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## CASUALTIES

Will a general shift to OA leave casualties?<sup>1</sup> For example, will rising levels of green OA trigger cancellations of toll-access journals?

This question matters for those publishers (not all publishers) who fear the answer is yes and for those activists (not all activists) who hope the answer is yes. So far, unfortunately, it doesn't have a simple yes-or-no answer, and most discussions replace evidence with fearful or hopeful predictions.

The primary drivers of green OA are policies at universities and funding agencies. Remember, all university policies allow publishers to protect themselves at will. (See section 4.1 on policies.) For example, universities with loophole or deposit mandates will not provide green OA when publishers do not allow it. Universities with Harvard-style rights-retention mandates will not provide OA

when authors obtain waivers or when publishers require authors to obtain waivers as a condition of publication.

Hence, publishers who worry about the effect of university OA policies on subscriptions have the remedy in their own hands. Faculty needn't paternalize publishers by voting down OA policies when publishers can protect themselves whenever they see the need to do so. The experience at Harvard since February 2008 is that very few publishers see the need to do so. Fewer than a handful systematically require waivers from Harvard authors.

This chapter, then, focuses on the strongest green OA mandates at funding agencies, like the Wellcome Trust and NIH, which allow no opt-outs for publishers or grantees. Will strong green OA policies of that kind trigger cancellations of toll-access journals? Here are 10 parts of any complete answer.

### **1. Nobody knows yet how green OA policies will affect journal subscriptions.**

Rising levels of green OA may trigger toll-access journal cancellations, or they may not. So far they haven't.

### **2. The evidence from physics is the most relevant.**

Physics has the highest levels and longest history of green OA. The evidence from physics to date is that high levels

of green OA don't cause journal cancellations. On the contrary, the relationship between arXiv (the OA repository for physics) and toll-access physics journals is more symbiotic than antagonistic.

Physicists have been self-archiving since 1991, far longer than in any other field. In some subfields, such as particle physics, the rate of OA archiving approaches 100 percent, far higher than in any other field. If high-volume green OA caused journal cancellations, we'd see the effect first in physics. But it hasn't happened. Two leading publishers of physics journals, the American Physical Society (APS) and Institute of Physics (IOP), have publicly acknowledged that they've seen no cancellations attributable to OA archiving. In fact, the APS and IOP have not only made peace with arXiv but now accept submissions from it and even host their own mirrors of it.<sup>2</sup>

### **3. Other fields may not behave like physics.**

We won't know more until the levels of green OA in other fields approach those in physics.

It would definitely help to understand why the experience in physics has gone as it has and how far it might predict the experience in other fields. But so far it's fair to say that we don't know all the variables and that publishers who oppose green OA mandates are not among those showing a serious interest in them. When publisher lob-

byists argue that high-volume green OA will undermine toll-access journal subscriptions, they don't offer evidence, don't acknowledge the countervailing evidence from physics, don't rebut the evidence from physics, and don't qualify their own conclusions in light of it. They would act more like scientific publishers if they acknowledged the evidence from physics and then argued, as well as they could, either that the experience in physics will change or that fields other than physics will have a different experience.

An October 2004 editorial in *The Lancet* (an Elsevier journal) called on the publishing lobby to do better. “[A]s editors of a journal that publishes research funded by the NIH, we disagree with [Association of American Publishers President Patricia Schroeder’s] central claim. Widening access to research [through green OA mandates] is unlikely to bring the edifice of scientific publishing crashing down. Schroeder provides no evidence that it would do so; she merely asserts the threat. This style of rebuttal will not do. . . .”<sup>3</sup>

For more than eight years, green OA mandates have applied to research in many fields outside physics. These mandates are natural experiments and we're still monitoring their effects. At Congressional hearings in 2008 and 2010, legislators asked publishers directly whether green OA was triggering cancellations. In both cases, publishers pointed to decreased downloads but not to increased cancellations.<sup>4</sup>

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#### **4. There is evidence that green OA decreases downloads from publishers' web sites.**

When users know about OA and toll-access editions of the same article, many will prefer to click through to the OA edition, either because they aren't affiliated with a subscribing institution or because authentication is a hassle. Moreover, when users find an OA edition, most stop looking. But decreased downloads are not the same thing as decreased or canceled subscriptions.

Moreover, decreased downloads of toll-access editions from publisher web sites are not the same thing as decreased downloads overall. No one suggests that green OA leads to decreased overall downloads, that is, fewer readers and less reading. On the contrary, the same evidence suggesting that OA increases citation impact also suggests that it increases readers and reading.<sup>5</sup>

#### **5. Most publishers voluntarily permit green OA.**

Supplementing the natural experiments of green OA mandates are the natural experiments of publishers who voluntarily permit green OA. The Nature Publishing Group is more conservative than most toll-access publishers by requiring a six-month embargo on green OA, but more progressive than most by positively encouraging green OA. NPG reported the latest results of its multidisciplinary natural experiment in January 2011: "We have, to date,

found author self-archiving compatible with subscription business models, and so we have been actively encouraging self-archiving since 2005.”<sup>6</sup>

This or something similar to it must be the experience of the majority of toll-access publishers who voluntarily permit green OA. Even if they don’t actively encourage green OA, most permit it without embargo. If they found that it triggered cancellations, they would stop.

## **6. Green OA mandates leave standing at least four library incentives to maintain their subscriptions to toll-access journals.**

Even the strongest no-loophole, no-waiver policies preserve incentives to maintain toll-access journal subscriptions.

First, all funder OA mandates include an embargo period to protect publishers. For example, the OA mandates at the Research Councils UK allow an embargo of up to six months after publication. The NIH allows an embargo of up to twelve months. Libraries wanting to provide immediate access will still have an incentive to subscribe.

Second, all funder OA mandates apply to the final version of the author’s peer-reviewed manuscript, not to the published version. If the journal provides copyediting after peer review, then the policies do not apply to the copyedited version, let alone to the formatted, paginated published edition. Libraries wanting to provide access to copyedited published editions will still have an incentive to subscribe.

The purpose of these two policy provisions is precisely to protect publishers against cancellations. They are deliberate concessions to publishers, adopted voluntarily by funding agencies as compromises with the public interest in immediate OA to the best editions. When we put the two together, we see that funder-mandated OA copies of peer-reviewed manuscripts won't compete with toll-access copies of the published editions for six to twelve months, and there will never be OA copies of the more desirable published editions unless publishers voluntarily allow them. Publishers retain life-of-copyright exclusivity on the published editions. Even if OA archiving does eventually erode subscriptions outside physics, publishers have longer and better protection from these effects than their lobbyists ever acknowledge.

Third, funder OA mandates only apply to research articles, not to the many other kinds of content published in scholarly journals, such as letters, editorials, review articles, book reviews, announcements, news, conference information, and so on. Libraries wanting to provide access to these other kinds of content will still have an incentive to subscribe.

Fourth, funder OA mandates only apply to articles arising from research funded by the mandating agency. Very few journals publish nothing but articles from a single funder, or even from a set of funders all of whom have OA mandates. Libraries wanting to provide access to all



the research articles in a journal, regardless of the sources of funding, will still have an incentive to subscribe. This incentive will weaken as more and more funders adopt OA mandates, but we're very far from universal funder mandates. As we get closer, unfunded research will still fall outside this category and the three other incentives above will still stand.

The Association of College and Research Libraries addressed subscription incentives in a 2004 open letter on the NIH policy: "We wish to emphasize, above all, that academic libraries will not cancel journal subscriptions as a result of this plan. . . . Even if libraries wished to consider the availability of NIH-funded articles when making journal cancellation decisions, they would have no reasonable way of determining what articles in specific journals would become openly accessible after the embargo period."<sup>7</sup>

### **7. Some studies bear on the question of whether increased OA archiving will increase journal cancellations.**

In a 2006 study from the Publishing Research Consortium (PRC), Chris Beckett and Simon Inger asked 400 librarians about the relative weight of different factors in their decisions to cancel subscriptions. Other things being equal, the librarians preferred free content to priced content and short embargoes to longer ones. Publishers interpret this to mean that the rise of OA archiving will cause cancella-

tions. The chief flaw with the study is its artificiality. For example, the survey did not ask about specific journals by name but only about resources with abstractly stipulated levels of quality. It also disregarded faculty input on cancellation decisions when all librarians acknowledge that faculty input is decisive. The result was a study of hypothetical preferences, not actual cancellation decisions.<sup>8</sup>

A less hypothetical study was commissioned by publishers themselves in the same year. From the summary:

The three most important factors used to determine journals for cancellation, in declining order of importance, are that the faculty no longer require it . . . , usage and price. Next, availability of the content via open access (OA) archives and availability via aggregators were ranked equal fourth, but some way behind the first three factors. The journal's impact factor and availability via delayed OA were ranked relatively unimportant. . . . With regard to OA archives, there was a great deal of support for the idea that they would not directly impact journal subscriptions.<sup>9</sup>

In short, toll-access journals have more to fear from their own price increases than from rising levels of green OA. Publishers who keep raising their prices aggravate the access problem for researchers and aggravate the sustainability problem for themselves. If the same publishers

blame green OA and lobby against green OA policies, then they obstruct the solution for researchers and do very little to improve their own sustainability.

## **8. OA may increase submissions and subscriptions.**

Some subscription journals have found that OA after an embargo period, even a very short one like two months, actually increases submissions and subscriptions. For example, this was the experience of the American Society for Cell Biology and its journal, *Molecular Biology of the Cell*.

Medknow saw its submissions and subscriptions increase when it began offering unembargoed full-text editions of its journals alongside its toll-access print journals.<sup>10</sup> Hindawi Publishing saw its submissions rise steadily after it converted all its peer-reviewed journals to OA in 2007. Looking back on several years of rapidly growing submissions, company founder and CEO Ahmed Hindawi said in January 2010, “It is clear now more than ever that our open access conversion . . . was the best management decision we have taken. . . .”<sup>11</sup>

## **9. Some publishers fear that green OA will increase pressure to convert to gold OA.**

Some publishers fear that rising levels of green OA will not only trigger toll-access journal cancellations but also

increase pressure to convert to gold OA. (Likewise, some OA activists hope for this outcome.)

There are two responses to this two-fold fear. The fear of toll-access cancellations disregards the relevant evidence in points 1–8 above. The fear of conversion to gold OA also disregards relevant evidence, such as Ahmed Hindawi’s testimony above, and the testimony of Springer CEO Derk Haank. In 2008 when Springer bought BioMed Central and became the world’s largest OA publisher, Haank said: “[W]e see open access publishing as a sustainable part of STM publishing, and not an ideological crusade.” (Also see chapter 7 on economics.)<sup>12</sup>

Publishers inexperienced with gold OA needn’t defer to publishers with more experience, but they should at least study them.

In fact, OA publishing might be more sustainable than TA publishing, as toll-access prices and the volume of research both grow faster than library budgets. (See section 2.1 on problems.) If publishers acknowledge that gold OA can be sustainable, and even profitable, and merely wish to avoid making lower margins than they make today, then their objection takes on a very different color. They’re not at risk of insolvency, just reduced profits, and they’re not asserting a need for self-protection, just an entitlement to current levels of profit. There’s no reason for public funding agencies acting in the public interest, or private funders acting for charitable purposes, to compromise

their missions in order to satisfy that sense of publisher entitlement.

#### **10. Green OA policies are justified even if they do create risks for toll-access journals.**

If we're only interested in the effect of rising levels of green OA on toll-access publishers, then we can stop at points 1–9. But if we're interested in good policy, then we must add one more factor: Even if green OA does eventually threaten toll-access journal subscriptions, green OA policies are still justified.

I won't elaborate this point here, since it takes us beyond the topic of casualties to the full case for OA, which is spread throughout the rest of the book. But here's one way to put the debate in perspective: There are good reasons to want to know whether rising levels of green OA will trigger cancellations of toll-access journals, and perhaps even to modify our policies in light of what we learn. But there are no good reasons to put the thriving of incumbent toll-access journals and publishers ahead of the thriving of research itself.

