

Interview with BioOne's Mark Kurtz

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Historically, peer-reviewed journals were published by scientific societies on a non-profit basis. Today scholarly publishing is dominated by a handful of large commercial publishers focused on maximising their profits. This has left small society publishers struggling to survive and libraries unable to afford all the journals they need. Unable to compete with commercial publishers, many societies have given up and sold or outsourced their publishing activities to them—a decision that inevitably leads to a rise in the price of their journals. Some, however, have sought survival by banding together and creating online collections of their combined journal portfolios. This is the objective of the [Learned Journals Collection](#); and it is the aim of [BioOne](#), which currently provides online access to 167 titles from 126 different non-profit bioscience publishers. I spoke recently with BioOne's director of business development Mark Kurtz. The conversation was a further reminder for me that while the Open Access (OA) movement now looks set to solve the access problem, it is far from clear that it will solve the more fundamental affordability problem confronting the research community.

Background

Writing in [D-Lib magazine](#) in 2000 Rick Johnson—then enterprise director for The Scholarly Publishing and Academic Resources Coalition ([SPARC](#))—pointed out that until the end of World War II scholarly publishing had operated somewhat like a gift economy. As he [put it](#), “For nearly 300 years—since 1665, when the [Royal Society](#) of London published the first modern journal, [Philosophical Transactions](#)—societies satisfied the need for scholars to communicate among themselves and so maintained their role as the principal scholarly publishers. Research articles were ‘gifted’ to societies by authors and returned to the community in low-cost journals.”

Following the explosion in research funding after the war, however, societies increasingly struggled to cope with the ensuing flood of papers. Spotting a market opportunity, commercial companies quickly filled the vacuum. In doing so, these profit-hungry corporations quickly realised that the demand for scholarly journals is remarkably inelastic. So they did the rational thing, said Johnson, “they raised institutional prices of journals dramatically and relentlessly to exploit the elasticity curve.”

Given this inelasticity, Johnson added, the traditional “circle of gifts” between scholars and their society was replaced not with a real market economy, but a “dysfunctional hybrid.”

Unsurprisingly, the new entrants were soon engaged in an orgy of acquisitions and consolidation—aided by the alacrity with which some societies rushed to outsource their publishing activities to them when they saw how easy it is to generate large sums of money from scholarly journals if your goal is to maximise revenues rather than simply communicate research. By collaborating with commercial companies, these societies realised, they could not only ensure their own survival, but also make a healthy surplus that would allow them to subsidise their other activities.

As a result, today a few large commercial companies own thousands of journals apiece, and are generally able to set their own price.¹

¹ Today the market leaders [Elsevier](#) and [Springer](#) publish around 2,000 journals each. [Taylor & Francis](#) publishes more than 1,000.

Serials crisis

Thus was born the [serials crisis](#), which has had the research community in its grip now for several decades. Unable to keep up with the constant increase in subscription prices, libraries began to cancel journals. Publishers responded by increasing their prices further, hoping to make up the lost revenue. This simply triggered further cancellations, and each time the price of a journal was increased a few more libraries cancelled their subscription. It was a vicious cycle that seemed likely to destroy the scholarly communication system.

Determined to staunch the bleeding, publishers came up with a new strategy: they put all their journals online² and invited libraries to buy their entire journal portfolio³ on an all-or-nothing, multi-year basis⁴—a business model that came to be known as the [Big Deal](#).

Why, given their straitened circumstances, would libraries agree to buy even more journals? Why, moreover, would they agree to lock themselves into multi-year contracts? Because if they did so publishers promised them access to a much greater number of electronic journals than they had had print subscriptions to—for the same price.

At first, everyone seemed happy with the Big Deal. When the contracts came up for renewal, however, libraries were confronted with a stark choice: Pay the publisher's new asking price (inevitably higher) and renew the contract; or go back to buying on a title-by-title basis and face the painful task of telling faculty that they were about to lose access to many of the journals they needed to keep up with developments in their discipline. In the circumstances, most librarians opted to renew the Big Deals.

Soon the Big Deals were devouring most of a library's budget, forcing it again to start cancelling journals. This time, however, it was the journals of those publishers who did not offer their own Big Deal that were targeted—these were invariably the journals of smaller publishers, and usually those of society publishers.

As a result, more and more societies decided that, if they wanted to survive, they had no option but to fall into the arms of a commercial publisher. This further distorted the market, putting those societies that remained independent under great pressure to partner up too.

Meanwhile, the on-going struggle to pay for journals meant that libraries faced a mounting *affordability* problem; and as libraries cancelled more and more titles, so researchers were confronted with a growing *access* problem.

SPARC

Unsurprisingly, libraries began to search around for solutions to these twin problems. In 1998, for instance, a group of libraries founded SPARC—to “[correct imbalances in the scholarly publishing system](#)”. And Rick Johnson was recruited as executive director of the new organisation.

Several new initiatives were launched as a result, including [SPARC Leading Edge](#), [SPARC Alternative](#)⁵ and [SPARC Scientific Communities](#). It was from the latter that BioOne emerged, conceived as an “aggregation of the full-texts of high-impact bioscience research journals.”

² A process they had in fact already begun.

³ Such bulk sales are normally made to library consortia rather than individual libraries.

⁴ These contracts invariably extended for three years.

⁵ The mission of SPARC Alternative was to partner with third parties to launch low-cost alternative journals like [Organic Letters](#) and [Evolutionary Ecology Research](#).

Introducing BioOne to the library community in 2000, Johnson [explained](#), “At the heart of the collaboration is the belief that high-impact, low-cost alternatives to commercially published research can play a continuing and expanding role in science—and can be key forces in rejuvenating scientific communications.”

BioOne’s mission was to create a *sustainable* infrastructure that would enable society publishers in the biological sciences to survive without having to turn to a commercial partner—a development (as earlier noted) that inevitably led to higher subscription prices, and so further fuelled the serials crisis.

The strategy was to develop a technical platform that would allow society publishers to migrate their journals to an online environment—something they had neither the money nor the expertise to accomplish on their own. And by pooling their titles and offering them as an electronic bundle, partner societies could offer their own form of Big Deal. In this way, they could compete more effectively with the big boys.

Of course, even when they aggregated their journals small societies could aspire to offer only a very modest version of the Big Deals being sold by large commercial publishers—which typically consist of many hundreds, even thousands, of journals. Nevertheless, the strategy reduced the likelihood that member societies would see their journals targeted for cancellation by cash-strapped librarians, and so increased their chances of remaining independent. Essentially it was a circling of the wagons.

There was in any case no desire to replicate the classic Big Deal, which was by now viewed with extremely jaundiced eyes by librarians. Indeed, specifically in order to avoid the more negative aspects of journal bundling BioOne split its journal portfolio into two separate packages—[BioOne.1](#) and [BioOne.2](#). This gives libraries greater flexibility, and limits the amount of money they have to commit to a single bundle.

True business collaboration

For societies, explained Johnson in 2000, the benefits of joining the collaboration were “a share of BioOne revenues, protection against accelerated erosion of print subscriptions, no out-of-pocket costs for start-up and continuing text conversion and coding, and minimal, if any, impact on operations and infrastructure in the transition to becoming an electronic publisher.”

For libraries, he added, it meant more affordable journals.

What was central to the ethos of BioOne was the view that it was a *partnership* between societies and libraries. As the founding president and COO of BioOne [Heather Joseph](#)⁶ put it when I emailed her recently, the goal was “to form a true business collaboration between academic libraries and non-profit publishers with the aim of bringing journals into the online environment in a cost effective way that equally benefited both stakeholders.”

Both these groups, she explained, had a vested interest in taking part. “The target group of publishers/journals were those non-profit organisations that lacked the funds to make the move to online on their own, and had basically two choices; stay in print and face irrelevance; or 2. lease/sell their journals to a commercial interest and lose a significant measure of control of their publications.”

Joseph added, “The library community had no desire to see this set of publishers move to the commercial arena, where ultimately, subscription prices would only go up. Creating a solution for affordable electronic accessibility and preserving the independence of non-profit publishers

⁶ Joseph later replaced Johnson as executive director of SPARC, and she remains in that role today.

was a goal shared by both groups.”

In confirmation of this it should be noted that libraries provided start-up capital for BioOne—which money was rebated back to them in the form of BioOne subscription credits over the five-year period following launch.⁷

Looking back we can conclude that BioOne’s strategy was a good one. Despite a few early hiccups,⁸ those societies to join (and stay) have retained their independence. And their journals have remained affordable for libraries. In other words, BioOne developed a sustainable and affordable solution that continues to benefit both libraries and societies.

Today BioOne provides electronic access to 155 subscription titles from 117 publishers, and 12 OA journals from 9 publishers—all [small society and institutional publishers](#). Currently there are 1,400 subscribing institutions in 51 countries (up from 773 in 2005).

And BioOne’s access figures have grown steadily. In 2010 it received 25M hits, a 7% increase over 2009. Of these hits 10.3M were “royalty-eligible”, up from 6.3M in 2005.⁹

Vitality, BioOne has shown itself to be viable. “[W]e’re in very good financial shape,” confirms Kurtz, “even in a difficult economic climate.”

Valuable collection

What is the library perspective on BioOne today? The University of Connecticut ([UConn](#)) was a member of the founding group of libraries, and continues to subscribe to the service. “Biology is an important program here at UConn and BioOne is a valuable collection of full text journals supporting organismal biology and related disciplines,” UConn librarian [Carolyn Mills](#)¹⁰ emailed me.

Importantly, UConn remains committed to the underlying philosophy. “[T]his was a big part of our early and continuing support,” says Mills. “We didn’t want to see organismal biology journals go the way of the more commercial collections, and for this discipline small society-based publishers are a mainstay of the published literature. To keep them viable and non-profit is in our interest as an academic institution.”

She adds, “We have also made a practice of supporting other archival and society-based initiatives like [JSTOR](#) and [Project MUSE](#).”

BioOne is a not, however, solution for all bioscience societies, not least because it cannot

⁷ As Mary Case [explains on the SPARC web site](#), SPARC’s origins lie in a simple proposition made at an ARL membership meeting in May 1997 by Ken Frazier, Director of Libraries at the University of Wisconsin, Madison. Frazier said, “If 100 institutions would put up \$10,000 each to fund 10 start-up electronic journals that would compete head to head with the most expensive scientific and technical journals to which we subscribe, we would have \$1 million annually. . . . I don’t see any way around the reality that we have to put the money out in order to make this start to happen.” This is the principle adopted by BioOne, although rather than go through the time-consuming process of funding startup journals, BioOne set out to aggregate established journals with a pre-existing subscription base.

⁸ BioOne did not appreciate, for instance, that making journals available online would lead to cancellation of the print version. It also did not anticipate that it would not be able to help all society publishers in the biological sciences.

⁹ The difference between the two figures reflects the fact that all the abstracts plus the full-text of OA journals are free to view. BioOne also provides free access to around 2,500 institutions in the developing world via [eIFL](#), [Research4Life](#) ([HINARI](#), [OARE](#), [AGORA](#)), and [TEEAL](#).

¹⁰ The current [Chair of the BioOne Board](#) is a member of UConn’s faculty.

match the financial benefits that partnering with a commercial publisher brings. This, of course, is whole point of BioOne, whose *raison d'être* is to lower journal costs. To try and compete with a for-profit company in terms of financial incentives would be to fly in the face of BioOne's objective. This objective has, however, inevitably limited BioOne's growth, and must surely continue to circumscribe its future growth.

After all, if a learned society is struggling to make ends meet, or determined to maximise its revenues, the lure of money will inevitably drive it into the arms of a commercial suitor. And as commercial publishers increasingly dominate the scholarly publishing landscape so the temptation for BioOne partner societies to jump ship can only grow. "BioOne has lost some good titles to the commercial world," points out Mills.

But it is not only the growing power and influence of commercial publishers that poses a threat to BioOne today. Ironically so too does the Open Access (OA) movement. This is ironic because many viewed OA as an attempt to address the same problem that BioOne is seeking to solve. That is, the *affordability* problem. As OA has won more and more mindshare, however, its focus appears to have shifted—as we shall see.

Today OA publishing is widely expected to become the dominant method for publishing scholarly papers in the future, not least because commercial publishers have come to view [article-processing charges](#) as providing a viable way of migrating their businesses to OA without loss of revenue.

For this reason, practically every commercial publisher now offers a [Hybrid OA](#) option; and many are in the process of launching [Gold OA](#) journals.

Indeed, some are now [predicting](#) that OA publishing is set to prove the "death knell" for traditional subscription publishing.

Death knell?

Were OA to become the primary means of publishing research it would without doubt be a very good thing. Since it would mean that all published research was made freely available on the Web it would not only solve the *access* problem but it would make the research process both faster and more efficient, and so allow new solutions and medical cures to be developed more quickly. So it would be good not just for the research community, but for humanity at large too.

What, however, would be the implications for BioOne, which is currently wedded to the subscription system, if OA became the norm? Logically one might expect that it too would convert to OA. That is certainly something Joseph has long wished to see. "I make no secret of the fact that I would like to see the database [BioOne] transition to an OA model rather than stay a subscription based solution," she told me.

This, she added, was precisely the future she had foreseen for BioOne. "As the Open Access movement emerged, it was my intention to incorporate OA content into BioOne, and to work towards an ultimate transition from a subscription based model to an Open Access model," she told me. "Consequently, while I was leading the effort, we added our first OA journals to the database, and worked directly with researchers to also experiment with non-journal OA content (like the [Arabidopsis book project](#) with plant biologists Elliot Meyerowitz and Chris Somerville). We also began conversations with current BioOne publishers to educate them on Open Access."

But however desirable it may seem, transitioning BioOne to an OA-based model is not a simple job. If it were, the transition would have occurred long ago.

There are two obstacles to overcome. First, unlike commercial publishers, society publishers remain deeply suspicious of OA—a fact that Mills drew my attention to when I contacted her. When I raised the possibility of BioOne converting to OA, she replied, “Well that’s not going to happen because OA and societies are not always friendly”.

Having been president and COO of BioOne, Joseph also understands the nature of the challenge, a challenge all the greater given the need to convert so many stakeholders. “[I]t is more difficult for BioOne to make this move *en mass* because it has to secure the support of 117 different publishers in order to do it,” she says. “That’s not an easy task....”

Second, even if BioOne could persuade all its publisher partners of the desirability of OA, there is no obvious business benefit to it in doing so. After all, while subscription journals can fairly easily reinvent themselves as OA journals (by exchanging subscription revenues for article-processing charges), there is no obvious OA business model for BioOne. Currently it earns no revenue from distributing the twelve OA journals it hosts. As such, says Kurtz, these journals are a pure cost centre for BioOne, not a source of revenue.

All of which invites the question: Could OA sound the death-knell for BioOne? Certainly, caught as it is between the on-going predations of commercial publishers and the possibility of a revenue vacuum if OA publishing does indeed to become the norm, the service would seem to face a challenging future.

Access vs. affordability

One could, however, view the situation from a somewhat different perspective: one could argue, for instance, that by having stuck to its knitting BioOne has something important to teach the world.

Why? Because while it is self-evident that OA can solve the *access* problem the widespread assumption that it can simultaneously solve the *affordability* problem is beginning to look downright naïve.

In retrospect, we can see that simply shifting publishing costs from the end of the process (by charging a subscription) to the beginning of the process (by levying an article processing charge) merely re-allocates costs. It does not reduce them. Indeed, it seems inevitable that there can be no savings if the scholarly communication system remains in the grip of incumbent commercial publishers, who are understandably setting APC rates at a level designed [to protect their existing revenues](#), not to reflect the true costs of publishing.¹¹

If OA publishing turns out to be as expensive as subscription publishing then the fundamental problem facing the research community will not be solved: Overall costs will remain comparable, and the same inflationary pressure inherent to the serials crisis will create what the [University of Southampton's Steve Hitchcock](#) calls an “[author crisis](#)”. Where today more and more researchers find that they are unable to access other researchers’ papers, in the future they could find that they do not have the funds to publish their own papers.

In short, the research community has become so focused on the *access* problem that it is sacrificing *affordability* to achieve it. Either that or it is simply in denial about the cost implications of OA publishing.

BioOne, by contrast, has kept its attention firmly on the issue of *sustainability* (and, by

¹¹ The usual Hybrid [APC rate](#) levied by commercial publishers in the biomedical area today is \$3,000 per paper.

implication, *affordability*). *Sustainability*, explains Kurtz “was the impetus behind the BioOne experiment at its founding and remains our core focus.”

Ironically, even SPARC appears to have given up on *affordability*. In a 2009 SPARC guide ([pdf](#)) outlining possible business models for OA publishing, SPARC consultant [Raym Crow](#) states, “The most compelling argument for Open Access is that it improves the efficiency, effectiveness, and equity of the research process, delivering greater social and economic benefits as a result. Greater social utility, however, does not necessarily translate into reduced costs from a local library procurement perspective.”¹²

What price then SPARC’s [founding mission](#) of making journals more affordable? Clearly, as OA publishing grows, subscription costs will fall and, if pundits are correct, possibly even disappear at some point. But if the research community cannot afford the traditional subscription system how can simply frontloading the costs fix the problem that SPARC was founded to solve?

OA publishing funded by APCs may now seem viable from the perspective of publishers,¹³ but from the research community’s perspective it is not at all clear that it will prove *sustainable* in the future—unless something changes.¹⁴

After all, if all the papers produced by the world’s researchers are to be published someone is going to have to pay the publishers’ asking price. If OA publishing turns out to be just as expensive as subscription publishing, however, the research community will be no more able to afford OA than it is currently able to afford the traditional subscription system?¹⁵

BioOne, on the other hand, has demonstrated that it can “sustainably support the production

¹² In November 2009 SPARC executive director Heather Joseph [said to me](#), “This could have been clearer, and I agree, in re-reading it, that it does make it sound like we think that OA doesn't have the potential to lower overall costs, and that isn't the case. I *do* think that an Open Access distribution mechanism—supported by thoughtful, balanced business models—can have a positive impact on the economics of the scholarly publishing system, particularly over the long term.” But might this be wish fulfilment? A [recent report](#) on OA publishing, for instance, outlined a number of potential scenarios. The most telling was this: “[I]f average APCs were set at a level equal to the estimated current global average cost per article (£2,634), UK universities’ annual cash costs would rise significantly, leading to a high net cost to the UK relative to the other scenarios (other than [subscription] licensing).” In other words, if OA became the norm and the average charge levied for publishing a paper today were not to fall in price the research community would still face insupportable costs.

¹³ That is, viable in the sense that publishers are free to set APCs at a level that will enable them to generate the same profits as they have been able to achieve from subscription journals (which critics have long argued [are too high](#)).

¹⁴ I.e. APC costs could fall. This, for instance, was the claim made by The Wellcome Trust’s Robert Kiley when I [spoke to him recently](#): “If you look at the raft of new, ‘pure OA’ journals that have been announced over the past six months,” he said, “you will see that the APC is akin to the *PLoS ONE* APC. So, the APC for NPG’s *Scientific reports* is \$1,350; *BMJ Open* is £1,200 [\$1,980], *Open Biology* (Royal Society £1,200); *Biology Open* (Company of Biologists) \$1,350 etc.—all of which suggests that an average APC of around £1,457/\$2,185 is realistic.” So long as profit-maximizing commercial companies dominate scholarly publishing, however, the scenario outlined in Footnote 12 seems more likely.

¹⁵ One suggestion is that funders meet some/all of the costs of OA publishing. However, while The Wellcome Trust now maintains that “[distribution costs are research costs](#)”, this is not likely to prove a widespread attitude. True, the Max Planck Society in Germany, the FWF Austrian Science Fund, and Telethon, one of the largest biomedical non-profit organisations in Italy, recently [entered into an agreement](#) with Wiley-Blackwell to pay OA publishing charges, but it is not clear that this is something most governments (as opposed to private funders) would be prepared to do. This point was [made to me](#) recently by David Sweeney, the director of research, innovation and skills at the Higher Education Funding Council for England ([HEFCE](#)). Finally, the funding of biomedical field is atypical. See the [Kiley interview](#) for further discussion of this.

and dissemination of scholarship by collaborative action in a non-profit context,” as Kurtz puts it.

As a proof-of-concept, he adds, “BioOne has been very successful.”

In this light, one might be tempted to conclude that the BioOne model—focused as it is on *sustainability*—offers a more realistic alternative model for the future of scholarly publishing. The main difference, we should note, lies in the absence of for-profit companies in the BioOne model. This is key, explains Kurtz, because “there are certain areas of human endeavour where the profit motive does not provide optimal outcomes for society at large”.¹⁶

In other words, for so long as scholarly publishing is viewed as a for-profit activity OA will be no more successful at fixing the underlying problem than subscription publishing has proved to be. As Johnson pointed out, any attempt to make scholarly publishing into a for-profit marketplace inevitably leads merely to a “dysfunctional hybrid”.

New economic settlement

However, the problem with the BioOne model, as we have stated, is that it is currently wedded to a publishing model that many now view as out-dated. Importantly, it means that—other than in a limited way (12 journals)—BioOne is not helping to provide the many benefits that Open Access promises. This would seem to place the organisation in an invidious position.

For this reason no doubt Kurtz appears a little conflicted when asked if he feels that the subscription model is now out-dated. “[Subscription publishing] remains far and away the dominant mechanism for funding the costs of scholarly communications,” he replies. “It has proven over its 350-year run to be remarkably sustainable and scalable, and has supported the greatest expansion of knowledge in human history.”

He adds however, “The more interesting question for me is whether it *should* be an out-dated model. That is, whether with the maturing of electronic publishing technologies, which makes much wider (though by no means universal) distribution technically possible, we *ought* to explore seriously the possibility of achieving something greater.”

The crux of the matter, he suggests, is “whether we can afford to support the expansion of scholarship, which shows no sign of waning, in a context of profit-maximization—irrespective of distribution model. Shifting unsupportable costs from libraries to authors won’t address that problem.”

Kurtz is right to remind us that while there is no denying the significant benefits that OA provides, if it comes at a price that society cannot afford then it cannot solve the real problem facing the research community. For this reason, the issue of *affordability* cannot, and should not be, brushed aside, or ignored, in the manner that many in the OA movement now seem inclined to do.

Kurtz believes the answer lies in what he calls “a new economic settlement.” And one possible way of achieving this, he suggests, is to re-focus and significantly expand the Compact for Open-Access Publishing Equity ([COPE](#)). COPE, we should note, is a 2009 initiative in which research institutions are invited to commit to “the timely establishment of durable mechanisms for underwriting reasonable publication charges for articles written by its faculty and published

¹⁶ We should not that OA advocates [maintain](#) that only around one quarter of OA journals charge an APC. However, this figure appears set to grow quickly as commercial publishers move into the market. In addition, no one really knows how these other journals fund themselves, and therefore how sustainable they are.

in fee-based open-access journals and for which other institutions would not be expected to provide funds.”

In other words, signatories to COPE agree to pay their researchers to publish in OA journals. “What would happen,” asks Kurtz, “if, for the next two years, libraries in North America and Europe swung all their OA efforts to lobbying their administrations to sign on to COPE—immediately—and to allocate a significant percentage of library acquisition budgets formerly paying for commercial products to supporting author fees for non-profit, non-hybrid OA publishing projects across all fields of scholarship?”

It is important to note here that while COPE currently does not sanction the payment of publication fees for researchers wanting to publish in Hybrid journals, it does permit payment for papers published in commercial OA journals—e.g. [BioMed Central](#) and [Hindawi](#). Kurtz’s proposal therefore would be an important change to COPE.¹⁷

We must doubt, however, that COPE signatories would agree to such a change. Moreover, as things currently stand, COPE is viewed as no more than a “[safety net](#)” for researchers who can find no alternative source of funding to pay OA charges, not a tool for bringing about a wide scale migration to OA publishing.¹⁸ Consider, for instance, that COPE signatory Harvard has to date paid for only three papers out of its [HOPE Fund](#).

Another complicating factor

There is a further complicating factor: making a simple distinction between for-profit and non-profit publishers is not overly helpful in the context of scholarly publishing—since, as pointed out earlier, some societies have shown themselves to be as keen to maximise their revenues as commercial publishers.

Kurtz acknowledges as much. Speaking to me, he agreed that it might be more useful to distinguish between cost-recovery and profit maximizing publishing models, or what he also refers to as “value-optimization” models—where pricing is based not on the cost of producing a journal but on its perceived value to the customer. “Value optimization,” he says, “explains how some commercial journals can charge \$10,000 or more [for a single journal].”¹⁹

In this regard, it should be noted that while its pricing strategy is not as questionable as some commercial publishers, [one could argue](#) that—although technically a non-profit publisher—[Public Library of Science](#) itself operates a “value optimization” business model for some of its products. This is most evident with *PLoS ONE*, which some have maintained PLoS treats as a cash cow in order to subsidise its other products, and to subsidise its OA advocacy activities—a claim that PLoS appears to [accept](#).²⁰

¹⁷ As the COPE FAQ [puts it](#), “The publishing community referred to in the compact is construed broadly to include not only commercial publishers but non-profit publishers, scholarly societies, and independent journals.”

¹⁸ In fact, to date [only 14 research institutions](#) have signed COPE, a veritable drop in the ocean.

¹⁹ [Writing in The Guardian](#) recently, [George Monbiot](#) reported, “The most expensive [journal] I’ve seen, Elsevier’s [Biochimica et Biophysica Acta](#), is \$20,930.” Elsevier later [pointed out](#) to *The New York Times* that a subscription to BBA actually covers nine separate titles.

²⁰ PLoS [argues](#) that it levies prices higher than “cost-recovery” rates for valid reasons. As it puts it, “*PLoS ONE*, as well as the Community Journals (*PLoS Genetics*, *PLoS Computational Biology*, *PLoS Pathogens* and *PLoS Neglected Tropical Diseases*), all make a positive financial contribution to PLoS.” This is justified, it argues, because it provides funds to allow PLoS to, amongst other things, advocate for OA. There is, however, something unsatisfactory about an OA publisher generating surpluses in order to advocate for OA if, as a result, it reinforces and perpetuates the affordability problem, and allows commercial publishers to set their prices at higher rates than justified.

What then do we conclude from the BioOne story? Perhaps this: it is ten years since the [Budapest Open Access Initiative](#), and thirteen years since SPARC was founded, and yet the research community has still not arrived at a solution to the *affordability* problem that plagues the scholarly publishing system. Not only does it seem unlikely that OA publishing will solve this problem, but there are grounds for arguing that it may [exacerbate it](#).

The dilemma facing the research community, therefore, is that, however desirable it may be, OA publishing as currently conceived seems to be no more *sustainable* than the subscription system it is intended to replace. This is the more remarkable given that there is another form of OA (Green OA, or [self-archiving](#)) that holds out hope of solving both the *access* and the *affordability* problems.²¹

As Kurtz concedes, BioOne offers no silver bullet for solving the serials crisis, but what is distinctive about BioOne is that it has remained firmly focused on *sustainability*—a focus that has seen it prioritise *affordability* over *access*. More importantly, it has consistently argued that there is no room for profit-maximising behaviours in scholarly publishing. And here, perhaps, lies the key to providing open access at an affordable price.

So what role can we expect BioOne to play going forward? The answer, says Mills, depends on what role it chooses to play. “Assistance to editors in determining OA financial models might be useful,” she suggests. The challenge, of course, is that there is no shortage of consultants happy to offer advice to publishers on how to re-invent themselves as OA publishers. Is there a viable business model for BioOne here?

Alternatively, one could envisage BioOne continuing to provide a technical platform for society publishers, but on an OA rather than subscription basis. The challenge here is that there are now open-source publishing platforms like PKP’s [Open Journal System](#), which allow small publishers to provide their own platform at little cost.

Whatever the future holds for BioOne, OA advocates would do well to ponder on its steadfastness to the underlying problem that plagues the research community—*affordability*—and learn from that. Let’s face it, if there were no *affordability* problem there would be no *access* problem.

²¹ Many believe that Green OA, or [self-archiving](#), offers a far more sustainable model. Utilising a Green OA strategy researchers continue to publish in subscription journals, but then self-archive their published papers in their [institutional repository](#). Self-styled “[archivangelist](#)” [Stevan Harnad](#) argues that by mandating researchers to do this the research community could force publishers to downsize, by stripping out all the unnecessary (but expensive) tasks they currently undertake. This strategy, he says, can solve both the *access* and *affordability* problems simultaneously. See [here](#) for further discussion on this.

The interview



*Mark Kurtz:
Taking on the big boys*

RP: *BioOne was launched in around 1999/2000. Can you say who was responsible for founding it, and what the perceived need was?*

MK: BioOne was incorporated as a [501\(c\)\(3\)](#) non-profit corporation in August, 1999, and launched in April 2001. In retrospect, it was an improbable collaboration among founding organizations: SPARC, the Big 12 Plus Libraries Consortium (now the [Greater Western Library Alliance](#)), the American Institute of Biological Sciences ([AIBS](#)), the [University of Kansas](#), and [Allen Press](#).

The initial catalyst for BioOne’s creation was a call to action issued by the chief academic officers of the Big 12+ universities, calling for the development of alternative, non-profit publication programs that promoted sustainable publishing models—sustainable for *both* research libraries and scientific societies.

There were two very real and related needs. On the one hand, the pricing practices of commercial publishers were having a debilitating impact on library budgets—the famous “serials crisis.” On the other hand, non-profit society publishers lacked the capital and technical expertise to move from print to electronic publication, and were often left little choice but to cede control to commercial publishers, which typically re-priced the journals at much higher rates. The cumulative effect of this trend on library budgets was severe.

Our Director of Publisher Relations, Lauren Kane, has just completed [a history](#) of BioOne’s first ten years, which is available on the BioOne website. It gives a good overview of the concerns that prompted the founding of BioOne, and the challenges the founding organizations faced in getting it set up.

RP: *As the name implies, BioOne majors in the biological sciences. Does it have a particular specialization within that broader field?*

MK: We specialize in field biology, rather than molecular and chemical biology. So, organismal biology, botany, ecology, environmental sciences, and the like.

RP: *Why field biology? Was there a particular issue in that research area at the time?*

MK: It was mostly happy circumstance. AIBS had 69 member societies at the time of BioOne’s founding, many of which had not begun the transition to electronic publishing, and had limited resources to make the shift on their own.

I guess the only issue in our area of research is that there are fewer resources in field biology than in life sciences. Far less grant funding, little or no commercial sales (advertising) potential to provide a secondary revenue stream. Most areas of scholarship face similar challenges.

RP: *Can you say how many employees BioOne currently has and who they are?*

MK: We have only four full-time executive staff at headquarters: [Susan Skomal](#), our executive director; [Lauren Kane](#), our director of publisher relations; [Nicole Colovos](#), director of marketing; and myself. We outsource everything we don't consider a core competency, and have developed a network of very effective partners for sales, technology, customer service, and financial services.

RP: *When BioOne was founded what were viewed as the primary benefits for publishers, and what were seen as the primary benefits for libraries and researchers?*

MK: In a word, sustainability. That's an overused term, but it was the impetus behind the BioOne experiment at its founding and remains our core focus.

Again, libraries recognized that they could not indefinitely support the increasing costs of academic journals; that's well understood. Less well understood are the severe constraints facing non-profit scholarly publishers.

I have the impression that when "society publishers" are mentioned in discussions of scholarly communications, people tend to think of the large, well-funded societies with sophisticated publishing operations, such as [ACS](#) or [IEEE](#). But they are exceptions to the rule.

As Raym Crow detailed in his [SPARC discussion paper](#) on publisher cooperatives, the vast majority of scientific societies run very small publishing operations, with three journals or less. They tend to have little access to capital, limited technical expertise, and small, volunteer-based staffs. Sustainability is a very real issue for them.

I think it also bears noting that societies are self-forming groups of researchers, so I might reframe the question to be, "What were viewed as the primary benefits for researcher-publishers, and what were seen as the primary benefits for libraries?"

Cost recovery vs. profit maximization

RP: *The key issue then was sustainability. So what was BioOne's business proposition for publishers? Was the aim to provide them with revenue on top of their print subscriptions, for instance, or simply to offer electronic delivery of their journals(s) to the subscriber base?*

MK: Initially, the idea was to manage the transition from print to electronic publication for societies lacking the resources to manage it themselves, and at no up-front cost to the society publishers. BioOne's costs were to be recovered from subscription sales of the aggregation, and any earnings beyond costs would be returned to the publishers as a secondary, incremental revenue stream.

It didn't take long for BioOne to recognize that librarians—again, facing significant budgetary constraints—had begun cancelling individual subscriptions in favour of the aggregation. That meant that BioOne had to revise its business model to provide replacement, not just incremental, revenue for its publishers.

RP: *How does the BioOne service differ from what the [Learned Journals Collection](#) offers—the service launched by the Association of Learned and Professional Society Publishers (ALPSP) in 2003?*

MK: I am not familiar with the particulars of the Learned Journals Collection’s business model, but insofar as ALPSP offers its members’ titles in coherent subject collections, rather than forcing big deals, and operates on a cost-recovery rather than profit-maximizing basis, I would guess that we’re broadly similar.

RP: *Can you clarify what BioOne’s business model is? From what you say, I assume that it acts as an intermediary service selling subscriptions to collections of journals at a certain price. It then keeps back some of that revenue to fund itself, and the services it provides, and passes the rest on to publishers. What BioOne brings to the party, therefore, is a technical infrastructure and sales and marketing services that its publisher partners could not provide for themselves? Is that right?*

MK: That’s a fair description of the publisher-support side of our business model. I would also emphasize that our sales and marketing activities occur largely in the consortial market. 75% of our sales are to library consortia. Individual titles, or incoherent groupings of titles—a challenge a lot of university presses face—have a very difficult time in a market dominated by consortia.

Then there’s the library side of our business model, which involves providing very good value for money. That is, excellent content and functionality, liberal licensing terms, at sustainable price points. This may sound trivial; I promise you it is not.

BioOne was designed to sit right in the middle of non-profit publishers and libraries, and to balance the needs of each on a collaborative basis. With all the tension now between libraries and publishers, you wouldn’t think that would work. But it does.

I sometimes wish, when reading some of the less constructive threads on listservs, that our board meetings were public. BioOne’s board is made up largely of stakeholder representatives from our publisher and library communities. You might think they would be paralyzed into inaction by mutual distrust and animosity—[Hatfields and MacCoys](#) in a standoff. Nothing would be further from the truth. They are a model of constructive, effective collaboration. That gives me a lot of hope for the future of scholarly communications.

RP: *Do you think that one reason for the on-going war of words over scholarly journals is that there is far too little transparency in scholarly publishing?*

MK: I do believe that there is too little transparency, but my point was that effective collaboration among all stakeholders in the value network comprising scholarly communications is still possible.

Non-profit “big deal”

RP: *What BioOne offers could perhaps be characterized as a non-profit “big deal”, although one that aggregates journals published by a range of non-profit publishers rather than the entire portfolio of a single commercial publisher. Would that be an accurate description?*

MK: Insofar as BioOne aggregates content into collections that we license to libraries, yes, that’s technically correct. We are a non-profit “big deal” of the sort the Wellcome Trust recommended

supporting in its [2003 economic analysis of scientific research publishing](#).

I think, though, that most of the current discussion of big deals includes the practices of the major commercial publishers: requiring purchase of their entire title list, requiring that titles currently subscribed to on an individual basis not be dropped, pricing on current spend plus top-up for previously unsubscribed titles. This is where the similarity between BioOne (and other non-profit aggregations, like [Project MUSE](#), [GeoScienceWorld](#), and [Project Euclid](#)) and commercial big deals ends.

RP: *BioOne does things differently.*

MK: Yes. We divided BioOne into [two subscribed collections](#), BioOne.1 and BioOne.2, specifically to give libraries purchasing options and not force a big deal purchase. Project MUSE similarly offers a variety of purchasing options.

And as a secondary publisher, we don't have the licensing rights to sell individual titles—we've never sought them. Our goal is to support independent, non-profit publishers in a digital-publishing and consortial-purchasing environment, not to act as the primary publisher.

Most importantly, our pricing is based on a product-cost model; we attempt to spread the costs of BioOne as equitably and widely as possible in order to reduce the financial burden on subscribing institutions. We do not evaluate markets as targets for maximal revenue extraction.

RP: *When you say a “product-cost model” do you mean a model based on cost-recovery alone?*

MK: Yes, cost-recovery—ours and a portion of costs incurred by our publishers in producing their publications—as opposed to a value-optimized pricing strategy, which sets pricing based upon the perceived value of the product to its customers. Value optimization explains how some commercial journals can charge \$10,000 or more.

RP: *Can you say how much it costs libraries to subscribe to your packages, and what percentage of that figure goes to BioOne?*

MK: We have a tiered pricing model, so there is no single price. In North America, the tiers are based on [Carnegie classifications](#), so level of research and size. It's not perfect, but it is the best proxy we can find for spreading costs equitably. And we've been working over the past couple of years to develop tiering categories appropriate to various regions around the world. We also use [World Bank income categories](#) as the basis for country discounts.

For 2012, the maximum list price for subscribing to both BioOne.1 and BioOne.2 will be \$26,965—that's for the largest North American doctoral universities, and before any consortial or other discount. Almost no institution pays that amount.

As of 2010 (the last year we have complete data, of course), BioOne retained 35% of earnings to fund its operations and invest very modest operating and capital reserve funds, with the rest distributed back to our participating publishers. Over the life of BioOne, we've retained 33% of earnings.

RP: *BioOne offers access primarily to subscription journals today. However, it does also have a number of OA journals. How does its business model differ for those OA journals?*

MK: Yes, we currently have 12 OA journals, for which we provide digital conversion and hosting at no charge. These journals don't earn subscription revenue, so they are not paid royalties or surplus share. So, our OA activities are a cost centre for us in the classic sense: they incur costs and are not directly related to producing revenue, but add significantly to the value of BioOne as a whole.

Profits vs. surpluses

RP: *As you indicated, BioOne likes to differentiate between commercial and non-profit publishers. We should perhaps note that some believe this distinction is not clear-cut in the scholarly publishing market. They argue, for instance, that some non-profit publishers and societies have come to behave more like commercial organizations. As such, they say, there is little difference between commercial profits and non-profit surpluses. In both cases, they add, the customer still ends up paying more than a fair price—not least because societies often use surpluses generated by their publishing activities to subsidize other parts of their operation. In making a distinction between “profit-maximizing” and “product-cost” models you are acknowledging as much. Certainly it would seem to imply that we need to take a more nuanced approach when categorising scholarly publishers?*

MK: That's fair to some extent; the distinction is not so clear-cut as a commercial/non-profit dichotomy would suggest. The real distinction is in business practices, risk mitigation and cost recovery as compared to profit maximization.

Commercial publishers are, and ought to be, focused on maximizing shareholder value, which means generating a good rate of return. Some non-profit publishers have adopted commercial business practices—and it's easy enough to see which are doing so. [IRS 990s](#), for example, are public and often enlightening documents.

On the other hand, the dichotomy between commercial and non-profit publishers is fair in the vast majority of cases. Again, most scholarly society publishing programs are very small and tend to charge as little as possible while maintaining their core publishing activities.

They're concerned with disseminating their research as widely as possible, while not going bankrupt. This is what Raym Crow calls the “[twin imperatives](#)” of society publishers: mission fulfilment and financial sustainability.

The data on the *practical* distinction between commercial and non-profit publishers could not be clearer. Ted and Carl Bergstrom have [published quite a bit](#) on this topic. Non-profit publishers have significantly lower subscription rates than commercial publishers, and provide much better value, as measured by cost per citation.

So it is a mistake—a factual error—to group all publishers together. The same word, *subscription*, when applied to commercial publishers denotes a distinct business practice, both in intent and economic function.

RP: *You said that one goal of BioOne is to help society publishers avoid having to cede control to commercial publishers, who automatically charge a higher price for journals—presumably in order to raise more revenue, both for the publisher and for the society. In the history of BioOne that you cited Lauren Kane says “BioOne’s most impressive statistical leap came in the financial return to publisher participants, which grew 32% in 2003, from \$461,538 in 2002 to*

\$609,491. 2004 also marked the first year that BioOne was able to distribute a Surplus Share to active participants. This second payment pool, allocated on the same basis as the Revenue Share, provided participants with additional earnings in years that BioOne enjoyed an operating surplus (with net operating income exceeding expenses). Though not guaranteed, BioOne has been able to return a growing Surplus Share to its participants every year since 2004.” Some librarians might feel that such surpluses would be better used to restrain or reduce prices rather than to provide an additional revenue stream for publishers. Would they have a point?

MK: That would be based on a misunderstanding. Again, at the outset, it was thought that BioOne would manage the transition from print to electronic publishing, and any revenue earned beyond BioOne’s costs would be an incremental revenue stream for its publishers. By 2003, it became clear that BioOne had to provide *replacement* revenue for cancelled print subscriptions. The shift from a print-subscription model to an electronic licensing model had happened more rapidly than anticipated.

RP: What you say would seem to imply that electronic delivery inevitably leads to cancellation of print subscriptions. That might seem obvious, but some have argued that this is not necessarily the case, or that it takes longer than one might think before the cancellations begin. You are saying that that was not the experience of BioOne?

MK: Aggregated electronic delivery does lead to cancellation of individual-title subscriptions, originally print, but now individual title sales of any sort, whether print, online, or bundled. Libraries quite rightly don’t want to pay for content twice. So if they purchase an aggregation, they often cancel the individual subscriptions for titles in the aggregation. Unless they’re prohibited from doing so, as in many of the commercial big deals.

So, if BioOne hadn’t adjusted its business model to provide replacement revenue to its publishers, it would have driven its society publishers into bankruptcy, or to commercial providers. A critical part of BioOne’s business-model adjustment was distributing any surplus earned by BioOne to its society publishers.

All this was documented in a [study](#) by then-executive director Heather Joseph, consultant [Mary Waltham](#), and my predecessor, [Todd Carpenter](#), published in [portal: Libraries and the Academy](#). It’s worth mentioning that the study won the 2005 [Johns Hopkins University Press](#) award for best article. The library community understood the transition and its impact on scholarly societies.

The other side of the story is what BioOne has done to reduce costs for its library stakeholders. From 2001-2010, the price-per-title has dropped 35%, and the price-per-page 72%. In 2010, the maximum price-per-title for subscribers to both collections was about \$145. Given this, I think we’ve been pretty successful in restraining and reducing prices.

Strategic increase

RP: In 2005 BioOne made what Lauren Kane calls a “strategic increase” in its prices of 9%. Can you explain the need for that increase, outline how prices have risen over time, what the increase was this year, and say how this all compares with commercial publishers?

MK: That was the price increase—a large and painful price increase for BioOne, well beyond CPI—required by the study I mentioned above. So, the shift from incremental to replacement revenue prompted an unprecedented (for BioOne) price increase, and the implementation of

Surplus Share.

We didn't raise prices at all in 2010. For 2011, we had a 4% price increase, but as we were adding titles to BioOne.2, the price-per-title actually decreased by nearly 4% in 2011.

We track BioOne's comparative value proposition pretty closely, in order to know how we're performing on the library-side of our mission, and I could give you statistics on how we compare with commercial publishers from the data available to us. For the purposes of this conversation, the Bergstrom data from www.journalprices.com provides a useful comparison of outcomes. In 2010, the Bergstrom data give an average cost-per-article in biology of \$33.57 from commercial publishers, and \$8.55 from non-profit publishers. BioOne's cost-per-article was \$2.48.

RP: How has BioOne developed over time, and in what way (if any) has its mission changed?

MK: We have experienced the typical challenges inherent in the shift from an entrepreneurial startup to a successful business operation. That's a diplomatic way of saying we've made our share of mistakes—like thinking aggregated electronic sales would not threaten primary subscription revenue—and have had to adjust accordingly.

A second major adjustment was in determining the cohort of publishers BioOne is able to serve. We are not a good fit for all independent, non-profit publishers in field biology. Some publications are large and well established enough that we cannot provide adequate replacement revenue for the subscriptions that would inevitably be cancelled if they were to join BioOne. And some publications are so focused, whether topically or geographically, that even though they are worthy publications, we cannot support them in a more general aggregation.

This was a painful lesson we learned with the launch of BioOne.2, and it took a significant amount of retooling to get it right. But we managed.

BioOne has always been about exploring models for sustainable scholarly publishing on a collaborative basis, taking into account the needs of all stakeholders. In that sense, our mission hasn't changed.

The context in which we pursue our mission, however, has changed significantly, and continues to be very dynamic. This presents the next set of challenges that the BioOne community will face: Are we, collectively, up to the task of managing rapid, perhaps disruptive, change?

RP: Can you expand on why it is not possible for BioOne to support very focused journals?

MK: Let's say you're the hypothetical American Association for Alaskan Coastal Studies, and you publish the *Journal of Alaskan Coastal Studies*. It's a small but well respected journal, focused on a specific ecological niche. It may even be ISI ranked—not a high ranking; the articles it publishes aren't going to get cited as heavily as those in broader titles due to the limited scope of the journal. Among the articles you've published include a number detailing puzzling anomalies in migration patterns of Humpback whales, which appear to correlate with changes in ocean temperature. Those studies, along with thousands of analogous studies in hundreds of other focused journals ultimately lead to a synthetic breakthrough: the theory of global climate change. Which is, of course, published in *Nature*.

So, *JACS* is doing important, perhaps critical, work. But it's pretty difficult to ask, for example, the University of Leicester to purchase a subscription—at any price—to a journal devoted to

Alaskan coastal studies, notwithstanding that Leicester has a good program in animal and plant biology. Particularly when Leicester's library budget has been severely cut.

This is a serious problem, and one we worry about quite a bit. What is the economic model that will support the “building blocks” of science, so to speak? If an area of study, however important, is very restricted, it is difficult to support in a subscription model. And saying, “Well then it *should* be OA,” is equally unhelpful, unless there happens to be ample grant funding available to cover author charges. Not many fields of scholarship are so lucky as to have ample grant funding.

It's part of BioOne's mission to explore innovative models that might be capable of supporting journals of this sort.

RP: So you hope to find a (separate and different) solution for these kinds of journals, but have yet to do so?

MK: In a word, yes. We have not solved that problem. It's a tough one.

Transparency

RP: Can you say something about BioOne's current finances and its expectations going forward?

MK: Fortunately, we're in very good financial shape, even in a difficult economic climate (touch wood)—and I should point out that we're very transparent about our finances. We've worked hard over the past three years to structure a clear and transparent set of financial statements, and we [post them](#) (not just our 990s) on our website.

Going forward, I see moderate growth opportunities in a couple of markets, primarily South and East Asia; and Latin America, to some degree. To the extent that it materializes, it will spread our costs and help us keep prices low everywhere. That's a big *if*, given the global slowdown, which is now impacting Asia as well. If I knew more, I would be a hedge fund manager.

RP: Do you expect the number of journals offered by BioOne to grow significantly in the future?

MK: We launched our second collection, BioOne.2, in 2007, and have focused our efforts on growing “dot 2” to an appropriate size, and supporting sales efforts in a difficult economic climate. Will there be a “dot 3”? It's possible, if there were sufficient demand. But our development efforts are directed elsewhere at the moment.

RP: So where are your current efforts directed? Helping small publications like your hypothetical Journal of Alaskan Coastal Studies?

MK: In the sense that solving for the “small but worthy” publications is part of a bigger challenge. We take seriously the *technical* possibility that scholarly communications has the ability to provide a public good in a digital age. That does not address the economic and sociological challenges inherent in the provision of public goods. So we're focusing our efforts on thinking through that challenge, and testing mechanisms for overcoming the very real barriers.

RP: You said earlier that you believe there is a lack of transparency in scholarly publishing: [Commenting on the likely migration to an OA publishing environment on the Liblicense](#)

mailing list recently, the former director of [Penn State University Press](#) [Sandy Thatcher](#) suggested that the research community will remain “entirely at the mercy of publishers, who will charge what they need to make their preferred profit margin and will not be any more transparent than they are now about their actual costs.” It is doubtless this lack of transparency that explains why discussions about scholarly publishing are often so bitter. Do you think it would be a good thing if journal publishers—including non-profits—were more transparent about costs, in the way that BioOne is? If they could demonstrate that their prices were fair would not a lot of heat go out of these discussions?

MK: Yes, I do think lack of transparency contributes to a sense of mutual distrust; I agree with Sandy. Part of it has to do with lack of transparency with respect to cost, but also lack of transparency with respect to price and usage rights. Many commercial publishers require that their licensing agreements be confidential. We don't. We believe libraries and consortia should have the ability to share information.

***RP:** You also said that one of the founding aims of BioOne was to address the “serials crisis”. This crisis has got far worse over the past decade. Clearly the problem is much too great for a small organization like BioOne to solve. But what would you say have been BioOne’s successes in at least ameliorating the problem.*

MK: You're absolutely right: BioOne is not a silver bullet for the serials crisis! We're one initiative in one area of scholarship. What the BioOne experiment has demonstrated is that we can sustainably support the production and dissemination of scholarship by collaborative action in a non-profit context. As a proof-of-concept, I think BioOne has been very successful.

Project MUSE has demonstrated the same in the humanities and social sciences. What we, the system of scholarly communication, can't support are the profits demanded by commercial publishers—and, yes, the surpluses demanded by the small number of non-profit publishers that have adopted profit-maximizing models.

Out-dated model?

***RP:** Most of the journals made available through BioOne are subscription journals. Do you not think that the subscription model is out-dated now?*

MK: Well, I think the question answers itself: the subscription model, which is a club-good model, remains far and away the dominant mechanism for funding the costs of scholarly communications. It has proven over its 350-year run to be remarkably sustainable and scalable, and has supported the greatest expansion of knowledge in human history. So, on the data alone, no, it is not out-dated. And I think it's a mistake not to recognize the extraordinary achievements of the subscription model and the club that has supported it.

The more interesting question for me is whether it *should* be an out-dated model. That is, whether with the maturing of electronic publishing technologies, which makes much wider (though by no means universal) distribution technically possible, we *ought* to explore seriously the possibility of achieving something greater, of providing some greater good, expanding access beyond the members of our clubs. I believe we should; that is my moral judgment.

I also believe that we ought to proceed with due diligence, and become very serious about the challenges to be overcome in realizing that ideal. In short, it will require a new economic settlement.

RP: Can you say what you mean by a club-good model?

MK: It's an economic mechanism for the provision of collective goods, sometimes understood to be a subtype of public goods. [Club goods](#) are typically provided by small, homogenous groups (clubs) with common interests or concerns.

In scholarly communications for the last 350 years, the club members that have supported the creation and dissemination of the collective good of scholarly information include universities, academic societies, funding bodies, and so on.

RP: You spoke earlier of the need to manage rapid and disruptive change. I guess Open Access is the most disruptive change agent in scholarly publishing today. BioOne was launched a little before the Open Access movement came into being and, as we said, currently offers access to just 12 OA journals. How do you see that changing going forward? Do you envisage a gradual move to an all OA environment?

MK: Beyond the biomedical and life sciences, which I believe may well have reached a tipping point in a move to OA—with the extraordinary success of [PLoS ONE](#) and the stampede of imitators—I don't think we know yet.

By the way, I think it's a mistake to understand *PLoS ONE* as representing a challenge to traditional peer review. Its rejection rate of about 30% appears, from the limited data we have, to be in line with historical rates in the experimental and observational sciences. If that's correct, *PLoS ONE*'s achievement is very, very significant.

The question is whether areas of scholarship having more limited (or non-existent) sources of grant funding will experience a similar shift.

That being said, I think that the moral argument for open access, that knowledge *ought to be* declared a public good, is compelling and very much in line with the goals and missions of the majority of non-profit publishers. The question is whether or not we can develop business models to support a shift to OA, to figure out how to pay for Jefferson's tapers.

I'll be very interested to watch the development of [SAGE Open](#) as it attempts to apply the *PLoS ONE* model to the social sciences and humanities. It's a bold move and will certainly provide important information on the appetite for article processing fees in underfunded areas of scholarship.

RP: Are you saying that we may discover there is simply no business model for OA outside a few subject areas?

MK: Not at all. A few organizations are lucky enough to have endowments sufficient to support open-access publishing. The [Stanford Encyclopedia of Philosophy](#) would be an example. [SSRN](#), which I admire and use heavily, seems to have (it's a little difficult to tell) a blended model of angel investor and foundation support, corporate support, and value-added services for which it charges.

And we do have a model that could provide a funding basis for open-access publishing in all fields of scholarship: the [Compact for Open-Access Publishing Equity](#) (COPE). Imagine if it were very widely adopted, at least in the developed world, and significantly funded. That could

provide a mechanism for building sustainable open-access publishing programs in all fields of scholarship.

Rock and a hard place?

RP: *I asked a librarian at one of BioOne's subscribing institutions—the University of Connecticut's Carolyn Mills—whether if BioOne decided to move to an all-OA environment it would face a difficult funding problem. After all, you earn no revenue from the OA journals BioOne distributes. Mills replied, “Well that's not going to happen because OA and societies are not always friendly”. Would you say that it is generally the case that societies are resistant to OA, or at least more resistant than commercial publishers now are. (Indeed, they seem currently to be rushing to embrace OA)?*

MK: I think there is a very understandable reluctance to adopt a distribution practice that, again, for areas of research having limited access to grant funding, has as yet no sustainable business model. It is not my experience that there is widespread resistance to open access in principle. The majority of societies are mission-driven organizations, focused on stakeholders rather than shareholders. They genuinely care about their fields of research and work hard toward opening access to the greatest extent possible while ensuring financial viability.

I believe that there's much more agreement with the proposition that knowledge ought to be a public good than is generally acknowledged—if only we could work out the financial details. But there is legitimate concern about the lack of a sustainable model for OA publishing. It's much more risk-aversion and lack of capital resources than resistance, I think.

As for commercial publishers rushing to embrace OA, I assume you mean the growing list of *PLoS ONE*-like initiatives being announced, as opposed to hybrid-OA models. Of course, like JSTOR created or discovered a market for backfiles which commercial publishes subsequently utilized, *PLoS ONE* appears to have demonstrated a market for OA publishing based on article-processing fees, in fields where sufficient grant funding exists to support the fees. Commercial concerns will certainly move into that market as well.

A question is whether we can afford to support the expansion of scholarship, which shows no sign of waning, in a context of profit-maximization—irrespective of distribution model. Shifting unsupportable costs from libraries to authors won't address that problem.

RP: *Does the fact that BioOne's revenues depend on subscription journals mean that it finds itself caught between a rock and a hard place? As I understand it, you believe that there is a moral imperative for moving to OA. As you pointed out, BioOne earns no money for the OA journals it distributes. Therefore, if it embraced OA fully it would presumably see its revenues melt away.*

MK: I don't think I said there was a moral imperative, but a strong moral argument for the ideal that knowledge ought to be a public good—one that I find compelling. The imperative, I would argue, is for those similarly persuaded to consider seriously how to accomplish that ideal. It's by no means a foregone conclusion that we'll be able to; the barriers to be overcome are substantial. We have to be frank about that.

And yes, as currently configured, BioOne is in the same situation our publishers find themselves in: built on a club-good model, acting as a responsible partner by operating on a cost-recovery basis, part of the club providing a very substantial good. I make no apologies for what that model

has achieved over time and what we continue to accomplish — we here includes BioOne and similar initiatives, our non-profit publishers, and our subscribing institutions, who underwrite the production of this substantial good.

If we hope to accomplish some greater good, our job is to figure out how.

RP: *Your earlier mention of “Jefferson’s tapers” is a reference to Thomas Jefferson’s views on intellectual property right?*

MK: Yes, and specifically to a quotation that is sometimes referenced by OA proponents as an authoritative statement regarding knowledge as a public good: “[He who lights his taper at mine, receives light without darkening mine.](#)”

So the public good is light, the electromagnetic spectrum. Fair enough. But somebody has to make the taper. Take [arXiv](#) as an example. It produces an impressive amount of light. The taper costs about \$500,000 a year. If we want to provide a public good (and again, I agree that we should pursue this seriously in scholarly communications), we need to get serious about how we’re going to pay for the tapers.

COPE

RP: *OA publishers seem increasingly to take the view that they won’t need to engage with libraries much in the future. I think their assumption is that in an OA environment their customers will be researchers themselves, or research funders and whoever within a university manages so-called [Gold OA funds](#) like those being established by COPE signatories. Do you agree that that is likely to be the case?*

MK: It doesn’t need to be the case, and many libraries are exploring a more active role in campus-based, OA publishing.

But I agree that in the emerging value network supporting the single sustainable, scalable, and replicable model we currently have for OA publishing, libraries are not a node. That is, libraries do not meaningfully intersect with [BioMed Central](#), [Hindawi](#), or [PLoS](#); what interaction exists is marginal and immaterial to the continued growth and success of those publishing programs.

RP: *What are the implications of this for librarians and how do you advise them to respond to the threat?*

MK: I’m in no position to advise libraries. I could no more run a university library than jump the moon. But I am willing to beg. If I could issue a plea for action to research libraries, it would be something like this:

First, distinguish between cost-recovery and profit-maximizing publishers, support the former, and push back against the latter, as [RLUK is now doing](#). The vast majority of non-profit publishers are your partners and will work collaboratively and constructively with you as we manage the implications of the transition to electronic publishing, including the possibility of providing a nearly universal public good.

Second, consider the opportunity costs of your OA activities, and focus on efforts that produce real-world, sustainable, and scalable results. The bar we have to clear together is the old club-good (subscription) model and its achievements over the last 350 years.

Third, insert yourselves as a critical node in the emerging value network supporting OA publishing. You have always, for centuries, underwritten the costs of scholarly communications. Continue to do that, now in an OA context and on a cost-recovery basis.

Here's a thought: What would happen if, for the next two years, libraries in North America and Europe swung all their OA efforts to lobbying their administrations to sign on to COPE—immediately—and to allocate a significant percentage of library acquisition budgets formerly paying for commercial products to supporting author fees for non-profit, non-hybrid OA publishing projects across all fields of scholarship? Not a safety net; a foundation. Can you imagine? That could change things. That could be transformative.

RP: *Yes, that would quite something. However, as you indicate, COPE is intended only to provide a [safety net](#), not a major funding resource. Indeed, a year after it was launched Shieber was [boasting](#) that, in practice, Gold OA funds are providing even less support than he had envisaged. "Safety nets," he [says](#), "are useful even when they are not used." For that reason no doubt, to this day Harvard's own [HOPE Fund](#) has paid for only three OA papers. What you are suggesting would seem to imply a need to re-think the aims and objectives of COPE.*

MK: Well, you have to start somewhere. There's really no solving for the [free-rider problem](#) in the provision of public goods, short of government provision. COPE's solution is not unlike the solution found in Britain for the private provision of lighthouses—an archetypal public good—in the 18th and 19th centuries. If the need is great enough and transaction costs low enough and equitably spread, private stakeholders can join together to provide a public good.

That approach doesn't solve free-ridership, it just ignores it. Pretty difficult to achieve, but we have at least one historical example of it being done, as [Ronald Coase](#) argued in his famous article, "[The Lighthouse in Economics](#)."

So it may take a period of experimentation, data gathering, and risk assessment for COPE to realize its full potential. But I think it has tremendous potential.

RP: *I want to try to sum up if I may. Would it be fair to say that you believe the subscription model has served the research community well enough for over 300 years, but that in recent years it has been hijacked by commercial companies (and some non-profit publishers) whose primary goal is profit maximization, rather than cost recovery. In addition, the advent of the Internet makes it technically possible to distribute papers on an open-access basis, and so there is a moral argument for trying to establish ways in which this can be done. However, to do so will necessitate arriving at a "new economic settlement"—a settlement, presumably, that will take a lot of effort to achieve?*

MK: Excepting the word "hijacked," that's a good summation. Look, there is absolutely nothing wrong with the profit motive in principle. I am a shareholder in profit-maximizing companies, and I want those companies to provide a good rate of return. But I think there are certain areas of human endeavour where the profit motive does not provide optimal outcomes for society at large. I would argue that scholarly communications is one of those areas. And yes, it will take a lot of effort—collaborative effort—to work through the real barriers between our current model and the realization of our ideal.

RP: *Ok, thank you very much for taking the time to speak with me Mark. I wish you the very best in your efforts to create the new economic settlement to which you referred.*



Richard Poynder

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