCs: three stated APCs and three where I couldn’t determine the situation. Will it surprise you that two of the three with APCs, including the one charging more than \$2,000 and calling itself “one of the most cost-effective OA journals on the market,” are in health and medicine? It shouldn’t.

Mathematics

Roughly ten percent of library and information science gold OA journals either do or might charge APCs. What about mathematics—where money’s a little more available and there are quite a few more journals?

Table 19 shows what I found for the 200 DOAJ mathematics journals with English as a primary language.

Grade	Count	Percent	APC
X: Unreachable	9	4.5%	
N: Not open access	8	4.0%	
F: Few articles	33	16.5%	4
E: Empty	1	0.5%	
D: Dead, dying, duplicate	7	3.5%	
C: Very questionable	2	1.0%	0
B: Plausible	104	52.0%	41
A: Good	36	18.0%	10
Known or poss. APCs	55	27.5%	

Table 19. Mathematics journals

In other words: a considerable majority of Gold OA mathematics journals are absolutely free—usually because they’re hosted by universities or sponsored by societies.

Those marked as not being open access include one that requires a login to read, three that consist entirely of conference proceedings or solicited papers (they may be open access, but they’re not peer-reviewed journals open for submission) and one with a one-year embargo.

One journal, marked E, may be re-emerging from a long quiet period: it’s collecting articles for 2015. The “D” journals include one explicitly discontinued title, one apparent duplicate (the URLs for two journals are identical, but one adds “Quarterly” to the title) and five that had *no* articles after 2012.

A relatively small percentage of mathematics journals fall into the F category.

Peak	Jrnls	2014	2013	2012	Art/jrnl
16-19	7	29	73	59	23.0
11-15	14	52	171	102	23.2
7-10	10	25	74	46	14.5
4-6	2	12	9	26	23.5

Table 20. Mathematics “F” journals, peak year

Sum	Count	Pct
25-29	9	27%
20-24	8	24%
15-19	8	24%
10-14	8	24%

Table 21. Mathematics “F” journals by total articles

The distribution in Table 21 is interesting for its evenness—and for the total lack of journals with fewer than 10 articles during the period. (Note that there were also no E2 journals; apparently, there aren’t loads of startups in the math field.)

Neither of the two “C” journals charged APCs. One of them was available only as whole-issue PDFs without contents tables, making it nearly impossible to see what was being published. The other had a number of problems, including the non-word “Journal” used with some frequency.

That leaves 140—a heartening 70% of the total. Except for two “B” journals with \$1,200 APCs; a handful that had APCs but didn’t state them; one with ugly PDFs; one referring only to an “editorial office”; some with minimal info; and some with problematic English, I think you could plausibly merge most of the “B”s in with “A”s.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	63	943	1,429	1,394	59.8
\$20-\$195	12	130	266	243	53.3
\$200-\$395	13	124	300	278	54.0
\$400-\$799	5	98	119	100	63.4
\$800-\$999	2	50	50	50	75.0
\$1,200	2	50	50	50	75.0
Unknown	7	98	160	150	58.3
Total	104	1,493	2,374	2,265	59.0

Table 22. Math “B” journals, APCs, article count

Note that not only are most of these journals free to authors, most of the *articles* are in those journals. No “B” math journal charged more than \$1,200.

APC	Jrnls	2014	2013	2012	Art/jrnl
Free	26	312	567	553	55.1
\$100	1	25	25	25	75.0
\$300-\$399	2	59	50	50	79.5
\$600	5	93	119	50	52.4
\$820-\$999	2	50	50	50	75.0
Total	36	539	811	728	57.7

Table 23. Math “A” journals, APCs, article count

Again, most of the journals are free to the authors, and those journals include most of the articles (roughly two-thirds).

I’m not sure there is such a thing as a “typical” field for Gold OA journal practice, but mathematics seems to be a little closer to the norm than either the OASPA list or Beall’s list, with the vast majority of OA journals supported by means other than APCs.

One thing became obvious as I was checking these journals: Hindawi publishes a *lot* of journals in the math field—19 in all, nearly 10% of all math journals (but only 4% of Hindawi’s listings in DOAJ). For that matter, Hikari—a publisher I hadn’t previously encountered—also has a fair number (seven in all). Emis.de distributes nine of the 200; that turns out to be the European Mathematical Information Service operated by Germany’s FIZ Karlsruhe, the Leibniz Institute for Information Infrastructure.

The Name Game

One interesting issue with those thousands of “journals” in Beall’s list: They have to have names. Legally, a title can’t be copyrighted. Effectively, reusing an existing journal’s name is not only unethical

but also generally stupid: I don’t believe you’d be able to get an ISSN or be listed in DOAJ. And “can’t be copyrighted” doesn’t mean the real journal—especially if it’s a high-profile subscription journal—can’t take action against the poseur.

So, with very few exceptions, every “journal” and every journal has a unique name. I thought it might be interesting to look at some aspects of the 8,983 names I derived from the Beall lists. (There were many other journal names I didn’t bother to jot down because of group situations; this section is for fun, not a serious examination.)

One caveat, in addition to the parenthetical one just noted: These are the names *as given on the publisher websites*, specifically in the journal lists or links to journals. I know of at least one publisher that leaves some prefatory words off of the names in the journal list in order to shorten them; I did not attempt to correct for that. (For one thing, the journal names are hyperlinks in Excel, which makes changing them a damn nuisance.) Thus, most or all of the 98 duplicate names Excel finds in this list may not be actual duplicates.

If you’re reading this report only for its serious worth, you can skip this section: it’s here for fun.

The International Journal of International Journals?

Sure, there are a bunch of “Advanced” journals (88 in the Beall list)—and even more “Advances in” (151 of those).

That’s nothing compared to 287 “American Journal of”—some of them legitimately American. (Beall’s list yields 316 journals beginning “American,” but some of them aren’t American Journal of.) By comparison, there are a measly 92 “Asian Journal of” and 56 “European Journal of.”

There are 247 journals beginning with “Global” and 74 “Indian Journal of” and 300 wearing their OA heart on their nametag with names starting “Open” (176 of them “Open Journal...”) plus another 228 “The Open...” journals.

There are 114 “Research Journal of...” and 131 “Research Open Journal Of...,” the latter all from one “publisher” and almost all “journals.”

It’s hardly surprising that there are a *lot* of “Journal of...” where the name wasn’t already taken: 1,541 of them in Beall’s lists, if I’m counting correctly.

But the champion name is “International Journal...”—usually but not quite always followed by

“of.” I count *at least* 2,208 of them from Beall’s lists, including roughly 2,150 “International Journal of...”

More than 2,200 “journals” and journals where you need a fairly long title window to even begin to distinguish them!

So, just in the Ws (one of the smallest ranges), there are International Journals of Waste Recycling Engineering, Waste Resources Open Access, Waste to Energy, Water & Hydro Constructions, Water Knowledge, Water Research, Water Resource Engineering, Water Resources & Environmental Sciences, Water Resources and Environmental Engineering, Web & Semantic Technology, Web Engineering, Web Technology, Wildlife and Endangered Species Conservation, Wildlife and Range Management, Wildlife Ecology, Wired and Wireless Communications, Wireless & Mobile Networks, Wireless Communication, Wireless Communications and Mobile Computing, Wireless Communications, Networking and Mobile Computing, Women and Men’s Studies, Worldwide Waste Management and Wounds and Injuries.

I’m one of those skeptical fellows who believe that the constant rapid rise of published refereed journal articles, which helps subscription journals to keep raising those bundled and other prices, is driven partly by salami-slicing, also known as the Least Publishable Unit: publishing results in as many tiny pieces as possible. There’s also some salami-slicing at the journal level. Consider this list of International Journals of... relating to pharmaceuticals and pharmacies: Pharma and Bio Sciences, Pharma Medicine and Biological Sciences, Pharma Sciences, Pharmaceutical & Research Science, Pharmaceutical Analysis, Pharmaceutical and Biomedical Research, Pharmaceutical and Clinical Science, Pharmaceutical and Phytopharmacological Research, Pharmaceutical Applications, Pharmaceutical Chemistry, Pharmaceutical Development and Technology, Pharmaceutical Research & Analysis, Pharmaceutical Research and Development, Pharmaceutical Science, Pharmaceutical Science and Health Care, Pharmaceutical Science Invention, Pharmaceutical Sciences and Drug Research, Pharmaceutical Sciences and Research, Pharmaceutical Sciences Review and Research, Pharmaceutical Studies and Research, Pharmaceuticals Analysis, Pharmaceutics, Pharmacognosy and Phytochemistry, Pharmacognosy and Phytochemistry, Pharmacological Research, Pharmacological Sciences, Pharmacological Screening Methods, Pharmacology, Pharmacology and Clinical trials, Pharmacology and Pharmaceutical Technology, Pharmacology and Toxi-

cology, pharmacology and toxicology, Pharmacology and Toxicology Science, pharmacology research, Pharmacology Review, Pharmacotherapy, Pharmacy, Pharmacy, Pharmacy & Pharmaceutical Sciences, Pharmacy & Therapeutics, Pharmacy and Biomedical Sciences, Pharmacy and Medical Sciences, Pharmacy and Pharmaceutical Science Research, Pharmacy and Pharmaceutical Sciences, Pharmacy and Pharmacology, Pharmacy And Pharmacology, Pharmacy and Pharmacology, Pharmacy and Technology, pharmacy practice and drug research, Pharmacy Review and Research, Pharmacy Teaching & Practices, Pharmacy Teaching and Practices, Pharmacy, Biology and Medical Sciences and PharmTech Research.

What’s that you say? There are a few duplicates in that list? So there are—typically with different publishers for the “different” titles.

To the best of my knowledge, there isn’t an International Journal of International Journals. Yet. (There are a mere 694 “International Journal...” in DOAJ as of June 2, 2014, so it’s fair to say that most of these from Beall’s lists are “journals.”)

By contrast, only 101 out of 1,500-odd journals from OASPA are titled International Journal of... By comparison, that’s nothing. Somewhere in the middle: 22 of 200 math journals in DOAJ, 11%, including ten from Hindawi and Hikari, and six library and information science journals, but two of the six are unreachable or unworkable.

More Salami-Slicing at the Journal Level

Of course, the 1,500-odd “Journal of...” titles from Beall’s lists, without the “International” prefix, also leave lots of room for salami-slicing. Going back to the Ws, we find Journals of Water, Water Pollution & Purification Research, Water Research, Water Resource and Hydraulic Engineering, Water Resource and Protection, Water Resource Engineering and Management, Water Resources, Water Resources and Ocean Science, Web and Grid Services, Web Engineering & Technology, Western Culture, Wireless and Mobile Communications Engineering, Wireless Communication and Simulation, Wireless Communications and Networks, Wireless Networking and Communications, Womens Health and Gynecology, World Economic Research and World History.

In the pharma area, it’s a relatively modest group (I’d guess lots of names were already taken), but there are Journals of Pharmaceutical and Biomedical Sciences, Pharmaceutical and Biomedical Sciences, Pharmaceutical and Cosmetic Sciences, Pharmaceutical and Scientific Innovation, Pharmaceutical Biology,

Pharmaceutical Research & Opinion, Pharmaceutical Science and Technology, Pharmaceutical Sciences and Research, Pharmaceutical Technology and Drug Research, Pharmaceuticals, Pharmaceutics & Drug Development, Pharmaceutics & Pharmacology, Pharmacognosy, Pharmacognosy and Phytotherapy, Pharmacology, Pharmacology & Clinical Toxicology, Pharmacology and Drug Metabolism, Pharmacology and Toxicology, Pharmacology Research, Pharmacy & Biological Sciences, Pharmacy & Clinical Sciences, Pharmacy and Allied Health Sciences, Pharmacy and Pharmacological Research, Pharmacy and Pharmacological Research, Pharmacy and, finally, Pharmacology and Toxicology,

The Global World Advanced International Journal of Current Progress in Agriculture and Literature
Sometimes things get a little crazy—either from an ambitious “publisher” stacking on those qualifiers to try to achieve a unique name, or from a “publisher” adding a topic that just, well, doesn’t really go very well with the other topic. I won’t offer specific examples, although the one used as a heading isn’t all that far from the truth.

Surprisingly, removing most of the prefixes in journal names—publisher names, “Journal of,” “International Journal of,” “American,” etc.—doesn’t actually reduce the whole mess to a few hundred phrases. Without going to great pains, a modest normalization only reduced the number of unduplicated names to 7,380. Publishers are ingenious: even without prefaces, there are distinctions between Woman’s Reproductive Health, Women and Men’s Studies; Women’s Health; Womens Health and Gynecology; Women’s Health Care; Womens Health International; Women’s Health Journal; and Women’s Health, Issues & Care.

Similarly this cluster of wireless journals, even without distinctive prefaces (note that “Communication” and “Communications” are different words): Wired and Wireless Communications, Wireless & Mobile Networks, Wireless and Mobile Communications Engineering, Wireless and Mobile Technologies, Wireless Communication, Wireless Communication and Simulation, Wireless Communications and Mobile Cloud Networking, Wireless Communications and Mobile Computing, Wireless Communications and Networks, Wireless Communications, Networking and Mobile Computing, Wireless Engineering and Technology, Wireless Networking and Communications, Wireless Networks and Applications, Wireless Networks and

Communications, Wireless Sensor Network and, finally, Wireless, Mobile & Telecommunication.

I could go on, but I won’t. On the other hand, working from a list like this, it would take almost no time to establish a new “publisher,” say Pacific Open Science, using the preface “PoS “ followed by, say, 1,000 of the single and combination terms. And those would all *automatically* be distinct names. (Yes, there is *one* PoS in DOAJ, in this case an abbreviation for *Proceedings of Science*, an Italian operation that publishes conference proceedings.) It would take a few hours longer to build templated journal pages for each of the 1,000 “journals.”

But to actually build websites, *obtain* ISSN, and publish enough to qualify for DOAJ? That would be a *lot* harder and more expensive. Which may be why 90% of the “journals” in Beall’s list aren’t in DOAJ.

A Few “Publisher” Notes

With few exceptions, I’ve chosen not to call out individual publishers or journals; that isn’t the point of this exercise.

Still, as I was plowing through several hundred publishers and “publishers,” a few thousand journals and many thousand “journals” I couldn’t help but notice some interesting language. Herewith a few notes copied verbatim, necessarily with publisher or journal names connected to the link.

It’s hard to resist quoting Research Publish Journals, and there are quite a few paragraphs that could be quoted. [This one](#) is tough to beat, however:

Acceptance: Prima facia we do not reject any paper.

If manuscript submitted is not in Research Publish Journals format, then we advice authors to make it in Research Publish Journals format for considering. We only see the newness and high quality research work in manuscript.

If I read that carefully enough, twice, I can see that it’s not *quite* saying what it seems to be saying. Then there’s this comment on APCs:

Publication Cost: Research Publish Journals always wants free articles but due to day to day expenses, salaries and preservation of research papers for long time, author has to pay small amount as publication fees.

It’s easy to be distracted by the banner of text flowing left above that copy and the column of text flowing upward to its right, but I’ve seen worse. (The journals? A dozen, all with few papers, *all* with titles starting “International Journal Of....”)

While I like the classy all-lower-case banner for [north atlantic university union](#), I’m not so enthusi-

astic about this language (which appears more than once on the conference-holder/"publisher"'s site):

NAUN is an independent academic organization and is registered in the Federal State of Oregon, USA, solely for academic, and not for financial reasons.

Federal State of Oregon? Really?

I wonder whether [Stringer Open](#) was ever anything more than a dumb joke by somebody willing to spend the registration-and-hosting cost for such a joke. Whenever I've checked the so-called publisher, the site has consisted entirely of this:

This website is temporarily unavailable, please try again later.

[Technical Journals Online](#) has a home page so striking in the quality of its language that it deserves to be quoted in full (the "publisher" has five titles, none doing very well):

Technicaljournalsonline is one of the international site for Open Access peer reviewed journals devoted to various disciplines in science and technology. Open Access Journals are freely accessible via the Internet for immediate worldwide, open access to the full text of articles serving the best interests of the scientific community. All interested readers can read, download, and/or print open access articles at no cost. Journals available for Open Access on Technicaljournalsonline, publishes online research articles, reviews and letters in all areas. The journal aims to provide the most complete and unswerving source of information on current developments in the field. The prominence will be on publishing quality articles rapidly and making them freely available to researchers worldwide.

One unusual note for TJO: Only one of the five "journals" is in biomedical areas, the others being engineering-related.

A fair number of questionable "publishers" make fairly boastful claims. Here's one example, from [Takshila Publishing Pvt Ltd](#) (which is very clear about being located in an apartment in Begumpet, Hyderabad, India):

Takshila Publishing Pvt Ltd is an international Open Access publisher of peer reviewed journals around a wide range of scientific disciplines.

As the world's leading provider of science and health information, Takshila serves free access journals to scientists, students from worldwide.

I'm deliberately not emphasizing text within quotations, but that unqualified "world's leading provider of science and health information" is quite a statement from an outfit that lists all of five "journals,"

not one of which had any published peer-reviewed articles when I checked them.

More typical is the qualified claim, such as this from [Technopark Publications](#):

Publishing under our own high-flying trademark, we have positioned ourselves as a credible name among the bibliophiles and readers all over the world. We are one of the most renowned and online journals publishers in India. Our presence is being felt at the international level in increasing proportions and we are successfully wooing readers from all races, religions and ethnicity from all over the world. Quenching the thirst of knowledge of thousands of people, we are a force in the academic world that feels the pride of being a part of the knowledge revolution that is shaping the future of human civilization.

I assure you that everything in that paragraph, including the interesting placement of periods and spaces, is directly from the original. Four "journals," including one empty one and one unreachable. I wasn't sure whether to take the following as a promise or a threat:

Technopark publications will be going to launch some more new journals in the topics related to computer science.

read more...

But the "read more..." hyperlink just leads back to the same home page, so apparently there's nothing more to read. (As with almost all other publisher-site text, with one three-word exception further on, that was copied-and-pasted without modification: "launch" is indeed what appeared there.)

[Integrated Intelligent Research](#) supposedly specializes in computer science and engineering, and offers this as the first paragraph on its home page:

Integrated Intelligent Research is center for research empowerment to disseminate innovative research activities in the field of Computer Science Application and Engineering. The research activities attempts to integrate the applied domain Knowledge of next generation computing through sustainable research identification, execution of project and sharing the knowledge via publications with the peer and targeted group which has similar interests. As part of the research work we are interested to publish the journals for knowledge sharing process.

IIR's list of journals (which seems to have grown since I checked it) includes the *International Journal of Business Intelligents*.

In the case of [Sphinx Knowledge House](#), I suggest you follow the link (sphinxesai.com if the link doesn't work) to take in the full grandeur and so-

phisticated design of the home page. (I tried it in the recommended Internet Explorer, and the layout is in fact *slightly* better there.) SKH is Indian, not Egyptian, with two journals and the following [“About Us” paragraphs](#):

Sphinx Knowledge House is an establishment associated with Technocrats, Scientists, Academicians involved in the receiving, distributing, supplying the research data, interpretations, bases to all the destinations in time.

Sphinx Knowledge House is an International Research Knowledge Hub committed to provide a common universal platform to utilize research knowledge globally. It undertakes to distribute and provide the Research Knowledge in the subject areas Pharmaceutical Research, Chemistry, Chemical Technology, Biochemistry, Microbiology, Biotechnology, Medicine, Agro chemistry and applied Biosciences to all the destinations for faster connectivity to respective research, taking due care of speed and pace of knowledge generation.

I'm all for supplying bases to all the destinations in time! The two journals are (wait for it...) both International Journals of, ChemTech Research and PharmTech Research respectively.

I could go on for quite some time, but won't. Why does Bentham Open put scare quotes around “peer reviewed open access”? Who knows? Why do publishers with multi-hundred-dollar APCs falsely claim to be *the* lowest-cost publishers? Who knows?

I can't resist one subheading from the [“About” page](#) for Maxwell Science Publications:

Our Silent Feathers

That appears over paragraphs about OA, high visibility and MSP's manuscript tracking system. MSP apparently doesn't like cut-and-paste: When I tried to copy-and-paste that subheading, all I got was the URL for MSP. Still: “Our silent feathers” says it all.

Fee vs Free?

The outline for this article had a subheading here: “what's a reasonable APC?” Given the general lack of transparency of actual costs, the wildly varied costs of living and labor in various countries and even the reasonably varied costs of dealing with different kinds of articles, I'm not going to go there.

But there is the general fee-vs.-free issue for gold OA. It doesn't help that dozens (probably hundreds) of fee-charging OA publishers simply define OA or gold OA as involving author fees. (There are a few that don't.)

It probably doesn't help much that Beall's odd corner of the OA world is, I think by design, so heavily weighted toward APC-charging publishers. Among journals from Beall's list with *some* actual activity (that is, F, E2, D, C, B and A), 10% were free to authors, 69% had explicit APCs and 21% appeared to have APCs that weren't clearly stated. In essence, nine out of ten journals charged fees.

In this case, OASPA is considerably better but also not representative of the field as a whole. 32% of the journals were free to authors, 61% charged explicit fees and 7% apparently had fees that I couldn't locate on the journal sites.

As far as I can tell, 87% of Gold OA LIS journals and 73% of Gold OA mathematics journals (in both cases including only journals in DOAJ with English as a primary language) are free of charges—and the latter is fairly close to DOAJ's overall percentages (as of June 5, 2014: 66% with no charges).

Looking only at journals with English as a language (not necessarily *the* language), which is most of DOAJ (7,842 on June 5, 2014), the percentage is slightly lower: 62%. On the other hand, out of 493 SciELO journals, 446 lack APCs—that's 90% free for authors.

Exploring DOAJ and looking at APCs (easy to do given the Advanced Search interface) is fascinating. Of 2,268 journals with medicine as a subject, 1,182 (52%) don't charge APCs. Among 1,154 social science journals, 874—76%—don't charge APCs. Of 836 journals tagged Technology, 57% lack APCs.

What does this all mean? Primarily this: It continues to be the case that *most Gold OA journals do not charge author-side fees*, being funded by universities, associations, conferences, donations or what have you.

The last time I know of a large-scale check being done (involving thousands of journals), the percentage of subscription journals with page and other author-side charges was *higher* than the percentage of Gold OA journals with APCs. I suspect that's still true, but have made no attempt to carry out a large-scale test of subscription journals. Even if I didn't know my own limits, as an unaffiliated “researcher” I'm not even sure where I'd begin. With the membership list for the Society of Scholarly Publishing, roughly 60-odd firms including OMICS Group Inc.? With AAP-PSP (Professional Scholarly Publishing), with some 160-odd (if I'm counting right)? I don't believe either one includes a substantial fraction of subscription peer-reviewed journal publishers.

The Real and Possible Predators

In my opinion, a Gold OA publisher can only really be considered predatory if there's some plausible reason to believe it can succeed and gain significant income as a result. That requires:

- That it be sketchy as a publisher
- That it have a reasonable number of journals that score "A" or "B"—they're going concerns and they don't raise obvious red flags
- That it charges APCs—high enough APCs to result in significant revenue.

Guess what? There just aren't many of those in the Beall lists, as I examined them. Only six questionable publishers had "A" journals (37 journals in all, with only one having a significant number); none of those charged more than \$400 APC. The "B" level's a little more promising, with 56 possibly-questionable publishers and 300 "B" journals—but only nine of the 56 have 10 or more plausible journals. Most of those charge APCs below \$100 or in the low \$100s; only one charges more than \$500.

As I was doing the scans and starting this article, I had the idea of proposing Not Crawford's List, a list of possible, potential and probable predatory *subscription* publishers. Some of the criteria for a publisher being possibly, potentially or probably predatory (the 4P qualifier):

- It has been known to create journals out of whole cloth consisting entirely of articles reprinted from other journals, in some cases to benefit a company.
- It has been known to double-dip (I): charging authors page charges and other fees while also charging for subscriptions and access.
- It has been known to double-dip (II): publishing "hybrid" journals with very high APCs that don't appear to yield savings on subscription prices down the road.
- It requires that authors transfer copyright to the publisher.
- It has been known to publish articles that should not have been published.
- It has been known to make its pricing policies opaque by requiring non-disclosure agreements from libraries and library groups, thus enabling it to play libraries off against one another and keep its true prices hidden.
- It has been known to salami-slice new journals, creating new titles with very narrow scopes that help expand the size of its bundles.

- Back in the days when money actually earned interest, it had been known to create new "journals" and gather advance subscriptions for them—journals that never actually emerged, and the libraries eventually got their money back.
- It has been known to publish "research" journals in fields with no plausible basis for research.

I'm sure I could add to that list, but you get the idea. Then, of course, I would offer a link to a dynamic list of publishers who *could* potentially have one or more of these sketchy attributes. The only lists I can think of are lists I've already mentioned in the previous section: SSP and AAP-PSP.

But that's unfair—almost as unfair as Beall's lists. I'm sure there are publishers in both organizations who never have and never will take any of these predatory actions. So I gave it up as a bad idea.

Other Issues

I'm tempted to go off on even more tangents, but instead I'll just mention a couple of related issues, neither of which I can reasonably solve or even address.

Can there be a legitimate blacklist?

I'll assert that Beall's list ain't it—and at the 4P level, it doesn't really even purport to be. I have been astonished by comments from some that there *needs* to be a proper blacklist of OA publishers not to be trusted—preferably an *official* one, possibly one with enforcement powers.

I don't think that's possible. Once you add "official" to the statement, I also don't think it's desirable or even feasible without running roughshod over the First Amendment.

I also wonder why there's a call for a blacklist of OA publishers when there's never been a blacklist of sketchy subscription publishers, as far as I know. (Nor, for that matter, is there a list of certified Good Publishers that don't engage in any questionable practices. Who would be on such a list?)

As for a generalized blacklist, I also doubt the feasibility and desirability. *Retraction Watch* offers a piece of this, but only a piece (and scrolling down the category list by publisher offers some interesting numbers!). There could be a "Yelp for peer-reviewed journals" and maybe there is and I don't know about it—but would it be more reliable than Yelp, or even more subject to the kind of axe-grinding that makes

Amazon and IMDB reviews so difficult to use without careful investigation?

If there is such a crowdsourced effort (whether for all peer-reviewed journals or just for OA), I don't know about it, which isn't at all surprising. In practice, the *Directory of Open Access Journals* is becoming a surprisingly good starting point—not an assurance of excellence (it can't and shouldn't be) or that there are no questionable practices, but a source with a bar high enough to apparently rule out more than 90% of Beall's supposed predatory journals. After working with DOAJ during the final stages of this project, I've come to respect it more and more, resulting in some changes in my suggestions for evaluating a new journal you're considering submitting a paper to (or tracking in your library, for that matter).

How is it that technology hasn't made journals cheaper?

There's a puzzler, albeit one related primarily to subscription journals, not the focus of this piece. Publishers touting Big Deals made much of "historic spend"—basically assuring themselves that no library would ever, ever spend less on that publisher's journals than it had in the past.

The problem with "historic spend" is that it assumes no changes in history that would lower the costs and should plausibly lower the price of a product. In non-monopolistic fields where technology is involved, directly or indirectly, that's almost never the case anymore.

Would you stand still for "historic spend" for a personal computer, noting that "historic spend" also means the prices rise with inflation? In 1984, a decent midrange PC (4MHz 8088, 256K RAM, 10MB hard disk, display using 7x9-pixel characters, dot-matrix printer, basic software) might cost right around \$6,800 in 2014 dollars; a "dream system" (with a whopping 8MHz 286, 640K RAM, 20MB hard disk and a laser printer) would go for around \$22,800 in 2014 dollars. (But then, a discounted HP LaserJet II in 1986—one of those hot-running monsters with limited typeface capacity—cost \$4,750 in 2014 dollars.)

Ready to spend that much? Of course not, and admittedly 30 years is several lifetimes in computing. In 1997, a decent midrange PC—166MHz Pentium, 32MB RAM, 16" display, 2.5GB hard disc, MS Office, fax/modem, CD-ROM and speakers—would go for a mere \$3,250 in 2014 dollars.

I don't know how much *you* spent on your current PC (\$3,250 isn't implausible, although it's five times what I spent on mine), but I'm guessing you got one heck of a lot more power and storage capacity at whatever price.

Pointless examples? Not entirely. While copy-editing (to the extent that peer-reviewed journals actually *do* this) involves people who make more money now than they did decades ago, peer review handling *should* be much cheaper (no copying, faxing or mailing costs, just for starters); many journals now offer templates to get manuscripts that are closer to the final layout—and I'm pretty sure the cost of "typesetting" and layout is a tiny fraction of what it was in the good old days. Basically, for an electronic-only journal, many of the per-paper costs have either disappeared or should have come down enormously.

But not the prices. Those are supposed to move in only one direction: Up.

It doesn't work that way for cars, for computers, for TV sets, for appliances...for most things where you can make choices. How is it that it works that way for scholarly journals?

I know, I know: "You just don't understand," That may be true.

Conclusions

I believe this is the first time anybody's actually examined what's on Beall's list in detail. I suspect it will also be the last time: it's an absurdly large job, and I wonder whether this special issue yields enough to make it worthwhile.

My primary conclusion is that Beall's lists constitute a sideshow full of distorting mirrors, having little or nothing to do with OA as a whole except to serve as a platform for Beall to take potshots at OA. I believe the lists should be ignored.

My secondary conclusion is that an author's road to finding the right OA journal—or, more pertinently, deciding whether Journal A (or The International Journal of B) is a good target—may be simpler than I and others have suggested in the past.

Here's the new set of steps I'd suggest for an author in this situation. Let's say you have an article that appears suitable for the topic range of *The International Journal of International Journals* (IJIJ) but aren't sure IJIJ's a good place to publish. (I'm leaving out cases where a friend or trusted colleague has recruited your article and vouches for IJIJ, or you're

on the editorial board yourself.) Here's what you might do:

1. Look IJJ up in the *Directory of Open Access Journals* (doaj.org). Not there? Look for another journal...which you can do quite nicely at DOAJ: it's got thousands of 'em. A keyword or subject search should yield many more candidates.
2. If it is in DOAJ, take advantage of the listing to learn more about the journal and to explore the journal's site. Note that, for those journals with APCs, DOAJ may provide a more direct link to the APC policy than the journal's own site (although I'd argue against publishing with any journal that hides APCs). Thus, steps 3-9, using links and info from DOAJ.
3. Do the quality of English and the general appearance of the journal's site give you confidence in its quality? If not, go back to step 1, looking for another journal.
4. If there is an APC, is it one you consider reasonable? If not, go back to step 1.
5. Is the journal a going concern—is it publishing a reasonable stream of articles (where only you can determine what's reasonable)? If not, go back to step 1.
6. Do the article titles over the past few issues make sense within the journal's scope? If not, go back to step 1.
7. Does one author show up over and over again within the past few issues? If so, I'd be inclined to go back to step 1.
8. Download and read at least one article in full text (which almost always means PDF), preferably one you think you can understand. If the download process doesn't work, requires registration or yields a defective PDF, go back to step 1.
9. Does the article look good enough for your tastes (that is, are the layout and typography acceptable)? Does it seem to be at least coherent enough to be in a journal you'd want to be associated with? If the answer is "No" to either question, go back to step 1.

Steps 1-9 really shouldn't take more than 2-5 minutes (maybe a little longer to read the article). If IJJ still looks like a candidate, you may be done—or you may want to do two more steps, one in DOAJ (or, rather, on the journal's site), one elsewhere.

10. Check the editorial board for plausibility and to see whether these are real people,

11. Check *Retraction Watch*—but be aware that excellent journals have retracted papers and that most journals don't show up there.

You can certainly go further; the final section of THE SAD CASE OF JEFFREY BEALL in the April 2014 *Cites & Insights* ends with a section, "Coping with Sketchy Journals and Publishers," including a long list of suggestions by the Library Loon. They're all good, if you want to take the extra time—and maybe you should. But I suspect these nine to eleven steps, which will take very little time, will help you avoid most difficult cases.

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An extra note (since there's a little empty space at the bottom of this page): *Cites & Insights* is not and has never claimed to be a scholarly research journal—it's a "journal" in the sense that it's a periodical. But it's also not and never has been a blog. It is self-published, which I guess means that it's worthless as a source for *Wikipedia*, even as, oh, Beall's lists (which are pages on a self-published blog) appear to be reputable sources. (Yes, his list has been cited in non-self-published printed sources. So has *Cites & Insights*—in at least two dozen books I wasn't involved in, according to Google Books. I find this ironic and amusing.)

Masthead

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