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# The Professoriate and Open Access

Let us assume that university scholars are paid to uncover new knowledge and apply their training to dispel ignorance, hoping to arrive at what we once—in a more innocent age—called truth. How, then, would we expect them to approach open access? Add to the mix that open access permits anyone easily and costlessly to read, comment, cite, use, and criticize, but also admire, work, opening authors to a potentially larger audience. And that, insofar as their professional standing depends on influence in their fields and sometimes more broadly in public debates, their ideas would be amplified by an expanded reach. Naively, we might anticipate that the professoriate would be in the battle's vanguard, delighted by the prospect of being widely read. Alas, disappointment would be our lot.

The professoriate is surprisingly uninterested in open access. A survey of French researchers revealed that, in principle, they had no objections to making their work accessible—so long as it required no significant change to their routines. Unrealistically, most considered that the cost to authors should be less than €500. And some were furious at the effrontery of making authors pay. A return to slavery, fumed one computer scientist.<sup>1</sup>

The professoriate's attitude stems from a combination of indifference, snobbery, and otherworldliness. University researchers do not recognize the problem of exclusion from knowledge because they do not suffer it. As a fish does not ponder water, the professoriate is insouciant about access because it knows only surfeit. University scholars routinely fail to realize that the overwhelming majority of humanity in the developed world, and even more in the Global South, has no access to JSTOR or HeinOnline, nor any of the wondrous scientific databases that populate their laptops. In the analog era, authors bought offprints of their articles to send would-be readers without subscriptions. In the sciences, requests for offprints from developing nations often arrived on preprinted cards with heartfelt pleas, pointing out that the senders had no other hope of reading the work. Today, such constant reminders of the information divide no longer prick the professoriate's conscience.

In 2019, 217,000 Britons worked as academic staff.<sup>2</sup> Thus only about a third of 1% of all British could, even generously, be classified as academics. Do any other groups have access to the scholarly databases, except perhaps by talking their way into the nearest research library or during their brief and happy years as undergraduates? If not, then 99.7% of the UK has no access to the cornucopia of material available within universities. The figures are similar elsewhere.

Only a few nations, including Egypt and Uruguay, have negotiated licensing deals with some publishers, allowing all their citizens access.<sup>3</sup> India has announced plans for something similar.<sup>4</sup> Adding injury to insult, the scholarly goodies are wildly mis-distributed. Most faculty within the digital bubble will use only a tiny fraction of the abundance on tap. The vast majority of big-deal journal articles, like most library books, remain unread by the patrons of any given institution.<sup>5</sup> Meanwhile, talented amateurs and interested citizens outside remain excluded.

The professoriate alone is well-served by the existing system. Consider Wikipedia's footnotes. Wikipedia is the greatest assemblage of

human knowledge ever, the closest we have come to the Enlightenment ideal of a universal encyclopedia. Yet, however open Wikipedia's text, the sources indicated in the footnotes are often locked down. The Internet Archive is trying to "blue" Wikipedia's footnotes. If it owns the work in question, it allows click-through to the page referenced. But, with over six million entries in the English-language Wikipedia alone and multiple footnotes for many, the task remains Herculean. For "Holocaust," for example, there are references to about 150 books and articles. Of these, a dozen appear to be clickable, but only two or three go to the source without some sort of subscription or affiliation with paywalled databases. The average reader who wants to check a reference cannot, except by going to the nearest research library, wherever that may be.

Many academics seem unaware of this brutal imbalance. They inhabit the university bubble without even realizing it. In a 2010 survey, 93% of university and college researchers considered accessing journal articles easy.<sup>6</sup> Naturally, they would, given that the system exists to supply their needs. The historian Jill Lepore—a force of nature and an enviable scholarly talent—gave voice to such academic obtuseness when she wrote that "most of what academics produce can be found, by anyone who wants to find it, by searching Google."<sup>7</sup> That is simply not true, except in the plushly feathered nest of a university proxy server or perhaps on the illegal pirate sites.

Add to otherworldliness a dash of snobbery. Regularly employed academics have no pressing reasons to expand their audience. Even scholars deeply involved in open access, such as Paul Ginsparg, founder of arXiv, worry about a poor signal-to-noise ratio if just anyone can comment.<sup>8</sup>

In academe, the readers who count most are the colleagues who decide hiring, promotion, and research grants. And they reside within the bubble, too. Some professors go beyond this personal lack of engagement to claim that those excluded from the scholarly

riches do not want to be, nor should be, admitted in the first place. The argument is dished up with variations. Most unpleasant are those for whom scholarly knowledge is akin to the esoteric secrets of druids, alchemists, and others whose status derived from hamstering occult wisdom. Robin Osborne, a Cambridge ancient history don, exemplifies the species.

Because universities teach how to conduct academic research, others uninitiated into these dark arts cannot—Osborne insists—understand what professors produce.<sup>9</sup> Even if true, that would still leave all university graduates who—once exmatriculated—are deprived of access.<sup>10</sup> Since a third of British 18-year-olds pursue higher education, graduates are a nontrivial, and growing, part of the population.

Most readers cannot understand what professors write, Osborne insists, therefore, nothing is lost when they are excluded. Perhaps the good don intended a sly academic self-parody. Every year, JSTOR alone registers 150 million fruitless attempts to breach its paywalls and access the cream of Anglophone social science.<sup>11</sup> In 2010, 16% of document supply requests at the British Library came from researchers with no university affiliation.<sup>12</sup> DeepDyve is a commercial service providing access to academic literature for unaffiliated researchers.<sup>13</sup> What libraries could supply, its clients are willing to pay for. The Latin American purveyors of open scholarship, SciELO and RedALyC, are used only to a quarter by university staff, of which a mere 5%–6% are professors. The remainder of its clientele is students (50%) and interested lay readers (20%).<sup>14</sup>

Who are these deluded fools seeking information they cannot understand? Any biographer, author of popular science, nonfiction freelancer, and writer of historical fiction or other imaginative literature requiring research—unless they happen to be university faculty—will have to make do with the web, their local public library, or the pirate sites. The same holds for citizen scientists, such

as data collectors in ecological studies.<sup>15</sup> And for journalists, civil servants, and social activists.<sup>16</sup>

A corollary of this attitude is the oft-heard remark from professors that only fellow academics are actually interested in reading their output. The implication is that since academics already reach their intended audience, restricting access causes no harm.<sup>17</sup> Before a House of Commons committee, the Royal Society of Chemistry testified that most academics care more about who, than about how many, see their work.<sup>18</sup>

Professor Osborne's words are those of what the Germans call a *Giftzweig*, a venomous ankle biter. Others of this ilk are more harmlessly dreamy and otherworldly. They do not expect a large audience nor seek its accolades. Some point out that academia's specialization renders its output incomprehensible. That was also Osborne's argument. Ridiculous as it may be for ancient history, it rings more plausible for the sciences. Rather than just ejecting would-be readers into the cold, as Osborne did, solutions can be found.

Open access sidesteps the comprehensibility problem by offering up the scholarly coalface in all its impenetrable glory to anyone willing to shoulder a pick.<sup>19</sup> Others propose a concerted effort to make academic content broadly understandable.<sup>20</sup> Still, most such approaches suffer from faux humility, snobbery, or both. Why should authors be entitled to pronounce on the quality of their audience, much less restrict it? At publication, they lose control. Surely, it is up to the public to decide whether to read or not. Those keen to limit their audience to the select should join the Rosicrucians.

Some parts of the scholarly world have solved the access problem, at least for themselves. Fields that disseminate via online preprints, such as computer science, physics, and mathematics, have lost interest in the subscription journals that still issue the final fruits of their labors. Their published articles are interesting mainly to future historians, not today's practitioners. Yet, the journal subscriptions

remain as charges to libraries, hogging resources beyond their value as historical documentation.

Humanities and social science scholars, in turn, present their own problems. That they write books as well as articles is the main issue. Large and intermittent, books are the pig in open access's python. The cost of opening access to books is daunting. Unlike journals, their sales are unpredictable. Even the driest academic book still nurtures faint hopes of royalties. Scientists entertain no such pretensions for their articles. From their start in the seventeenth century, journals have never paid for content.<sup>21</sup> But many humanities scholars fancy themselves independent creators in the Romantic mode. In their minds, they are authors, publishing works as they want, collecting royalties if they can.

Academic freedom is often understood to include scholars' right to publish their findings wherever they please.<sup>22</sup> It includes, say some, "full freedom in publication" or "the freedom to publish research results in venues of the researcher's choosing."<sup>23</sup> Requiring them to publish openly—or in any other particular venue—violates this. The logic is unconvincing. Academic freedom promises unconstrained dissemination of research findings, but not wherever it pleases researchers, only where they can convince the pertinent editors. Naturally, we would all like our books to appear as Borzoi editions from Knopf or Belknap from Harvard, preferably followed by swift and favorable reviews in the *New York Times* and the *TLS*. Alas, those institutions have their own opinions, as do the editors of *Nature* and *Science*. That hardly limits academic freedom.

Editors cannot be compelled to issue any particular work. Academic freedom promises scholars the right to publish if and where they can find a willing venue. Unless they are deliberately boycotted, authors who can persuade no editor have not necessarily had their academic freedom violated. Nor does open access do more than make it a condition of funding that the results be available. Wishing to retain full control, scholars can spurn conditional

research monies. Admittedly, some funders require wholly unrestricted availability of content, a controversial issue we discuss below with Creative Commons licenses.

In any case, requiring access is no more constraining of scholars' freedom than the expectation that they publish in prestigious, high-impact venues. That, too, narrows their choice. Open-access mandates constrain scholars only because the universities' promotion and tenure committees have drunk the prestige Kool-Aid of the high-impact-factor journals. If funders required specific accessible venues, that might be a freedom issue.<sup>24</sup> But so long as they only say, open access wherever you can find it, there is no compulsion. And as the number of open journals grows, offering more choice, any hint of compulsion evaporates.

## Dreaming of Reward

In *Swimming to Cambodia*, his one-person show, Spalding Grey accounts for his time on the set of the movie *The Killing Fields*, where he played a small role. Each time the cast and crew had to be mustered, their poker-faced minders would address them in the Romantic idiom, as in "Will the artistes please line up for the bus." University deans could learn something here. The humanities professoriate, too, longs to be treated as beret-wearing bohemian fops. Paul Fussell once observed that the surest way to humiliate university professors was to address them as "educators," lumping them together with grade school teachers, rather than treating them as high-minded servants of Athena.<sup>25</sup> Their sense of having a calling complicates the humanities professoriate's acceptance of open access, which many regard as a giveaway of the crown jewels. They feel a personal stake in their output beyond its content. And they quietly nourish hopes of writing something that will sell and return royalties.

Other fields also have aspirations beyond mere truth-finding, though not in the Romantic mode. Medical and engineering professors, not to mention chemists and computer scientists, often generate knowledge, breakthroughs, and discoveries with market potential. That has long been true. Alexander Graham Bell did the work behind his supremely valuable 1876 patents for the telephone as a professor at Boston University, but he owned them outright.<sup>26</sup> Fritz Haber won ammonia from the air, creating artificial fertilizer. Although Haber was a professor at the Kaiser Wilhelm Institute in Imperial Germany, he happily sold his rights to corporations, such as BASF. He also worked directly for companies and took out patents in his own name.<sup>27</sup> The University of Wisconsin set up a foundation in 1925 to administer patents resulting from Harry Steenbock's research on vitamin D.<sup>28</sup>

With the postwar flow of funds to universities, accommodations among research, funding, and commercialization followed. That increased in the late twentieth century as government financing diminished and universities sought new income. Initial hesitations that commercialized research threatened to sully the disinterested pursuit of knowledge were assuaged by the fruits promised.<sup>29</sup> Marshaling the computer and medical technologies founded on university research, ecosystems of corporate spin-offs and start-ups haloed around the academic cores. Transferring knowledge beyond the ivy-covered walls has become regularized, with universities themselves taking stakes in companies. Start-up firms in IT, pharmaceuticals, and engineering have opened in the shadows of the research nodes—in Boston's Route 120, Silicon Valley, and all the other Silicon spin-offs—Glens, Shires, Savannahs, Hollars, Fens, Saxonies, and Capes.

Given promising payoffs, US universities have long asserted ownership of patents worked up by their faculty, unlike in Bell's day. Harvard requires faculty and staff using university funds or facilities, including outside monies it administers, to report all inventions. Harvard takes ownership of patentable inventions, although



it grants researchers those that only incidentally use university infrastructure. The university then decides whether to patent and exploit, promising only reasonable efforts to keep inventors involved and informed. Eventual royalties are shared. The inventor receives 35% personally, with another 15% for research, and the rest is divided among department, school, and central administration.<sup>30</sup>

Similarly, the professional schools whose faculty also labor outside the academy have guidelines to ensure a reasonable coexistence. A day per week of salaried outside employment is a rule of thumb, intended for doctors, lawyers, and others who can make serious money consulting or practicing on the side. While regular civil servants in the US may not earn outside their jobs, noncareer employees and presidential appointees can receive up to 15% of their basic pay in additional compensation.<sup>31</sup>

Distance learning has drawn even humanities and social science faculty into the logic of profit-sharing with their universities. A few decades ago, average humanities professors needed little more than chalk and a blackboard to teach. Now, the sizzle of digital technology has seduced them. Online courses require infrastructure, training, and backup, leaving faculty dependent on their institutions' IT offices. Online courses have advantages: larger audiences drawn from anywhere, new pedagogical tools to dazzle and enlighten, and an opportunity to focus on the qualitative aspects of pedagogy (discussions) rather than mere information transfer (lectures). Both faculty and university gain, whether from teaching remotely, asynchronously, and with less repetition, or by profiting from more backsides on seats. But, because teachers of online classes are reliant on university know-how and resources, they have had to concede their exclusive claims to content.<sup>32</sup> The professoriate's inability to project its message unaided has made the medium of transmission as important as the substance.

Yet, in other respects, the humanities professoriate resists the imputation that its output is not wholly its property. The sums

at stake in the occasional bestselling book written by tenured faculty are small. One possible exception is Erich Segal's *Love Story*. That brought him renown and riches but also deep-sixed his academic career when Yale denied him tenure. Isaac Asimov posed the dilemma more starkly. While he was teaching biochemistry at Boston University's medical school, his prolific writing soon undermined his research. Sticking to lecturing only, he was dismissed for having abandoned lab work. He was allowed to keep his title of Associate Professor, and, eventually, BU gave him full professor status, recognizing his literary achievements. Both sides stuck to their guns and found an accommodation.

Who is to say precisely on whose dime such works are produced? When a bestseller is in the professor's field of expertise, the presumption may be that it is part of their salaried work. In other instances, matters are less clear. Bernhard Schlink wrote *The Reader* and other fiction while professing law at the Humboldt University and serving as a judge. Stephen Carter has written mystery novels and conservative cultural criticism as a Yale Law professor. Deborah Harkness writes vampiric Cinderella fantasies for the over-educated while a historian of science at USC. Bruce Holsinger puts out novels while teaching English literature at Virginia. We assume they are doing this in their spare time, those moments when they would otherwise be bicycling through Provence, cooking homemade pasta, listening to opera, or whatever the professoriate does when left to its own devices.

But when the popular works are in the author's field or when they are college textbooks written on company time, the situation changes. Professors would be outraged were their institutions to demand a share. And they would resist the idea of open access for such works as stealing their lottery ticket to possible royalties. The argument that popular books spread enlightenment and that academics perform a public service by getting the word out is

undercut by considering how superior open works would be at the same goal.

Textbooks raise the problem most starkly. Yes, every field needs two or three to assign in introductory courses. But the current state of affairs is indefensible. Publishers issue a huge oversupply of texts. To undercut the second-hand market, the books are sometimes accompanied by websites or other ancillary media that can be accessed only with codes supplied to the initial buyer but not transferable to subsequent users. The books are revised on tight schedules—every two or three years now, no longer four or five.<sup>33</sup> That allows them to remain state of the art. In the sciences, being up to date has some justification. But in the humanities and social sciences, developments worth an undergraduate's attention occur over decades, not years. Again, the publishers' goal is to undermine the secondary market, as supposedly outmoded editions are rendered worthless by new ones.

Add to that the relentless price increases foisted on students who are harnessed by their professors to particular texts in specific editions for their required classes. Economics textbooks can cost over \$300 once stranglehold extras are added, such as codes for homework assignments. Textbook prices have escalated over 1,000% since the 1970s.<sup>34</sup> Their authors whistle all the way to the bank. A Harvard economics professor, Gregory Mankiw, has sold more than two million copies of his *Principles of Economics* (Cengage Learning), pocketing over \$42 million in royalties.<sup>35</sup>

## More Than Reading

Unlike article-driven fields, whose practitioners nurture no illusions of authoring bestsellers or being paid for their writerly efforts, humanities scholars fondly imagine themselves as old-fashioned

creators in the Romantic mold. Paying attention to form, style, and presentation, not just content, they stand on their moral rights more than scientists do. Moral rights protect the authors' claims to be recognized as such, their reputations, and their control over the work's aesthetic aspects. Historians may be among the worst offenders, writing in a field that still has a broader readership than, say, literary theory or analytic philosophy. To judge from the holdings of major US research libraries, history is the subject where most books (58%) are aimed at a general, not a specifically scholarly, audience (36%).<sup>36</sup> Ambitious for a general readership, humanities scholars are often allergic to open access. They regard it as giving their stuff away while also letting just anyone paw through it for their own purposes.

Text mining and topic modeling are big-data analyses of content. Text mining allows tracking of word usage and prevalence of concepts. Google's Ngram is an example.<sup>37</sup> Topic modeling produces conceptual maps, revealing networks and connections to highlight unexpected emphases. Both are examples of "distant reading" (as opposed to the humanities' traditional method of close reading), seeking big patterns in large aggregations of data.<sup>38</sup> Because they leave the text untouched, neither has raised the humanities' hackles. They use works for their factual or other nuggets without changing the original. The same holds for the possibility that the ability to search across texts will decompose them into their constituent parts, whether facts, ideas, assertions, or memes.<sup>39</sup> While this process may disregard the work, it does not change it.

Data mining, in contrast, again divides the humanities from the sciences. Scientists routinely generate massive quantities of data, which they often post along with the resulting articles, allowing others to test their conclusions or use it independently. More than the text that derives from it, the underlying data would seem to belong not just to the scientist who generated it. The data are an ordered version of the external reality under study, thus not

self-evidently the scholar's property. In any case, they must be made available to verify the work.

Humanities scholars, who rely more on qualitative sources, rarely work with data in this sense. As mentioned, legal scholars footnote every assertion. Historians and literary academics reference the sources that ground their claims. Some of those sources are themselves copyrighted and cannot be delivered to new readers. Others are archives open to any who want to consult them. It is hard to know what material analytic philosophers would reference, much less what data they would present. Humanities scholars' research sources are indicated in their footnotes, allowing others to double-check them. But they could rarely provide them as data packages separate from the holdings of the libraries and archives they have consulted. Data mining thus seems largely irrelevant for them.

Yet, a database may be the fruit of endless labor and the result a boon to others. Scientists who thus organize reality, giving colleagues material to work with, deserve credit for that, even beyond their own published results. Here science and the humanities are alike. A historian or literary scholar who establishes an important text or an art scholar who develops a catalogue raisonné serve similar ends. Enormous effort parses variations, explicates obscure passages and vocabulary, presents a definitive text, or tracks down all of an artist's works. Much like databases, such work deserves more credit than is customarily granted.

Nonetheless, data mining is but one aspect of a broader question—whether uses beyond just reading should be permitted of open texts. Entirely unrestricted use of works would include quoting, misquoting, translating, parodying, abbreviating, paraphrasing, plagiarizing, excerpting, reprinting, filming or other media shifting, changing, reading aloud, setting to music, republishing, and indeed republishing under another name. This is the aspect of open access referred to as *libre*, free to use, as opposed to *gratis*, available at no cost.<sup>40</sup> Only the most ardent open-access activist is likely

to countenance all possible uses. But many are willing to grant considerably more than most humanities scholars tolerate.

How much control do authors retain over works once released? Copyright law prohibits many uses without permission: republishing, translating, filming, or excerpting more than short quotations. Reproducing passages or ideas without attribution—plagiarism—is a moral, not a legal, transgression.<sup>41</sup> Only if it goes beyond the limits of fair use does it become actionable. The moral rights granted authors in some nations outlaw other uses, such as changing works, excerpting them at any length, sometimes setting them to music, or parodying them. At their most extreme, some countries, such as France, permit withdrawal, allowing authors to remove a published work from circulation—insofar as that can be accomplished at all.<sup>42</sup>

Humanities scholars have been more eager than scientists to assert moral rights of aesthetic control. In 2002, Creative Commons developed a suite of legal licenses for releasing works to the public. These are, in effect, the open-access equivalents of copyright, allowing authors to make their content available to varying degrees in a legally binding manner. Their great advance is to permit more uses than traditional copyright.

That alone does not address the problem of works that remain protected by copyright. Nor have Creative Commons licenses been uncontroversial. In debates over how to structure open access, a neuralgic point is how much control to guarantee authors. Funding agencies often require, and scientists, on the whole, have accepted, licensing (CC BY) that allows any use so long as new versions credit the authors and note if changes have been made.<sup>43</sup> Others can thus copy and redistribute works in any medium or format; they can remix, transform, edit, translate, and build on them. Such conditions seem in part curiously tailored to specific art forms—popular music—and it is unclear what remixing a book or article would mean, much less mashups.

Humanities scholars find agreeing to such conditions difficult. They may welcome works being read widely, but they are unlikely to be happy with derivative content boiled off them. Transposing works into foreign languages, braille, or audio to make them more available may be good. Many other derivative uses are also unobjectionable, even desirable. But not all. Reprinting an article in an anthology with a specific political slant or commercial ambitions might strike authors as illegitimate. “Building on” a work raises the possibility of plagiarism or unjustified appropriation, even if the original is credited.

Merely indicating that a piece has been changed, without specifying how, while crediting the author, raises the specter of mischaracterizing it.<sup>44</sup> At the extreme, a work on a controversial subject could be selectively edited to suggest a different meaning and then disseminated with the author prominently credited—all while remaining within the confines of CC BY.<sup>45</sup> The anodyne idea that this is not permissible or that moral rights will spare us is unconvincing, especially in Anglo-Saxon nations where moral rights have little purchase.<sup>46</sup>

Meanwhile, CC BY allows anyone to do as they please. Having paid fees for their work to be issued at no cost to users, some authors have been surprised to find it reprinted in for-sale editions—something legally possible under CC BY.<sup>47</sup> The new pay editions compete with the print versions that earn money for the initial open-access publishers, helping offset costs.<sup>48</sup> CC BY allows anyone, including commercial publishers, free rein with works, much as with public domain content. Such largesse would be eliminated by licensing open books as CC BY-NC, forbidding commercial use. Yet, a CC BY-NC license prohibits uses that authors might favor. Such works could not appear in free knowledge databases, such as Wikipedia, nor blogs if either had ever developed commercial uses to help defray the cost of open access.<sup>49</sup>

In nations that grant authors extensive moral rights, including attribution and integrity, how could others be allowed to do what they wish with content, such as changing and repurposing it? But even in more permissive legal regimes and among authors sympathetic to spreading knowledge, misgiving is the likely reaction to wholly unfettered reuse of work.

Examples of legitimate uses often include excerpting whole articles or portions of books—larger amounts than fair use tolerates—for inclusion in course readers/packs or anthologies. While this would seem harmless, it is also trivial when the work is already freely accessible. Course readers are a product of the analog era, spawn of the photocopier. Back then, it was difficult to ask large groups of students to read the same ten pages of a book or an article, even when the materials were held on reserve in libraries and lent for only a few hours at a time. Course packs were the solution to analog scarcity.

Today, a syllabus needs only to indicate the web location and page numbers of an otherwise freely available work. It is a very lazy undergraduate who cannot be bothered to click through to the original work, scrolling to the requisite passage. But even the professoriate finds the concept difficult. In the UK, 38% of journal articles copied under the licensing allowed for course material apparently come from content that is, in fact, already freely available.<sup>50</sup> Anthologies are similar. They, too, continue outmoded analog thinking from a time when articles could usefully be collected, united around a common theme in a new volume. A list of the relevant web addresses suffices to achieve the same effect today. For a generation that streams its music from cloud servers, why reproduce freely available content in yet another format?

Insofar as they agree to use of their works, humanities scholars generally insist that licenses forbid derivatives (CC BY-ND) and sometimes commercial use, too (CC BY-NC-ND). They also face the problem of third-party content. A scientist typically generates data



directly from the coalface, trampling on no other rights, so long as they respect the protocols for experimenting on humans and animals. In contrast, humanities scholars' "data" typically consist of quotations or references to others' works, often with their own copyrights.

Such third-party rights are particularly thorny for art historians, historians of dance, and musicologists, among others.<sup>51</sup> If they buy reproduction rights to artworks discussed, they cannot promise future users of their text the same. Worse, since licensing fees vary depending on anticipated uses (print run of a book), open editions, with their unpredictable and potentially limitless readers, are hard to price. Open editions of books with illustrations often have blank spaces instead, with supremely unhelpful notes suggesting that the original edition be consulted. Literary scholars reliant on extensive quotation suffer similar problems, while historians can better make do with paraphrases or work with materials more likely to be in the public domain. Overall, humanities scholars are rarely masters of their "data" in the same way as scientists.

The insistence by gold open-access advocates on CC BY licensing also sticks in the craw of developing nations.<sup>52</sup> Allowing commercial reuse of content permits the dominant scientific publishers to scoop up, repackage, and sell content otherwise made freely available in the South.<sup>53</sup> Latin American universities have long paid the cost of diamond journals, allowing scholars anywhere to read. A fifth of their articles come from Northern scholars, but are published at the South's expense. If gold initiatives in the North were to set the standard everywhere, developing nations would suffer most.<sup>54</sup>

## The Perils of Prestige

Academic prestige also complicates any move to open access. Prestige is the currency of the scholarly realm. Money is important but

less crucial than elsewhere. Prestige, salary, and research funding go hand in hand. The material rewards scholars can win are sufficiently lackluster that they are not the primary motive. The most successful ones are paid upper-middle-class salaries. They can earn well into the bottom half of six figures, although varying widely by specialization. Yet, nothing here will excite a lawyer or doctor, much less any finance or business person.

Instead, scholars seek to be celebrated for their discoveries and insights. They covet the respect of their peers, though they do not spurn the trappings of worldly success if proffered—to pen an op-ed piece, appear as a talking head, lecture, or consult. Nor will they refuse an award, a gong, or other honor dangling from a ribbon, pinned to a lapel, suitable for framing, or perfect for a mantelpiece. That respect goes hand in hand with decent salaries and professional success is a given, but money is the least of it. Renown is what scholars strive for. Hence the attribution right is the core of their demands, that authors be named when their work is used. “Citing is paying,” as David Nimmer puts it.<sup>55</sup>

Scholars’ discoveries, knowledge, and talents can be parlayed into success in other fields. Investment banks snap up quants with math and physics PhDs. Some may be sought for political advice. But on the whole, the validation scholars aspire to is quite hermetically limited to their own world. Not for nothing is it the ivory tower. So self-referential is academia that too much success in other realms risks ostracization. A large readership or audience stokes suspicions of pandering. Worldly profit or attention and the pursuit of truth align only mistrustfully. Not long ago, publishing with commercial presses threatened budding academic careers. In the early 1980s, Thomas Kuhn, the revered philosopher of science, cautioned Sherry Turkle, then his junior colleague at MIT, that a second book with Simon & Schuster would put a pox on her hopes of tenure.<sup>56</sup>

Prestige is won by selectivity and exclusivity. The most discerning journals and publishers are the most respected. Hotly sought after

are those rejecting most manuscripts, whose editorial standards are the hardest to meet, whose pages, the most difficult to breach. The more authors aspire to contribute to a journal, the more it limits the input it publishes, the more selective it is. Prestige is scarcity rewarded. It reverses the logic of Yogi Berra's quip: Nobody goes there anymore, it's too crowded.

Prestige must be patiently earned, not just stamped out of the ground. The publishing establishment is a tough nut to crack. Its product's unsubstitutability protects it from competition. As does the slow accretion of prestige and other signs of academic worth. A rival cannot just set up shop to offer better or cheaper products. The barriers to entry are imposing. The field is moderately concentrated. Its products are unique and the venue where they appear itself enhances their luster. Moreover, suppliers (scholars) are in a weak bargaining position, needing to sell and eager to land with the most prestigious disseminators.

Nor are the consumers (libraries and readers) negotiating from strength. They must buy most of what is on offer and cannot bargain. Worse, they are at odds—the readers are price-insensitive, while the libraries' budgets are strained by rising costs.<sup>57</sup> In theory, digitality should allow new journals to issue cheaply and efficiently, and many do. But the barriers to competitiveness at the food chain's apex impede a liquid market. To start with, newcomer journals have to convince the indexing services to include them so that their articles appear on consumers' radars. While digitality has disrupted other industries, it has served to reinforce inherited positions in academic publishing.

Prestige and quality are correlated, but not invariably. As a relational good, prestige is zero-sum. Only a few journals or publishers can occupy its pinnacle simultaneously. But nothing prevents many from being good in the sense of high quality.<sup>58</sup> Nor does prestige necessarily guarantee quality. Prestige is taken as a proxy for quality by departments deciding on hires, tenures, and promotions and

funding agencies distributing their largesse.<sup>59</sup> Busy scholars seeking a steer on what to read opt first for works from renowned presses.

The most prestigious venues receive the most submissions. At the extreme, one could imagine the top publisher receiving every manuscript completed each year, aspiringly submitted to it first. Yet, some sense of self-selection convinces hopeful authors that they waste their time waiting for the detour via a rejection letter from their top choice. Nonetheless, having to wade through more submissions, the most desirable presses face the steepest selection tasks. Prestigious journals incur costs as they staff up to vet manuscripts.

High-status periodicals can charge hefty subscriptions and publishing fees. But for books, if anything, prices are inversely correlated to prestige. The bigger the names of authors publishing with the most prestigious presses, the lower a book's price. The more obscure the press, the higher the price. A Palgrave book invariably costs more than one from Princeton. Oxford and Cambridge are perhaps exceptions to this rule. Their scholarly monographs are priced significantly above—easily double—their US university press competition. In effect, they gouge the captive research library market. In return, they deliver profits to their host universities, while the American outfits require subsidies. Since 80% of UK print monograph sales are abroad, foreign libraries help keep Oxbridge afloat.<sup>60</sup>

Unlike books, journals do not enter the market with each publication. Their prices are locked in for years, with little ability to fluctuate with demand. Also, it is only with books that digital publishing's cost savings have been reaped. While digital journal prices have been steadily ratcheting up, e-books sell for less than their paper counterparts. In 2007, at their launch, when Jeff Bezos announced that Kindle editions of bestsellers would go for \$9.99, he shocked conventional publishers with the realization that he was benchmarking prices down.<sup>61</sup> Add in self-published volumes, and the book market's reverse movement compared to journals becomes even starker—at least for works other than scholarly monographs.

For books, another consequence of the prestige arms race is the role of literary agents. As of the 1990s, authors in the Anglophone world could no longer approach trade book publishers unaccompanied by an agent.<sup>62</sup> That is less true for university presses. Trade houses are not necessarily those that scholars favor, though they have gained a certain caché in recent decades—largely for their more generous advances, publicity, and distribution. Against this speaks that they work largely without the imprimatur of peer review, sometimes publishing books no scholarly press would touch. Their printed volumes are often mediocre specimens—with miserly margins, shoddy paper, and flimsy bindings.

Acquisitions at trade houses are handled by staff with little expertise in their books' subjects. They work from 20- or 30-page proposals, not the manuscript, nor even sample chapters. The author's previous sales history and the market potential of the current project are among their primary considerations. Trade publishers, approached by scholars and freelancers alike, stagger under more submissions than university presses. Agents have become the first line of defense, running interference for the in-house staff.

All readers will have had the experience of being disappointed by books from first-rank presses despite their sizzling blurbs. Less frequent than such false positives are the works that surprise even their editors by taking off like rockets or achieving widely cited classic status—the false negatives. Fiction sees this often, since subjective taste bears heavily on decisions, and peer review plays no role. J. K. Rowling's *Harry Potter* books, rejected by several publishers, ultimately made the fortunes of then-fledgling Bloomsbury. Hedging its bets, the press had paid Rowling a £1,000 advance, printing five hundred copies.<sup>63</sup> *Shuggie Bain*, Douglas Stuart's Booker-winning novel about growing up poor in Glasgow, was rejected by 32 houses before Picador took it up.

Some of the most influential social science books were published by lesser-ranked presses lucky enough to spot a gem. Norbert Elias's

*The Civilizing Process* was originally issued by a now-defunct press in Basel. Among the LSE's list of most cited and influential social science works, Gert Hofstede's *Culture's Consequences* was published by SAGE, Erving Goffman's *The Presentation of Self in Everyday Life* by the University of Edinburgh's Social Sciences Research Centre, and Richard Lazarus and Susan Folkman's *Stress, Appraisal, and Coping* by Springer, which is a prominent publisher of journals but no one's first choice for a book.<sup>64</sup> Alfred Crosby's *The Columbian Exchange* was issued by Greenwood, the English-language edition of Ulrich Beck's *Risk Society* by SAGE, and Richard E. Nisbett and Dov Cohen's widely cited *Honor Society* by Routledge. Having been rejected by Columbia, Princeton, and other presses, Raul Hilberg's monumental *Destruction of the European Jews* finally found an outlet with Quadrangle.

On the whole, size and prestige are inversely correlated. The smallest press imaginable—proud outlet of one book—is not necessarily the most prestigious. Yet, the mill that churns out thousands annually will shine dimmer than a publisher whose several dozen volumes spill into the bookstores glossy with meticulous curation, editing, and marketing.<sup>65</sup> Prestige is also a quality earned by a track record. The older the press or journal, the more likely it is to have won its spurs. Because age and prestige go hand in hand, open journals will take time to build up patina. Many of the most respected science periodicals remain subscription-based. *Nature* and *Science* are still among the most tensile jumping-off points for career advancement. Open journals face a hard slog against such established competitors. That would be true for any newcomer journal no matter how it paid the bills. Open-access presses sometimes marshal prestigious editorial boards to compensate for their lack of accreted gravitas.<sup>66</sup>

But open-access competitors face additional hurdles. With an author-pays model, they are incentivized to accept as many

submissions as possible without undermining the brand. In China, where even subscription journals often levy publication fees, some publish up to 36 issues annually, with dozens or even hundreds of articles in each.<sup>67</sup> Certain gold periodicals have fought battles with their editorial boards when they resisted demands to accept more and worse submissions.<sup>68</sup> Conversely, the more prestigious and selective journals justify higher fees because of their heightened sorting obligations and to compensate for their lower throughput.

As discussed below, so-called “predatory” journals accept almost everything that crosses the transom, collecting the fees. The most selective conventional journals reject 95% of manuscripts submitted. *PLOS Medicine*, one of the most prestigious open journals in its field, accepts only 15% of submissions.<sup>69</sup> To build prestige, such serials must keep rejection rates high. That, in turn, requires high publication fees to pay for the winnowing, which impedes would-be authors. Many open journals therefore rely on support from parent institutions or other sources. They sometimes cross-subsidize from less-discriminating affiliated journals where acceptance rates are kept high to reap publication fees for use elsewhere. *PLOS One*, for example, is treated as a cash cow, accepting 70% of submissions. Its publication charges (ca. \$1,350) underwrite fellow PLOS journals.<sup>70</sup> Other journals have followed this example, including *Scientific Reports*, *BMJ Open*, and *PeerJ*.

Striving for prestige, humanities and social science scholars are blinded to how they effectively extinguish their books by sticking with traditional publishers. To issue an academic monograph with a conventional university press or one of the commercial scholarly houses often means dropping your work into a black hole. The only readers who will see it are those who can afford the three-figure price of a Routledge or Oxford University Press book or who enjoy lending privileges at major research libraries. Monograph publication is effectively privatization. Here are some examples of Oxford

works that no one other than research libraries will buy. From the reading public's vantage, these books might as well have been buried in their authors' back gardens.

W. E. Vaughan, *Ireland Under the Union, I: 1801–1870*, \$480.00

N. G. L. Hammond and F. W. Walbank, *A History of Macedonia*, v. 3, \$440.00

W. Bernard Carlson, *Technology in World History*, \$400.00

Edward M. Spiers and Jeremy A. Crang, *A Military History of Scotland*, \$250.00

Stuart Carroll, *Blood and Violence in Early Modern France*, \$213.00

Prestige's hammerlock also has wider pernicious effects on the scholarly world. Academia outsources what should be one of its primary tasks to publishers. Publication by the most prestigious houses is considered a proxy for quality. When hiring, tenuring, promoting, or allocating funds, academia relies on publishers' pronouncement of worth. Where content is published matters more than it should. Publishers become part of academia's credentialing process.<sup>71</sup> It is not uncommon for tenure to be granted once a book is accepted by a well-regarded press.<sup>72</sup> Articles forthcoming in the most renowned journals play a similar role. The trend for dissertations to become collections of published articles shifts the evaluation function from faculty-as-teachers to faculty-as-peer-reviewers. The same people do the same work, but journals now effectively credential PhDs, not the universities.

For journals, rejection rates give some sense of their exclusivity, but no comparable data exist for book publishers. Their metric of prestige is an anecdotal pastiche of other authors in the stable and how well their works have been reviewed and sold. Academic presses often specialize, upping the ante for books in their fields—Princeton for economic history, MIT for linguistics and architecture, Oxford for philosophy, Duke and Texas for South America,



Minnesota for literary theory, Hopkins for the history of medicine, and so forth.<sup>73</sup>

When dissemination was difficult and expensive, it may have made sense to incorporate publishers into the credentialing process. With resources at stake, theirs was the decision to publish or not. And as their reputations were built up by a track record of consistent choices, perhaps there was some logic to making the press a proxy for quality. But once dissemination has become the least of it, once works can be posted on the web and read by anyone, the issue shifts from getting it out to getting it noticed. Evaluation, not publication, becomes the goal, as is discussed in Chapter 9.<sup>74</sup>

The irony is that the vetting undertaken by publishers is done by scholars anyway. Rather than organizing evaluation on its own, academia allows publishers to enlist its own members and then accepts the results unquestioningly.

Pursuing prestige may itself also distort the truth value of the most sought-after content. The winner's curse is a concept economists use to analyze auctions where the value of what is bid for is unclear. Bidders who expect oil reserves to be plentiful—likely overestimating them—are motivated to go highest and overpay. Analogously, journals keen to publish articles making the most striking, novel, or unexpected claims—whose results are least likely to withstand future scrutiny without regression toward the mean—are most likely to issue corrections and errata notices.<sup>75</sup> Selectivity and its attendant prestige do not invariably lead to quality.<sup>76</sup>

## Peer Review

Peer review is scholarly publishing's gold standard. Scientific presses submit works to experts who write reports recommending publication or not. Even thumbs up, they often suggest extensive revision. If and when their concerns are met, publication follows. Books and

articles are often significantly altered and—one hopes—improved in the process. Some do not make the cut at all. They either wander off to other presses or journals with different criteria or back into the author's bottom drawer.

Publishers have normally organized, but not directly paid for, peer review. Needing its imprimatur to accept manuscripts, they keep a Rolodex of scholars to call on for their specialty. Publishers are right to point out that peer review has to be organized and administered even when staffed by volunteers. Vetting submissions takes time and effort. Scholars and their universities are bad at recognizing the implicit costs of labor time, which they regard as sunk and therefore negligible.<sup>77</sup>

Yet, publishers bear few of the true costs of peer review. The scientific dissemination industry employs 125,000 editors who maintain a network of 2.5 million reviewers.<sup>78</sup> In 2016, they undertook some 14 million evaluations to publish 2.9 million articles.<sup>79</sup> Reviewers work largely for free. For journal articles, they normally receive nothing. For books, they are customarily offered \$100 or \$200 in cash, or sometimes double that amount in books from the publisher's list. The workload varies, but even a cursory book report clocks in far below minimum wage if calculated as an hourly fee. The collective value of peer reviewers' work has been estimated at £200 million in the UK alone and £1.9 billion globally, 23% of total publishing costs.<sup>80</sup> That works out to some \$250 annually for each of the world's scientists or each manuscript reviewed, depending on who does the calculation—perhaps not an unreasonable contribution to the cause.<sup>81</sup>

But are publishers the best venue for peer review? It's hard to see why. First and foremost, some of the most prestigious outlets undertake none. The content of the most venerable US law reviews is selected by the drones of the legal world, students. They often judge the work of faculty who grade them and recommend them, or not, for their first positions. Hardly a recipe for disinterested expert evaluation.

Nor do trade presses undertake much peer review. They decide to publish based on anticipated sales. Whether the arguments made are convincing or well-grounded is less pressing. Publication may be agreed upon without expert blessing. Worth noting, too, is how fluid distinctions among publishers are. University presses publish not just scholarly monographs but also trade books on light and popular subjects. Conversely, some trade houses publish works with intellectual heft, though mainly those with a broader appeal, too. Some compete prestige-wise on equal footing with the major university presses: Norton, Basic, and the Free Press in the US. In addition there are the commercial scholarly presses, which feed on the second and third tiers of manuscripts to supply research libraries with expensive works: Palgrave Macmillan, Blackwell's, Routledge, Duckworth, Bloomsbury, Polity, and the like.

That is the Anglophone world. Without a long-established university press system, European scholarly publishing happens in commercial houses specializing in serious nonfiction. Publishers here tend to keep decision-making in house. Peer review is a fairly novel Anglo-Saxon import. Austrian publishers (admittedly a hard-scrabble lot faced with their larger and glossier German competitors) scarcely have peer review.<sup>82</sup> The French lack even a word for the process.<sup>83</sup> Sometimes European publishers are advised by scholarly editors or boards, acting, in effect, as outsider readers. Editors at such presses may have advanced degrees in the fields where they judge manuscripts, but they are rarely practicing specialists.

In Germany and the Netherlands, presses such as Springer, De Gruyter, C.H. Beck, Vandenhoeck & Ruprecht, Campus, and Brill are commercial scholarly presses. They have long plowed the same furrow as the new university presses that have recently sprung up: Amsterdam University Press, Central European University Press, and so forth. Despite its name, PUF (Presses universitaires de France) was not a university press but a commercial issuer of serious nonfiction.

Such diversity of venue affects peer review. For the university world to allocate its resources based on books from Farrar, Straus and Giroux, Knopf, Penguin, or other trade houses means—not to put too fine a point on it—to accept evaluations by agents and editors with no more than undergraduate training in vaguely related fields, whose foremost concern is sales potential. While peer-reviewed publishers may supply useful proxy evaluations of scholarly merit, trade houses do not.

Even where a university press or scientific publisher organizes peer review, it does not necessarily tap into the best advice. Specialized journals with editorial boards of experts are adept at sending manuscripts to the most pertinent evaluators. But will the in-house editors at university presses, who are not themselves specialists, know whom to ask? And will they reliably convince the best experts to promptly read and report on 600-page manuscripts in exchange for \$200 worth of press books (one or two volumes at current list prices)? The hotter the topic, the better-known the major figures in the field, the less likely a manuscript is to get a reading from them. Other scholars are also capable of careful evaluation. Indeed, often the academics at lesser institutions with greater teaching responsibilities and fewer ambitions to publish are most conversant in their fields, most up to date in the literature, and best able to judge new works. They could play invaluable roles. But are they the ones familiar to harried editors in New York, Berkeley, Madison, or either of the Cambridges?

Even when it is well organized, peer review has faults.<sup>84</sup> Does anyone still quaintly believe that it ranks works based on their correspondence to some external reality?<sup>85</sup> The autobiographical reflections on slavery by Joel Williamson in the *Journal of American History* jolted the complacency of assuming peer review to be objective. With the author's agreement, the six referees' reports were published, too. The four reviews from White historians recommended publication, while the two Blacks rejected it.<sup>86</sup> Every

reader has favorite examples of shoddy work that passed muster. Though harder to quantify, excellent pieces have doubtless also been rejected by peer reviewers.<sup>87</sup> Even work that eventually went on to win a Nobel prize has been spurned at first.<sup>88</sup>

Trusting peer review means being guided by the opinions of two—max three—scholars who pronounce the work fit for consumption. That is not nothing. Nor is it a guarantee of much. Depending on how peer review is structured (blind or not), decisions may be influenced by the prestige of the authors' home institutions or other irrelevant factors. Editors aiming to publish a manuscript, or not, can select reviewers to achieve their goal.<sup>89</sup> New techniques have sought to avoid such problems. Without much success, some scientific journals have opened up the process to a broader pool of reviewers. Others, however, claim better results. Since authors fear being widely shamed, public peer review may discourage them from submitting low-quality work.<sup>90</sup>

Either way, when their submission is rejected, authors generally ignore an initial slight and move on to other journals or presses until they find one willing to recognize their merits. Most economics papers are submitted between three and six times before finding a home.<sup>91</sup> Peer review imposes costs and soaks up time, sometimes needlessly. If an initially rejected article is repeatedly resubmitted en route to its eventual resting place, efforts are duplicated and resources wasted. Multiple, repetitive peer review consumes up to 15 million hours annually.<sup>92</sup>

It would be better to evaluate work once, with competing outlets then vying to publish it. Something like this is already in place among the mega-journals, large aggregations of open content that we return to in Chapter 8. They avoid needless duplication of review by pooling efforts, producing cascading evaluations. Reviews are done once, with the work then resubmitted until it finds its proper niche in the publication hierarchy. The mega-journals have also instituted portable reviews that can be taken along until a

welcoming venue is identified.<sup>93</sup> Publishers even cooperate on sharing evaluations.<sup>94</sup>

In effect, mega-journals allow publishers to capture the output and (more modest) publishing charges for submissions rejected by their prestigious flagship organs.<sup>95</sup> *PLOS One* receives manuscripts rejected by the other PLOS titles. Authors submitting to BMJ journals can have their manuscript automatically considered by *BMJ Open* if it is not accepted by their first choice.<sup>96</sup> What does not make it into (the highly selective conventional subscription journal) *Nature* may instead appear in (the open access) *Nature Communications* or, if not that, its mega-journal, *Scientific Reports*. At the very least, such one-off assessment helps solve peer reviewer burn-out, curtailing repetitive efforts.<sup>97</sup>

Peer review suffers other problems, too. There is no need to rehearse the debate over whether it works at all. The alleged crisis of scientific reproducibility is part of this. Unreplicable work should be spottable by functioning peer review—though how, short of re-running experiments, is unclear. Such weaknesses are not specific to open access. They affect subscription journals just as much and plague all scientific evaluation. Peer review's critics are harsher than it deserves. Yes, work is evaluated within a preexisting conceptual framework. Truly revolutionary accomplishments are unmeasurable by the inherited standards they reject.<sup>98</sup> Dialogue across Kuhnian paradigm shifts is impossible. Some researchers appreciate preprint depositories precisely for their lack of peer review, which tends to reward conventional wisdom.<sup>99</sup> Yet, like all skeptical positions, the grain of truth in such arguments is undermined by the irrelevance of the corner they maneuver their adherents into. If true, despair is the only plausible reaction.

The practical advice offered by peer-review skeptics dodges the fundamental problem. Let us say that, thanks to such criticism, resources are apportioned according to new criteria, not the self-referential and socially exclusive ones that existing peer review

solidifies. Instead, publication is decided by soundness, adequacy, capacity, or the like in ways that undermine the current system's Matthew effect and bring more scholars into the fold. Even so, the basic problem persists: which among the thousands of works should readers take up first? If evaluation does not occur before publication, it will have to come after. But since there is more content than mortals can ever consume, judgment cannot be dodged. Even if we lived forever, we could not read everything.

## Metrics

Recognizing the interrelated problems of peer review and the prestige hierarchy has spawned attempts at solutions. One is to quantify postpublication review, searching for metrics that indicate if not merit outright, then at least some other desirable quality: readership, citations, or—more nebulously—impact. For fields like biomedicine that publish countless articles, quantification promises relief. The brute amount of each scholar's output is the easiest indicator, but it is also crude, almost meaningless, except as a measure of diligence. The Journal Impact Factor (JIF), compiled by Thomson Reuters starting in 1964, was originally intended to guide librarians seeking the most-read periodicals, not to be a measure of their value. But citation density was quickly confused with quality, and the result put a premium on journals that were often referred to. Libraries knew they had to have those, and were willing to pay the going rate.

Quantifying citations allowed evaluators to skip reading colleagues' works by delivering a number that supposedly indicated their influence. Although it was an improvement on just counting articles, totting up citations still raised problems.<sup>100</sup> The system could be gamed. Institutions stuffed with clever people in fierce pursuit of choice morsels can expect to be hotbeds of manipulation.<sup>101</sup>

Universities themselves fiddle the metrics by which they are ranked; why not their faculty? Once a particular indicator has been announced as the measure of quality, it quickly becomes the goal all strive for. If citation intensity is the gold standard, then everyone will seek to maximize citations, all else be damned.

Editors encourage authors to submit, thus inflating their journal's rejection rate and prestige, much as universities bask in the glow of the many applicants they spurn.<sup>102</sup> Some journals stoop to heavily suggesting that authors cite other articles published in their venue, thus inflating their impact factor.<sup>103</sup> Self-citation, automated citation, log-rolling mutual citation, review articles that themselves are oft-cited as they free-ride on others' work—all are means of artificially inflating references to an author's work. Some fields practice self-citation more prolifically than others—engineering at twice the rate of medicine and the life sciences.<sup>104</sup>

Didier Raoult, an off-piste French microbiologist notorious for promoting hydroxychloroquine as a remedy for Covid, touts an h-index inflated by 25% through reference to his own work.<sup>105</sup> But that is just bush-league self-promotion. At least 250 scientists have received over 50% of their citations either from themselves or coauthors. One researcher can thank this method for 94% of his citations: Sundarapandian Vaidyanathan, a computer scientist at the Vel Tech R&D Institute of Technology in Chennai.<sup>106</sup> Why do they bother? Whether h-index or journal impact factor, the algorithms have long since been tuned to filter out self-citation.

Citation intensity measures whether a work has been referenced elsewhere. Why it is cited is ignored—whether as log-rolling by others, whether in review works surveying the field without adding to it, or whether to refute its deficient ideas. A much-cited work has not necessarily had a positive or profound influence. Citation frequency increases with the number of coauthors, each marshaling a cluster of colleagues, coworkers, friends, and other potential citers.<sup>107</sup> The more works an article cites, the more likely it is to be



referenced in return by those who now owe it a favor in academia's gift-exchange economy. Some disciplines, such as medicine, often begin an article with a comprehensive overview of the field, citing the literature in a way foreign to the humanities and social sciences.<sup>108</sup>

And, as noted, citation density says less about the quality of work than the publicity it has generated, possibly its notoriety. Citation intensity measures attention more than quality. A mediocre article on a hot topic will be more cited than an excellent one on a theme of less pulsating interest.<sup>109</sup> Obscurity is punished, pandering rewarded. Attention and quality are not the same.

Some quantitative measures, like impact factors, pertain to journals, not their articles. Treating them as a proxy for the quality of articles merely reproduces on a smaller scale the same problem of the parasol of prestige that a renowned press unfolds over even its mediocre volumes.<sup>110</sup> And in any case, some metrics vary so widely across fields as to be meaningless except within them. Impact factors for top-rated mathematics journals are one-tenth of cell biology.<sup>111</sup> The citation rate is eight times as high in medicine as in law or the humanities.<sup>112</sup>

Alternative metrics (altmetrics) try to sidestep such problems by aiming beyond the journal to quantify article-level measures, using factors other than citations.<sup>113</sup> They track interest in the work and its qualities, refusing to accept the publication outlet as a meaningful proxy. Some measure immediate usage, as downloads or page views, rather than waiting for eventual citations.<sup>114</sup> Others analyze social media and venues other than journals to gauge the broader impact of abstruse research.<sup>115</sup>

Besides altmetrics, the antidote—so far very partial—has been to encourage evaluators to ignore shorthand indicators of prestige, seeking instead to determine quality independently. The Bethesda Statement insisted that a work's intrinsic merit was what counted, not where it appeared.<sup>116</sup> The San Francisco Declaration on Research

Assessment (DORA) from 2012 is the most prominent attempt to follow this lead. It commits signatory institutions to assess the quality of research on its own merits, not those of its venue.<sup>117</sup> Some universities, such as Utrecht, have followed this lead, explicitly doing away with impact factors in hiring and promotion.<sup>118</sup> Most major Western universities no longer consider numerical impact factors when hiring. Instead, they ask candidates to submit their five best articles, which are then read and evaluated.

But the problem extends beyond open access to a larger question thrown up as dissemination democratizes: How can we ensure that the best work in a swelling wave of content is recognized independently of the conventional signals of prestige? Some fields' hyper-publication habits impede hopes of qualitatively evaluating output. Specialization forces researchers who feel unqualified pronouncing outside their turf to rely on others' opinions, ideally quantified and easily digestible. Bias and prejudice can easily sneak back in. The qualitative assessments urged by DORA are, in principle, no different from the peer reviews performed for journals and publishers.<sup>119</sup> Why should they be better in one instance than another?

The university world's thralldom to the prestige hierarchy of the established publishing venues impedes open access. New presses and periodicals face an uphill battle for recognition. Even new conventional outlets would confront similar issues. Tackling the prestige dilemma is not specific to open access, but it has become especially acute as digitality promises to change the nature of dissemination.

## **Faux Open Access**

The interface between analog and digital media is not the only source of friction. By itself, open access has also created problems. The gold version has partly misaligned the incentives. It flips the

inherited business model on its ear. Libraries had been the main customers. Now authors are. Content suppliers and customers are identical in the new model—authors, supported by their funding agencies.

In the developed world, authors are largely price-insensitive—at least the scientists. Earlier, librarians paid for subscriptions to journals and bought books whose quality they judged and whose usefulness they could monitor by tracking circulation. They were part of overall quality control. With gold open access, that watchful eye has now clouded. Authors are willing to ask funders to pay the going rate for the most prestigious journals, and, as individual buyers, they have little collective bargaining power.<sup>120</sup>

True, funding agencies may come to play a moderating role similar to the one librarians once had. They have little interest in a journal's reputation so long as the work is read. Their concerns may set an upper limit to exorbitant charges. If so, that effect has yet to kick in.<sup>121</sup> But if it does, funders will be in a better position to negotiate than libraries since there are fewer of them. On the other hand, the cost of journals is a much smaller percentage of funders' budgets (1% or 2%) than libraries' (20%), which may inure them to high charges.<sup>122</sup>

Either way, having authors as the primary customers for gold content, no longer readers and libraries, may tempt publishers to lower quality and to maximize output. Authors and publishers are united in a vicious collusive circle.<sup>123</sup> Authors are keen to force-feed the dissemination channels, and the presses happy to oblige if paid. The system has no inherent brakes or controls other than scholarly shame, perhaps. At its worst, it generates intellectual moral hazard, with publishers printing all the content they can charge for while authors aim to place all they churn out.

What are sometimes called predatory journals reveal this spiraling logic at its most expansionary. Predatory journals are low-prestige gold periodicals. At their worst, they print anything sent to them, sometimes obvious rubbish submitted by muckrakers

seeking to expose the scam. A paper consisting only of the repeated phrase “Take me off your fucking mailing list” was apparently accepted by the *International Journal of Advanced Computer Technology* in 2014, but it was not published when the authors failed to pay the charge.<sup>124</sup> *MAD* magazine used to mock the *New York Times*’ venerable slogan with a variant, “All the News that Fits.” In the digital age, everything fits. Yet another article generates only few additional costs even as a new publication charge is rung up. Some online journals are therefore open-ended size-wise. Format obesity ensues, and gargantuan journals waddle the digital landscape. Yet, just because big does not mean they are bad.

Lapses in quality control are not new, nor are they created by digitality or open access. Indeed, whether a slip has occurred is sometimes unclear. Parody would be impossible without texts pretending to be straightforward while actually blustering. Jonathan Swift’s anonymous *A Modest Proposal* (1729), suggesting the sale of poor Irish children as food for rich Englishmen, was recognizably ironic. But Daniel Defoe got into trouble in 1702 for his *The Shortest Way with the Dissenters*, which proposed their execution or exile. Too subtle, his satirical intent was taken straight by readers, and he landed in the stocks for sedition.<sup>125</sup>

*Angry Penguins* was an Australian modernist literary periodical. In 1944 it eagerly published a nonsensical pastiche of words submitted as poems by a nonexistent author, Ern Malley, and it was eventually exposed to general ridicule.<sup>126</sup> In 1996, Alan Sokal, a physics professor, managed to place a rubbish submission, arguing the socially constructed quality of nature’s fundamental laws, in *Social Text*, a postmodern cultural studies journal.<sup>127</sup> In fields like computer science, generating plausible nonsense has been automated.<sup>128</sup> Thanks to such labor-saving inventions, Ike Antkare, a nonexistent figment of a devilish imagination, was the most-cited computer scientist in Google Scholar around 2010 and the 21st highest cited in any field.<sup>129</sup> Whatever the reputational consequences of publishing

nonsense, in the analog era, each worthless work occupied space that could have been better used. But gold access has lit the fires of self-interest under publishers to cash in and put out.

Gold access tempts to mischief. Predatory publishers solicit submissions, especially from graduate students, junior faculty, and scholars from poorer institutions and nations who may not know better. They accept them with little fuss and even less peer review or other editorial interference, cash in the charges, and slap up the results on a website. While at it, they run entire stables of journals. Academic predation has become big business. OMICS, one of the worst offenders—incorporated in Nevada but operating out of Hyderabad—“publishes” some 700 journals. Of the 69,000 manuscripts submitted to them between 2011 and 2017, only about half were peer-reviewed. The journals generated their own impact scores, and many of their allegedly associated experts had never even been asked if they wanted to participate. In 2019, the publisher was fined over \$50 million in the US for deceptive practices.<sup>130</sup>

Yet, what distinguishes a truly predatory journal, intent on deceit, from a run-of-the-mill journal positioned low on the academic food chain? Not everyone can be *Nature* or *Science* or the *Proceedings of the Royal Society*. Insofar as predatory journals are remiss in imposing much quality control, they are more like digital repositories than conventional journals. That is not in itself a sin, though pretending to arrange and charging for nonexistent peer review is indisputably fraudulent. In 2008, Jeffrey Beall began compiling a list of journals classified as predatory. To recognize these supposedly rotten apples, he identified suspicious features: lacking an editorial board or sharing one with other journals from the same publisher, being issued by houses that ran large stables of similar journals, lacking procedures for archiving, skimping on peer review, and accepting many submissions, sometimes all.<sup>131</sup>

In 2017, Beall’s List included almost 1,300 journals.<sup>132</sup> Some studies have identified 8,000 such periodicals, others 10,000.<sup>133</sup> By

comparison, Thomson Reuters's Web of Science, among the most prestigious listings, indexed 9,300 journals in 2018.<sup>134</sup> How do such lists distinguish the predatory from the merely mediocre? Toward the bottom of the pile, even otherwise well-intentioned journals may assume some of Beall's characteristics. Yet, many supposedly predatory periodicals function well and, in any case, indistinguishably from their more conventional peers. One survey of Third World scholars who had published in supposedly predatory periodicals revealed that less than one-fifth found the journals' standards of peer review poor or nonexistent, and 70% had gotten good feedback. Most of the scholars were attracted by the journals' speed of delivery and low cost.<sup>135</sup>

How can predatory journals publish so much? One study in 2014 identified 8,000 such journals publishing some 420,000 articles. By comparison, Web of Science periodicals issued 1.85 million articles in 2018.<sup>136</sup> In the developed world, predatory publishers are often seen as motivated by ill will and greed, while their authors fall for the ruse out of ignorance. "The fact that so many of these 'journals' exist and publish so many articles is a testament to either the startling credulity or the distressing dishonesty of scholars and scientists the world over—or, perhaps, both," remarks one observer.<sup>137</sup> However comforting it is to find a villain, such conclusions gloss over how the problem is amplified, if not created, by First World publishers, both conventional and open access.

Predatory journals respond to broader problems. Some spring from difficulties Global South scholars face in accessing First World journals. These authors publish more often in open-access periodicals than their developed-world peers.<sup>138</sup> And they often contribute to mega-journals, with their less-burdensome review process and cheaper fees. Chinese scholars are coauthors in up to 40% of articles in *Medicine*, *AIP Advances*, and *Scientific Reports*. Mainland and Taiwanese authors proliferated in *Medicine* (from 1% to 40%) once it had transitioned to mega-journal status. In *Scientific Reports*,

Chinese scholars were responsible for 18 articles in 2011, 4,159 in 2015.<sup>139</sup>

While the brand-name open journals have eliminated barriers for readers, they have created new ones for authors. Publishing charges are perhaps not an obstacle at prominent Western universities, but they are a new hurdle for others. Global South authors publish more in gold journals than their North colleagues, happily paying at least some charges.<sup>140</sup> Indeed, some open journals waive or discount charges for developing nations, but discounts are often forfeited if any coauthors are from more prosperous places.<sup>141</sup> And even countries such as Nigeria and India do not qualify. Surveys reveal that more than half of authors in the Global South still end up paying publishing charges.<sup>142</sup> That is comparable to the 50% of authors globally who publish in open-access journals and pay fees.<sup>143</sup> So, how effective are waivers?

Publishing charges bite differently around the world. A typical Western fee of \$3,000 is 50% more than an average annual income in Pakistan, a bit lower than one in Vietnam.<sup>144</sup> Even if academics are better paid, such charges are unaffordable. Given salary levels in Africa, a publication charge can be several months' wages.<sup>145</sup> One survey found that 11% of fees were paid out of pocket by rich-world scholars, but almost four times as many in developing nations.<sup>146</sup> Not for nothing is the average publishing charge in the low three figures for predatory journals. That is a small fraction of the low to mid four figures charged by conventional gold periodicals.<sup>147</sup>

Other factors driving scholars in the Global South toward predatory journals are homegrown. In certain nations, such as Iran, Nigeria, and sometimes China, universities insist that scholars have published work in order to receive advanced degrees. Articles in nonlocal journals also carry greater weight in hiring and promotion.<sup>148</sup> In China, some conventional subscription journals levy fees, which lessens the disincentive to publish in periodicals with author's charges.<sup>149</sup> Not to mention—a problem everywhere—how

long it takes leading journals to vet and publish. That adds to the attraction of the quick turnaround promised by low-barrier predatory competitors.<sup>150</sup>

Predatory journals cater mainly to developing-nation scientists, daunted by the hurdles to established outlets.<sup>151</sup> Their authors are primarily doctors and engineers from India, the rest of Asia, and Africa. With its well-functioning infrastructure of open journals, South America needs predatory journals less and is underrepresented. The discrepancy is revealed by the per capita ratio of articles published in predatory journals compared to conventional serials indexed in the Web of Science. While it is only 6% in the US, it rises to 80% for Iran, 277% for India, and a staggering 1,580% for Nigeria.<sup>152</sup>

Predatory periodicals are, in effect, the poor world's open-access journals. They are to academia what junk bonds were to investment: despised, scorned, and reviled, yet a vehicle for democratization in their fields. The First World's open journals may have allowed free reading, but not writing. Predatory journals at least cut the price of admission for authors. They are to geographic diversity what self-published books are to gender parity. Two-thirds of top-ranked self-published books are by women, but only 40% of conventional books.<sup>153</sup>



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# Athena Unbound

## Why and How Scholarly Knowledge Should Be Free for All

By: Peter Baldwin

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