

The OA Interviews: Ahmed Hindawi, founder of Hindawi Publishing Corporation

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Founded in 1997, Hindawi Publishing Corporation was the first subscription publisher to convert its entire portfolio of journals to Open Access (OA). This has enabled the company to grow very rapidly and today it publishes over 400 OA journals. The speed of Hindawi's growth, which included creating many new journals in a short space of time and mass mailing researchers, led to suspicion that it was a "predatory" organisation. Today, however, most of its detractors have been won round and – bar the occasional hiccup – Hindawi is viewed as a respectable and responsible publisher. Nevertheless, Hindawi's story poses a number of questions. First, how do researchers distinguish between good and bad publishers in today's Internet-fuelled publishing revolution, and what constitutes acceptable practice anyway? Second, does today's Western-centric publishing culture tend to discriminate against publishers based in the developing world? Third, might the author-side payment model fast becoming the norm in OA publishing turn out to be flawed? Finally, can we expect OA publishing to prove less expensive than subscription publishing? If not, what are the implications? These at least were some of the questions that occurred to me during my interview with Ahmed Hindawi.

**** TO SKIP THE INTRODUCTON AND GO DIRECT TO THE INTERVIEW [CLICK HERE](#) ****

After training in (and briefly teaching) High Energy Physics, Ahmed Hindawi decided he wanted to become a scholarly publisher – an ambition sparked by the advent of the Internet, his experience using the physics pre-print server [arXiv](#), and a newly-acquired passion for typography.

Inspired by this dream, Hindawi and his wife Nagwa Abdel-Mottaleb returned from the US to their native country of Egypt and founded Hindawi Publishing Corporation. From the start they set their sights high, determined to “make a dent in the universe” by leveraging the potential of the Web to “disrupt the scholarly communications industry”.

Becoming a player in the scholarly publishing market was at that time, however, no walk in the park – not least because the subscription model traditionally used to publish scholarly journals had enabled a few large publishers to acquire near-monopoly powers.

Nevertheless, after several false starts, Hindawi and his wife did gain a foothold, taking over publication of the *International Journal of Mathematics and Mathematical Sciences* ([IJMMS](#)) in 1999.

Big break

Hindawi's big break came in 2001 – when he made a daring bid to acquire the journal *International Mathematics Research Notices* ([IMRN](#)) from [Duke University Press](#).¹ Lacking the wherewithal to buy the journal outright, Hindawi proposed an instalment plan and, to his delight, Duke accepted his proposal. “This was the most significant journal acquisition that we had made up to that point, and it doubled our annual revenue,” says Hindawi.

Now established as a traditional scholarly publisher, Hindawi found himself increasingly frustrated with the limitations of the subscription system. Not only does it make it difficult

¹ Hindawi later sold IMRN to Oxford University Press ([OUP](#)).

for new entrants to break into the market, but it inevitably erects a paywall between reader and author, and so significantly limits the potential audience. As a result, many subscription journals have only a handful of subscribers. “[W]e were very concerned about the readership of these journals,” says Hindawi. “It just didn’t feel right to call this publishing.”

So the publisher began experimenting with ways to make the research that he published available *sans* paywall, including inviting authors to pay a publication fee so that their papers could be made freely available on the Internet – a model that later came to be known as [hybrid Open Access](#) (OA)².

By 2004, however, the pioneering OA publishers BioMed Central ([BMC](#))³ and Public Library of Science ([PLOS](#))⁴ had demonstrated that it was possible to build a viable publishing business from so-called [gold OA](#)⁵. So Hindawi made the decision to convert his entire portfolio of journals to gold OA, a process completed by 2007.

OA made sense for a number of reasons, not least because it allowed the company to play to its strengths. As Hindawi puts it, “In the early 2000s, it became clear to us that we are much better as a B2C business than a B2B business. For example, we were not good at building a sales force or fostering a strong relationship with libraries and library consortia. On the other hand, we believed we did an excellent job in managing our relationships with thousands of authors, editors, and reviewers. It was becoming clear that open access would capitalize on our strengths and marginalize our weaknesses.”

Looking back, he adds, “Perhaps the biggest regret I have from building Hindawi over the past 15 years is the fact that we didn’t move to open access sooner.”

Trial and error

It was also evident that OA would allow the company to grow much more rapidly, and Hindawi embarked on an aggressive program of journal acquisitions and new launches. Between 2005 and 2010 the number of journals the company published grew tenfold, to 224. And in the last two years the number has doubled again, to 433 journals.

The important metric for Hindawi, however, is not the number of journals he publishes, but the number of articles.⁶ Ten years ago, therefore, he set the company a goal that he called “10 by 10.” That is, to publish ten thousand articles in the year 2010.

“We only missed that goal by a few months,” says Hindawi “[W]e published less than ten thousand articles in 2010, but more than ten thousand articles in 2011. Our new aspirational goal is ‘10 by 20’. That is, publishing 10% of the annual number of articles worldwide by the year 2020. This means we need to grow by a factor of 10 or so over the next 8 years.”

² Hybrid OA emerged as a distinct business model in 2004, when Springer [introduced Open Choice](#). Essentially, this allows authors to choose to pay to have their papers made OA even when publishing in a subscription journal — OA on a paper-by-paper basis if you like.

³ BMC was founded as an OA publisher in 2000.

⁴ PLoS became an OA publisher in 2003.

⁵ With author-side gold OA authors have no choice but to pay to publish unless, that is, they qualify for [a waiver](#).

⁶ In a world in which a publisher’s revenue depends directly on the number of articles published, not the number of journals, this makes sense.

Naturally, this growth has been reflected in Hindawi's revenues, which grew from \$0.5m in 2002 to around \$12m last year. Net profit last year was \$2.3m, and Hindawi expects this to grow to around \$6m this year.

The publisher also began to experiment with different editorial models – partly in order to better automate the publishing process, partly to standardise the multiplicity of editorial approaches that were being inherited from the journal acquisitions program.

The end game was to transfer all the administrative responsibilities of the traditional editor-in-chief to Hindawi's editorial department, while transferring all the scientific responsibilities to the journal's editorial board.

As a result, today not one of Hindawi's journals uses an editor-in-chief, and they all use one of two editorial models: what Hindawi calls his "distributed" and "collaborative" models.

As might be expected, this process required a degree of trial and error. In 2008, for instance, a new service called the Scholarly Research Exchange was [launched](#), but later abandoned. "It failed, big time", explains Hindawi. "We had no choice but to discontinue it."

What was learned from the failure, however, was taken and used to create a new service called the International Scholarly Research Network ([ISRN](#)). Like the Scholarly Research Exchange before it, ISRN has no editor-in-chief, but uses a novel two-stage process in which a number of editorial board members work in concert to assess a paper (Hindawi's "collaborative" model).

Dispensing with editors-in-chief, and automating the editorial process in the way Hindawi had done, has not been without controversy, and some researchers have expressed concern that too much control has been moved from research community to publisher.

Writing in [Physics World](#) in 2008, for instance, physicist [John Harnad](#) complained that this means "there is no-one with suitable scientific expertise determining the choice of the editorial-board members responsible for the selection of referees or overseeing the process".

He added, "Correspondence with referees is also largely handled through an automated process of e-mail messages. These appear to be written, signed and sent by the board member, but that person may, in fact, have never seen or approved the text. If these procedures are continued unamended, and suitably qualified editors-in-chief are not appointed for these journals, it seems unlikely that many such board members will agree to continue providing their services."

But Hindawi denies that his system is confusing or misleading, or even particularly different from the systems other publishers use today. "My understanding is that our manuscript tracking system basically works the same way as manuscript tracking systems of other publishers," he says. "[It] is used by tens of thousands of authors, editors, and reviewers, and we see no trace of misunderstanding by the recipients of these messages."

Spam

A more frequent complaint levelled against Hindawi is that its *modus operandi* consists of spamming researchers with multiple email invitations asking them to join editorial boards, and submit papers.

What has not helped is that the level playing field that OA has made possible has encouraged a flood of new companies to enter the market offering OA publishing services.

This has led to researchers being subjected to regular blitzkriegs of spam invitations from a host of unknown companies.⁷

Understandably, some of the recipients of these email bombardments have felt besieged. Frustrated by the unwanted attention he was receiving from OA spammers, for instance, in 2010 computer scientist [Per Ola Kristensson](#) [complained](#) about it on his blog. The strategy, he said, “seems to be to mine reputable conference and journal papers for email addresses and then use them for targeted spam.”

After listing a number of companies that had targeted him, Kristensson added, “Another open access publisher that likes to send spam is Hindawi. However, news to me was that Hindawi now spams on behalf of [EURASIP](#), an organization I thought was reputable (until now).”⁸

To make matters still worse, it became apparent that some of the solicitations were coming not from ethical companies, but from professional scammers. While happy to take money from researchers to put their papers on the Web, these companies have proved worryingly casual about having the papers peer reviewed. These companies appear to view OA publishing as a golden opportunity to grow rich by exploiting the research community, at very little cost to themselves.⁹ As such, their activities are making a mockery of scholarly publishing.

Concerned that this was bringing OA into disrepute, Hindawi decided that something had to be done, and the company [joined with a number of other OA publishers](#) to found the Open Access Scholarly Publishers Association ([OASPA](#)). Amongst other things, OASPA requires that members adhere to a [professional code of conduct](#).¹⁰

Around the same time, a librarian at the [University of Colorado Denver](#) called [Jeffrey Beall](#) decided to start naming and shaming OA publishers that he believed were unethical, and in 2009 he began to [publish reviews](#) of these companies. He also established a [list](#) of what he called “predatory publishers” – that is, companies who “unprofessionally exploit the gold open-access model for their own profit.”

In addition, Beall created a “[watchlist](#)” of those companies he believed showed “some characteristics” of being predatory. Unfortunately, however, he added several respectable companies to the list, including Hindawi.¹¹ Beall included Hindawi on this list, he explained, because it has “way too many journals than can be properly handled by one publisher.”

Response to Beall’s activities has been mixed, with some complaining that his categorisation of OA publishers is unmethodical – more finger-in-the-air than scientific rigour. As a result, Beall has been admonished as well as praised. One of those to reproach him was Hindawi’s Head of Business Development [Paul Peters](#).

⁷ At its simplest, unlike establishing a traditional subscription journal, setting up an online OA journal can involve little more than creating a rudimentary publishing platform and firing off a welter of emails inviting researchers to join the editorial board and submit papers.

⁸ Hindawi declined to say how many email invitations are sent out each week, but he estimated that “the typical researcher received about three email messages from us in the entirety of 2011.”

⁹ After all, critics point out, if you are not too fussy about adding bells and whistles to the service you provide, placing a paper on a web server is practically cost free today.

¹⁰ Unfortunately, OASPA’s code of conduct is too vague to be particularly useful. E.g. on spamming it says, “Any direct marketing activities publishers engage in shall be appropriate and unobtrusive.” There is plenty of room for interpretation here.

¹¹ Beall also included the Indian OA publisher [MedKnow Publications](#) on his watchlist, for having a “vague and unproven” business model. This clearly did not put off the international publisher [Wolters Kluwer](#), which at the end of last year [bought](#) MedKnow for an undisclosed sum.

Others, however, were inclined to agree that Hindawi should be on a watchlist, if only because of its spamming activities.

In the event, Beall subsequently discontinued his watchlist. But to Hindawi's understandable annoyance, he added ISRN to his main list of predatory publishers.

As time has passed, however, there has been a growing sense that, however admirable his motives, Beall's attempts to distinguish good from bad amongst OA publishers leaves a lot to be desired.

Credibility

To his credit, Beall generally responds to critics. As a result, he has occasionally removed publishers from his list when persuaded that they are not in reality "predatory".¹² And in August this year he published [a set of criteria](#) he had drawn up to assist him make more objective assessments of new OA publishers he came across. This, however, has attracted even sharper criticism – with many complaining that the criteria are far too disparate and subjective to provide either a useful or an accurate way of separating the wheat from the chaff.

David Solomon, a professor in the department of medicine at Michigan State University,¹³ [responded](#) acerbically, "I think you have made your point but it is either time to do something constructive or quit this nonsense."

He added, "What irks me is that in my view you seem to be very cavalier about using an ugly term like predatory. There are publishers who deserve it but I think you ought to be a lot more careful about using it." And he expressed particular annoyance that ISRN had been listed as a predatory publisher for no better reason than that it had, "the term 'network' in the series name."

Solomon is not the only person to object to Beall's stated reason for adding ISRN to his list. In July, for instance, an observer of the academic publishing scene made the same point to me (on a non-attributable basis). "SSRN stands for 'Social Science Research Network'. It's a collection of repositories but not a 'network' in Beall's sense. Yet I've never heard anyone, including Beall, complain that the name was misleading or deceptive," he emailed me. "Ditto for the RIN ('Research Information Network'), the RDN ('Research Discovery Network'), the IOSN ('International Open Source Network'), the WRN ('Welsh Repository Network'). Ditto for SOLINET ('Southeastern Library Network'), HINARI ('Health InterNetwork'), and Sage Bionetworks. And so on."

In light of this background, when I was preparing to interview Ahmed Hindawi I emailed Beall to ask why he had listed ISRN as a predatory publisher. Again, Beall cited ISRN's use of the term network, arguing that it was "deceptive to call something a network when in fact it is just a publisher's brand. To me, 'network' implies a system for interaction, and the brand doesn't really supply that."

Beall also cited Hindawi's editorial process, saying that he was "sceptical of their policy of not having editors".

¹² It must nevertheless be regretted that these withdrawals are not publicly announced. The publisher's name is simply dropped without comment — as if it had never been listed in the first place.

¹³ Solomon is also a [founding member](#) of OASPA, and a former OASPA board member.

A few weeks later it was brought to my attention that ISRN had disappeared from Beall's list. So I emailed him again. "I hope you don't think I'm a hypocrite," he replied. "Despite their misuse of the word network, ISRN was always a borderline case anyway. It has been more difficult for me to classify it as predatory."

So why, critics ask, did Beall ever list ISRN as being predatory in the first place?

Whatever the reason, the upshot appears to be that as Hindawi has gained in credibility, so Beall has started to lose it – something Beall appeared to concede to me in his second email. "I think my inclusion of ISRN may have hurt my credibility regarding classing the others as predatory."

Ironically, just at the point where the number of researchers to question Beall's activities has begun to grow, so the media has started to court him. This year Beall has received coverage in a range of high-profile publications, including [The Chronicle of Higher Education](#) (also [here](#)), [The Times Higher](#), [The Scientist](#), and most recently [Nature](#).

Inherently flawed?

To add to the confusion surrounding Beal's attempts to name and shame OA publishers he deems predatory, the research community appears to have become conflicted over what it believes constitutes acceptable and unacceptable behaviour by publishers.

Spamming is a case in point: a few years ago there was a consensus that the use of unsolicited bulk email to recruit editors and paper submissions – a practice, as we saw, that Hindawi has been criticised for – was unacceptable. Today that no longer seems to be the case, and criticism of Hindawi has therefore subsided.

"We are now being spammed incessantly about conferences (legitimate, borderline, as well as junk), books, and, I'll warrant, subscription journals too," comments OA advocate and cognitive scientist [Stevan Harnad](#) (brother of John Harnad). "I think it's true that Hindawi spams no more than other legitimate businesses and organizations spam today. That may not be an admirable standard but it's a realistic one. In this context, Hindawi's promotional messages don't deserve to be singled out for stigmatisation."

Nevertheless, S Harnad adds, he remains of the view that the practice should be frowned upon. "Advertising a product or service that might be of interest to an academic is one thing, spamming for authors, referees or editors is another (and that is in increasing order of noxiousness)."

He concludes, "Editors should be selected by competent editors through personal expert knowledge and familiarity, not through mass-mailings and the luck of the draw. Ditto for selecting referees. It's fine for competent editors to use email to help them broaden their referee stable and to make the invitation of referees to review faster and more efficient. But 'crowd-sourcing' and fishing expeditions is not peer review. Hence spamming for authors is the least noxious of the three kinds of spam, but I'll warrant that the high-standard journals don't need to do it; their quality and usage is 'advertisement' enough for future authors."

Be that as it may, neither Hindawi's bulk emailing practices nor its decision to dispense with editors-in-chief appears to have prevented it from filling its many editorial boards, or attracting thousands of paper submissions each year.

The research community's new tolerance of spam, however, has made the problem posed by predatory publishers all the greater. As S Harnad points out, it means that researchers

now face the difficult task of distinguishing “the ‘legitimate’ spammers from the scam spammers.”

In other words, if spam is now deemed acceptable, and is used equally by ethical and predatory publishers alike, how can researchers know whether the email they have just received from an unrecognised company inviting them to submit to an unheard of journal is a scam or an honest sales pitch? And this problem is likely to get worse as the number of new OA publishers entering the market accelerates,¹⁴ since neither OASPA nor Beall (yet) offer an effective way of differentiating between good and bad OA publishers.

For his part, Beall is held to be far too subjective, too haphazard, and too harsh in his judgements. OASPA, by contrast, has been accused of being too lenient, and even of [harbouring](#) predatory publishers. In any case, OASPA can only claim to be skimming the surface of the problem: The Directory of Open Access Publishers ([DOAJ](#)) estimates that there are now 4,794 OA publishers (publishing over 8,000 journals);¹⁵ yet only around 80 OA publishers/journals have signed up to OASPA’s code of conduct.

To complete the melancholy picture, we have learned that researchers can be worryingly indiscriminating when choosing a publisher. Indeed, many are clearly conspiring in the proliferation of predatory publishers – by joining their editorial boards and paying to have their work published in predatory journals, even when warned that the publisher is predatory.

Perhaps this is not surprising: researchers can expect to be more than compensated for investing a few thousand dollars to publish in an OA journal – in the shape of the financial benefits attached to tenure or promotion that publication in a scholarly journal promises.

We must therefore wonder whether – even if predatory publishing proves to be only a teething problem – gold OA publishing might not have an inherent flaw, a flaw that will continue regardless of whether the predators are all eventually evicted from the jungle?

After all, the main charge levelled against predatory publishers is that they provide insufficient or no quality control (peer review), and some have long argued that the pay-to-publish model must inevitably lead to lower quality research being published, however reputable the publisher may be.

This was as an issue raised eight years ago by [Elsevier](#), the world’s largest subscription publisher. In a [written submission](#) to the UK House of Commons [Science & Technology Committee](#) in 2004, Elsevier warned that charging authors, or their sponsoring institutions, to publish research papers by means of an article-processing charge would remove the “critical control measure” that characterises subscription publishing. It is this, Elsevier added, that “ensures high quality, independent peer review and prevents commercial interests from influencing decisions to publish.”

By contrast, Elsevier said, OA publishers will find themselves “under continual pressure to increase output, potentially at the expense of quality.”

¹⁴ Even if one feels that Beall casts his net too wide, the number of questionable new publishers appearing is growing. In July, Beall [told me](#) that he currently lists 38 independent journals and 111 publishers, and he is adding 3-4 new publishers a week.

¹⁵ Moreover, this is inevitably an underestimate, although how much of an underestimate we cannot know.

Quality

Unsurprisingly, therefore, quality is an issue that arises in any discussion about OA publishing. And for this reason, any review of an OA publisher needs to ask how good the papers it publishes are.

How do we judge the quality of a scholarly journal? One way in which it is done is to count the number of citations the papers it publishes attract from other researchers.¹⁶ This is precisely what [Thomson Reuters](#) does when it calculates its journal “impact factors” (IF), which are published each year in its *Journal Citation Reports* (JCR). The IF is widely held to be the industry standard for measuring journal quality.¹⁷

How does Hindawi measure against this standard? On the surface, not so well: of the [400+](#) journals that Hindawi currently publishes, only around [30](#) (6.9%) are indexed in the JCR, and so have a recognised impact factor. By contrast, 120 (54%) of BioMed Central's [220 journals](#)¹⁸ are now indexed in the JCR and so have an impact factor.

When I drew Hindawi's attention to this he pointed out that BMC has been publishing OA journals for longer than he has, and so has had more time to be selected for inclusion in the JCR.¹⁹ “There is no question that BioMed Central did an excellent job in getting these journals indexed in the Web of Science,” he told me. “However, one has to take into account that while BioMed Central launched most of their journal titles in the early 2000s, Hindawi did not really publish that many titles until more recently. In fact, of the journals that we publish today, there are only 39 that we published back in 2007.”

We might also want to ask how accurate an indicator of quality the IF is. Certainly there is no shortage of critics. [Writing on impact factors](#) in 2007 [Mayur Amin](#)²⁰ and [Michael Mabe](#)²¹ argued that the value of the impact factor is affected by a number of sociological and statistical factors,²² and they concluded that, “Impact factors, as one citation measure, are useful in establishing the influence journals have within the literature of a discipline. Nevertheless, they are not a direct measure of quality and must be used with considerable care.”

There are, of course, other ways of assessing scholarly quality, including the [h-index](#). It was the *h-index* that Hindawi referred me to when I asked whether migrating to OA had led to an increase in the quality of his journals. “One metric that we use is the average *h-index* of the most senior author of each published paper,” he said. “That is, we take each published paper in our journals, compute the *h-index* of each of its authors, select the highest *h-index* for that paper, and then average this *h-index* over all published papers.”

¹⁶ The assumption is that is that if a paper is good and/or valuable other researchers will cite it.

¹⁷ In a given year, the impact factor of a journal is the average number of citations received per paper published in that journal during the two preceding years.

¹⁸ Impact factors are calculated yearly, but only for those journals that are indexed in Thomson Reuters *Journal Citation Reports*, now integrated into the [Web of Science](#).

¹⁹ How a journal is selected to be included in the JCR remains a mystery, but it is [estimated](#) that it takes up to five years of publishing before a journal's quality can be accurately measured.

²⁰ Elsevier's director of research.

²¹ CEO of the International Association of the International Association of Scientific, Technical & Medical Publishers.

²² These factors, [they explained](#), are “the type of journal (letters, full papers, reviews), and the average number of authors per paper (which is related to subject area). Statistical factors include the size of the journal and the size of the citation measurement window.”

He added, “In 2006, which was the year just before our full open access conversion, this average *h*-index was 8.7. By 2011, this number had risen to 16.2, which shows a significant increase over the five years since we moved to an open access model.”

The *h*-index is based on a set of a scientist's most cited papers, and calculated on the number of citations those papers have received. As such, the figures quoted by Hindawi are essentially an index of the quality of individual researchers, not necessarily of the quality of any papers that they have published with Hindawi.

When I put this to Hindawi he replied, “One advantage of looking at the *h*-index of our authors is that it gives a more immediate indication of the quality of our journals. Citations, on the other hand, can take at least a couple of years in order to provide a meaningful indication of the quality of a journal. I do agree with you that it is possible that we are able to attract senior researchers (as judged by their *h*-index), but that these authors are somehow sending us their worst papers. This is theoretically possible of course. However, I don't see anything that suggests this may be the case.”

I asked the director of JCR and bibliographic policy at Thomson Reuters [Marie McVeigh](#) what she thought about using the *h*-index as a measure of journal quality. She replied that it was an interesting approach, but one not without flaws. “No ‘population’ metric will truly reflect the characteristics of individual members of the population,” she explained. “The average [BMI](#) for a woman my age is about 27. From that, you might be able to infer my age (that is, the ‘average’ quality of a researcher who published with Publisher X), but you don't know what I weigh (the quality or even the citation level of any individual paper published with Publisher X).”²³

Responding to my scepticism about his use of the *h*-index Hindawi said, “If you want a citation metric that is based on the papers published in our journals, and not on the authors of these papers, one number that you can look at is the percentage of articles that get cited once or more in the couple of years following their publication. 71% of the articles published in our journals in 2009 have been cited once or more since their publication according to [Scopus](#), which is very good if I may say so myself.”

Clearly another way to try and assess the quality of a journal is to sit down and read some of the papers. So on 8th September I clicked on the three papers that were profiled that day on Hindawi's front page and took a look at them. The papers are [here](#), [here](#), and [here](#).

Personally, I felt all three papers could have benefited from clearer language. But the second one struck me as being particularly poor, despite being published in one of the handful of Hindawi journals that has an impact factor – that is, *Evidence-Based Complementary and Alternative Medicine* ([eCam](#)).²⁴

The paper is entitled “Herbal Products: Benefits, Limits, and Applications in Chronic Liver Disease”, and the first sentence reads: “Complementary and alternative medicine soughts and encompasses a wide range of approaches; its use begun in ancient China at the time of Xia dynasty and in India during the Vedic period, but thanks to its long-lasting curative effect, easy availability, natural way of healing, and poor side-effects it is gaining importance throughout the world in clinical practice.”

I did not feel that the text improved as I read the rest of the paper. And since Hindawi papers are all copy edited, this did not seem very satisfactory.

²³ Readers will doubtless see an irony here. The IF was devised to measure the quality of journals, but is widely used to measure the quality of individual researchers.

²⁴ eCAM's IF is 4.774.

I asked Hindawi for his views on this paper. He replied, “I took a quick look at this article, and I indeed agree that the quality of the English in this manuscript is not as good as it should be, particularly in the opening sentence that you quoted. Although we do provide copy editing for all accepted manuscripts, the fact is that there is still variation in the resulting quality of the English usage among our published articles.”²⁵

The problem with reading a few random papers, of course, is that it does not provide any meaningful statistical data. Moreover, like any non-specialist I was not able to judge the quality of the science – a point Hindawi made. “In regard to the scientific content of the article, it would be difficult for anyone who is not an expert in this field of research to give an informed opinion about this. However the authors of this manuscript seem very qualified to write a review on chronic liver disease, which is the research area covered by this review article.”

Yet another way of trying to assess the quality of published papers is to use [article-level metrics](#). However, this generally requires that the publisher provide the necessary data and/or functionality. This can include download statistics, comment boxes, and the ability to pull back and aggregate on the publisher’s site information and commentary about published papers posted on blogs and social bookmarks around the web. [PLoS began to use](#) article-level metrics a few years ago. Hindawi, however, does not, believing that download statistics, for instance, are neither meaningful nor particularly reliable. This may be true, but it means that we have no accurate way of knowing how valuable and useful other researchers find Hindawi’s papers, or whether anyone is actually reading them.²⁶

Why does this matter? It matters because scholarly publishing is by and large funded from the public purse, so it is desirable that this money is spent responsibly and effectively.

It also matters because scholarly publishing serves two purposes today: it enables researchers to share their research findings, and it serves as a tool for assessing them when they come up for tenure or promotion, or when apportioning grants to them.

While P&T committees generally look at the IF of the journals that researchers have published in when assessing them,²⁷ it is often enough for a researcher simply to demonstrate that he or she has been published in a scholarly journal.²⁸ Moreover, P&T committees will likely know no more about most of the new OA journals emerging today than the researchers they are assessing will know. As such, the committee cannot even be sure that the journals have had the papers properly peer reviewed.

²⁵ One of the [claimed benefits](#) of OA is that it will encourage researchers to improve their writing skills. To date there is little clear evidence that it is happening. However, this issue is by no means confined to Hindawi. Consider the extraordinary abstract attached to this [PLoS ONE paper](#), for instance.

²⁶ We could also note that Paragraph 1.5 of the recently published [BOAI-10 recommendations](#) states: “We discourage the use of journal impact factors as surrogates for the quality of journals, articles, or authors. We encourage the development of alternative metrics for impact and quality which are less simplistic, more reliable, and entirely open for use and reuse. Insofar as universities, funding agencies, and research assessment programs need to measure the impact of individual articles, they should use article-level metrics, not journal-level metrics.”

²⁷ In fact, this is increasingly frowned upon, on the grounds that the IF was designed to measure the quality of a journal, not individual papers. And there are a growing number of critical voices. See [here](#) for some recent commentary.

²⁸ For instance, I have had researchers contact me about predatory publishers who end our conversation with words along the lines of, “Well, I just need to get something published quickly, so I don’t really care whether the publisher is ‘predatory’. It can help my career.”

There is no reason at all to doubt that Hindawi has its papers properly peer reviewed. However, it is worth noting that the customer of a gold OA journal is no longer the librarian acting on behalf of the university (as is the case with subscription journals), but the researcher acting in his or her own interests. And OA publishers will be all too aware that they can make a good living from publishing papers, even if those papers are rarely, or ever, read.

The key point is that once the author becomes the customer, the publisher is selling a service to that author, not to the research community at large. And since publication in a peer-reviewed journal provides researchers with a proxy currency when seeking promotion, tenure, or funding, paying an APC is for them an investment in their future.²⁹ As Elsevier pointed out in 2004, this means that OA publishers will be “under continual pressure to increase output, potentially at the expense of quality.”

With a host of suspicious journals being unleashed on the research community we are bound to ask whether there is a risk that OA publishing could become chiefly a tool to assist researchers bulk up their CVs, with too little effort made to ensure that only high quality research is published?

In other words, could the process of facilitating scientific progress through the sharing of valuable research be undermined by the pressing need of researchers to acquire credits to advance their careers? This is a danger with subscription publishing too of course, but if Elsevier’s analysis was correct then OA’s pay-to-publish model seems far more likely to lead to a decline in quality.

All that said, and despite J Harnad’s concerns, there is no evidence that Hindawi’s editorial approach, or the way in which it recruits authors, has had any serious consequences so far as the quality of its papers is concerned (leaving aside the issue of copyediting).

Certainly, I am not aware of any Hindawi paper that has become the subject of public controversy (beyond what we will discuss below). *PLoS ONE*, by contrast, has on a number of occasions been [accused of](#) conducting inadequate peer review. But then *PLoS ONE* uses peer review lite, and rejects [only 30%](#) of the papers submitted to it. Hindawi rejects around 60%.³⁰

What do we conclude?

Journal quality aside, one thing we do know is that earlier this year Thomson Reuters announced that it would be [excluding](#) one of Hindawi’s journals – *The Scientific World Journal* (TSWJ) – from the JCR. The reason given was that there had been “anomalous citation patterns resulting in a significant distortion of the Journal Impact Factor”.

More specifically, two articles published in TSWJ had excessive citations to another journal called [Cell Transplantation](#). Moreover, these articles had been authored by members of the editorial board of *Cell Transplantation*, and their review process had been overseen by a former member of the journal’s editorial board who is also a Section Editor for *Cell Transplantation*.³¹

For Hindawi this was clearly embarrassing and frustrating. However, we should stress that it did not happen on his watch. Both papers were peer reviewed under the previous

²⁹ As Barton Swaim [put it](#) recently in *The Weekly Standard*, “Academics don’t write to be read; they write to be published.”

³⁰ For purposes of comparison, *Nature* reports that it [rejects 90%](#) of the papers submitted to it.

³¹ No doubt to Hindawi’s frustration this incident even [caught the attention](#) of *The Wall Street Journal*.

management of the journal and, to his credit, Hindawi acted quickly and firmly to address the matter. As the [Retraction Watch](#) web site [pointed out](#), “Hindawi’s punishment for citation manipulation – which is similar to its sanctions for plagiarism – is quite strict. Unlike many journals, it does not shy away from bans on authors.”

So what do we conclude from all this? I think we conclude that the TSWJ incident was itself anomalous, and that there is no reason whatsoever to assume that Hindawi Publishing Corporation has ever behaved unethically or dishonestly, or countenanced unethical behaviour by its editors or authors. There is likewise no reason to classify Hindawi as a predatory publisher. Even Beall now appears to accept this.

Indeed, it is surely evidence of Hindawi’s commitment to probity and transparency that he went out of his way to draw my attention to the exclusion of *The Scientific World Journal* from the JCR during our interview; and he answered all my questions in a detailed and conscientious way.

It would perhaps be more accurate to conclude that Hindawi’s reputation appears to have been temporarily tarnished as a result of collateral damage arising from some well-intentioned – but clumsy – attempts to name and shame those companies that could be described as predatory.

It does not help, however, that – due to an absence of accurate or meaningful data – it is hard to get a clear picture of the quality of Hindawi’s journals, and the extent to which they are or are not read, even when they are cited.³² As such, we cannot really say how good the research in Hindawi’s journals is relative to other publishers.³³

More broadly, we have to conclude that, however ethical and effective a publisher Hindawi itself may be, the author-side gold OA model may turn out to be a flawed model, since it can too easily be exploited by disreputable (predatory) publishers – to the detriment of the global research endeavour.

But we not quite finished. Given the assumptions many appear to have about predatory publishers, and the high expectations the research community has for OA, there are two further issues we need to consider.

The first is whether today’s Western-centric publishing culture is inclined to discriminate against publishers based in the developing world. The second is whether gold OA will prove to be a more cost-effective way of publishing research papers than the traditional subscription model.

Culturalism?

The inclusion of Hindawi/ISRN on Beall’s lists of predatory publishers, coupled with the fact that many of the new OA publishers emerging appear to be based in the developing world, has led some to assume that current attempts to name and shame unscrupulous publishers may be subject to bias.

There is no doubt that some OA publishers based in the developing world are unprincipled and predatory. However, it is imperative that we avoid conflating geographical location with quality and/or probity, or the lack of such.

³² Bernstein Research [recently estimated](#) that around 50% of subscription papers may not be read. “[H]alf of the articles which are published today are largely ignored by the scientific community, even if the libraries acquire (and pay) them.” Is the figure higher or lower with OA papers?

³³ One other piece of data we do have is that Hindawi has retracted 15 papers to date. See [here](#) for a list.

Pondering on this issue on the [Liblicense](#) mailing list recently, former BMC publisher [Jan Velterop](#) suggested that people based in the West too easily succumb to what he referred to as “culturalism”.

Specifically citing Beall’s list, Velterop pointed out that, “Many of the publishers on his list, the majority even, have non-Anglo-Saxon origins. Instead of helping those publishers to reach good quality levels, they are dismissed out of hand. Some may not have potential and indeed be real scams, as some of the traditional subscription journals are as well. But some may have true potential.”

He added, “Once a reasonable base level of scientific robustness is reached, quality is as much about perception than about substance. It is symptomatic that Beall’s list does not focus on the quality or scientific robustness of the articles published by his ‘predatory publishers’ (especially in comparison to the quality published by established, presumably non-predatory publishers), but on the way they market and present their services.”

The industry observer I cited earlier made a similar point to me, but added that it is not only people in the West who tend to take a blinkered view. “[A]cademics can be horrible snobs,” he said. “They tend to regard new publishers, which are sometimes first-rate, as second-rate. Similarly, they tend to regard third-world publishers, which are sometimes first-rate, as second-rate. This is often true even for academics in developing countries themselves! Witness the policies in China to pay Chinese academics to publish in high-impact journals from Europe and North America. It’s another symptom of the underlying disease to treat prestige as a substitute for quality.”

We are therefore bound to wonder whether Hindawi Publishing Corporation might not have been a victim of prejudice, or at least found guilty by (geographical) association, rather than on the facts. There is no call to accuse Beall of this, but we should at least air the matter – not least because others have accused him of bias. As Beall explained to me in August, “I recently published a [list of my criteria](#) for determining predatory publishers on my blog, and there has been mostly negative reaction, with some even implying that I am racist for including third-world firms on the list.”³⁴

It is possible that Beall’s list includes a lot third-world companies simply because the majority of new OA publishers entering the market right now are based in the developing world (as we noted).³⁵ However, this makes it all the more important that anyone taking it upon themselves to create a list of suspicious publishers tries scrupulously to apply objective and transparent criteria – something that Beall is repeatedly charged with having failed to do.

Another form of “culturalism” is to assume that the primary role of OA publishers based in the developing world is to serve locally based researchers who are unable to penetrate the elite world of Western publishing. Doing so can quickly lead to the conclusion that non-Western scholarly research is inferior, and that non-Western OA journals are by definition low quality.

Again, it should not be doubted that some developing-world OA publishers are disseminating very poor research (and some are clearly out and out scammers). But we should not treat that as is a general rule, which some commentators seem inclined to do.

³⁴ I too have been [accused of racism](#), simply for asking questions about the peer review process of an OA publisher.

³⁵ Speaking to me in July, Beall [said](#), “A new predatory publisher appears almost weekly in India, the location of most of my recent listings.”

Last year, for instance, the self-styled [Library Loon](#) published a [blog post](#) commenting on [an interview](#) I had done with Croatia-based [InTech](#). Generalising from what had been described and discussed in that interview, the Loon suggested that the publication of poor-quality research by developing-world companies is a consequence of the “cutthroat cargo-cult academic hiring and promotion practices in emerging nations.”³⁶

Arguing that papers submitted to Western publishers are easier to publish, the Loon seemed to imply that the inevitable role of developing-world OA publishers is to assist local researchers publish research that would not be acceptable to a Western publisher, presumably because it is deemed to be of lower quality than that produced in the West. By implication, this would also seem to imply that researchers based in the West do not publish in developing-world journals – which is clearly not true.

Certainly, this is not true of Hindawi, as the table below showing the top 20 countries (as of 16th September) from which its articles originate demonstrates. There is no indication at all in this table that Hindawi caters primarily to Egyptian, Middle-Eastern, or indeed developing world authors. It is a publisher with a global customer base. And as we have seen, there is no evidence that the research it publishes is of lower quality than that published in Western-based journals (although copy editing could be an issue).

Rank	Country	Article Number
1	United States	18974
2	China	6489
3	India	4339
4	UK	3701
5	Japan	3654
6	Italy	3552
7	Germany	3135
8	Canada	2991
9	France	2770
10	Spain	1893
11	Brazil	1783
12	Republic of Korea	1722
13	Australia	1516
14	Islamic Republic of Iran	1405
15	Province of China Taiwan	1392
16	Turkey	1313
17	Greece	1178
18	Netherlands	1095
19	Saudi Arabia	901
20	Sweden	885
	Egypt	688

³⁶ In reality, of course, the “cutthroat culture of academic hiring and promotion practices” is by no means confined to emerging nations. It is a feature of today’s global research environment, and a poisonous one at that. The unique difficulty that researchers in the developing world generally face is that their native language is not English, which is currently the language of science.

Anyone doubting that Hindawi is a global publisher could do worse than compare the above chart with the [chart](#) on Thomson Reuters [ScienceWatch](#) showing papers ranked by country of origin globally.

Counting the costs

The final question we need to ask is whether OA publishing will prove less costly than subscription publishing. While this issue is not specific to Hindawi Publishing Corporation, Hindawi does have views on it. Moreover, it is a question of some importance – not just for Hindawi but for all publishers – since the future profitability of scholarly publishing would seem to hang on the answer. It is clearly also an important question for the research community particularly for those who joined the OA movement in the belief that OA would solve the so-called “[serials crisis](#)”.³⁷

What do we mean by the serials crisis? We are referring to the serious affordability problem that universities have been grappling with for several decades now, a problem whereby they have found it increasingly difficult to keep up with the constant growth in journal subscription prices.

This is an issue that incites strong passions, not least because while they have been struggling to pay for their journal subscriptions, universities have witnessed publishers repeatedly reporting profits of between 30% and 40% – a level that many believe to be “[obscene](#)”. Moreover, with library budgets now falling, the situation is fast becoming untenable.

As noted, the expectation was that OA would inevitably reduce the costs of scholarly publishing, and so resolve the affordability problem. As time has passed, however, this expectation has looked less and less realistic.

Why? Because while author-pays gold OA publishing has been an option now for some ten years, there remains no convincing evidence that it will prove any less expensive than subscription publishing, or that the price increases will be any more restrained.

When it launched in 2003, for instance, [PLoS Biology](#) charged a “[modest](#)” fee of \$1,500 to publish a paper. Today that fee is [\\$2,900](#), a 93% increase in price. PLoS, of course, is a non-profit publisher and (as one might expect) the prices of commercial OA publishers have increased at a faster rate. When launched in 2004, for instance, BMC’s [Journal of Translational Medicine](#) charged [\\$525](#) to publish an article. Today it charges [\\$1,950](#), up 271%.

What of Hindawi, an OA publisher with a reputation for providing a less costly publishing service? When Hindawi’s [Journal of Biomedicine and Biotechnology](#) was converted to OA in 2004, it charged \$495 to publish a paper. Today the cost is \$1,500, a 203% increase.³⁸

We should not be surprised at this. Publishers, especially commercial publishers, naturally try to maximise their revenues. So why would an OA publisher set its prices lower than

³⁷ Wikipedia’s definition of the serials crisis is [this](#): “The term serials crisis has become common shorthand to describe the chronic subscription cost increases of many scholarly journals. The prices of these institutional or library subscriptions have been rising much faster than the Consumer Price Index for several decades, while the funds available to the libraries have remained static or have declined in real terms.”

³⁸ For purposes of comparison, [Allen Press](#) estimate that subscription prices US society journals [have increased by 7.3%](#) on average annually since 1989.

those of its subscription competitors, other than to attract customers on first entering the market?

From an OA publisher's perspective all it is doing is billing its customers at the start of the publishing process (APCs) rather than at the end of the process (subscriptions)³⁹. It is not in an OA publisher's interests to conspire in the reduction of the overall revenues that can be earned from publishing, particularly when they have shareholders to feed.

The problem, however, is that unless the costs of publishing are contained, the research community will eventually be unable to afford to disseminate all its research. Whether OA can address the affordability problem is therefore a pressing issue.

As noted, it is far from evident that that OA will prove any less expensive than subscription publishing. But might there be a way of ensuring that it is?

Let us recall that when the OA movement [was born](#)⁴⁰ two separate forms of OA were proposed. Initially known as BOAI-1 and BOAI-2, these were later renamed [green OA](#) and [gold OA](#).

As we have seen, gold OA consists of researchers (or more usually their funders or institutions) paying an article-processing charge to an OA publisher, who in return for that payment makes the paper freely available on the Internet as part of the publication process.⁴¹ With green OA, researchers continue to publish in subscription journals, but themselves make copies of their papers freely available in their [institutional repositories](#) – generally after an embargo period intended to allow publishers to recover their costs from subscriptions prior to the free copies being made available.

While green and gold have generally been viewed as complementary strategies, there has over the years been a great deal of discussion as to which form of OA ought to be prioritised. Some OA advocates, for instance, argue that if we want the cost of publishing papers in an OA environment is to be lower than with subscription publishing, then the emphasis must be placed on green OA. Indeed, S Harnad believes that gold OA is premature today. Rather, he says, the world's researchers should be [mandated](#) to self-archive all their papers.

How will this lower prices? S Harnad [argues](#) that once green OA approaches or reaches 100% globally, institutions will be able to cancel their subscriptions.⁴² This, he says, will force publishers to “phase out the print and online edition, archiving and access-provision and their costs, downsizing to the management of the peer-review service and converting to gold OA, whose far lower costs institutions will pay, per paper published, out of a fraction of their annual windfall savings from having cancelled subscriptions.”⁴³

³⁹ As noted elsewhere, the other important change is that the customer is no longer the librarian, but the researcher.

⁴⁰ With the 2001 [Budapest Open Access Initiative](#).

⁴¹ OA advocates are often at pains to [point out](#) that the majority of OA journals currently do not charge an APC. While this may be true (today), we should not doubt that, unless something dramatic happens, author-side gold OA is set to become the primary model for OA publishing, at least in the near term.

⁴² Importantly, it is only once all the papers published in a particular journal that the researchers of an institution need access to are freely available on the Web that that institution can consider cancelling its subscription to the journal.

⁴³ S Harnad's primary point is that green is much faster. However, he also believes it to be the only way of containing costs.

In other words, S Harnad sees green OA as a lever to enable the research community to squeeze out all extraneous costs built into today's journal publishing system (most of which S Harnad believes to be redundant in a networked world). Only then, he argues, will it be possible to reduce the overall financial burden on the research community.

Recent events in the UK, however, suggest that green may be about to be relegated to bit player in the coming transition to OA.

Going for Gold?

On 19th June, a committee set up by the UK government to establish how access to research could be expanded, and headed up by the sociologist [Dame Janet Finch](#), published its [report](#). This recommended that gold OA should become the "main vehicle" for scholarly publishing in the UK, and green OA repositories relegated to the task of housing theses, dissertations, grey literature and data, and for preservation.

The Finch Committee estimated that this would cost the UK research community an additional £50-60 million a year (of which £38m a year would cover article-processing charges).

Unsurprisingly, the Finch recommendations attracted [immediate and angry reaction](#) from research-intensive UK universities, who complained that they would have to find the extra money needed for gold OA from existing budgets, at a time when they are already under severe financial pressure.⁴⁴

Days later, a second report was published. Commissioned by the UK Open Access Implementation Group (OAIG) – and called [Going for Gold? The costs and benefits of Gold Open Access for UK research institutions: further economic modelling](#) – this report appeared to support S Harnad's argument. As the authors [Alma Swan](#) and [John Houghton](#) put it, "the cost of adopting green OA is much lower than the cost of gold OA – with green OA self-archiving costing institutions around one-fifth the amount that gold OA might cost, and as little as one-tenth as much for the most research intensive university sampled."⁴⁵

Nevertheless, on 16th July, the UK government [accepted](#) most of the Finch recommendations and, on the same day, Research Councils UK (RCUK)⁴⁶ announced that its [new OA policy](#) would be conformant with Finch. Specifically, RCUK will require that UK researchers choose gold over green, unless a publisher does not offer a gold option. However, as S Harnad [points out](#), since hybrid OA also meets the requirements of the RCUK policy, any publisher not currently offering gold OA is sure to offer in its place an expensive hybrid option, and to increase its green embargo beyond the six-months stipulated by RCUK, thereby mooting green.⁴⁷ Importantly, this will allow publishers to lock in their current revenues.

⁴⁴ The UK government responded on 7th September by [announcing](#) that it would provide an additional £10m to help – this, *Nature* quickly [pointed out](#), is not new money, but money that will come from another part of the UK science budget.

⁴⁵ The report added, however, that once gold OA became universal costs could be expected to fall.

⁴⁶ The RCUK is an umbrella organisation for the UK's seven research councils.

⁴⁷ As S Harnad put it, if you were a publisher looking at the RCUK policy the natural thing to do would be "to 'allow' your authors to pay you for hybrid Gold OA (while continuing to collect your usual subscription revenues) and, for good measure, you would ratchet up the Green OA embargo length (up to the date your grand-children finished their university education!) to make sure your authors pay you for hybrid Gold rather than picking the cost-free option that you fear might eventually pose a risk to your subscription revenues!"

However, since the wording was ambiguous, some challenged this interpretation. In order to try to clarify the situation, OA advocate [Peter Suber](#) spoke to the convenor of the RCUK Research Outputs Network ([RON](#)) [Mark Thorley](#). Suber later [published his notes from their conversation](#).

Thorley appeared to concur with S Harnad's interpretation that "journals offering a suitable gold OA option would probably not want to offer a compliant green option as well. Hence, as more journals start offering gold options to make themselves eligible for RCUK funding, many that permit green OA today may stop permitting green, or might only provide a green option with an embargo period to be too long to be compliant with the RCUK policy."

How did the UK end up with what appears to be a counter-productive OA policy? Both the Finch Committee and RCUK were evidently keen to facilitate a move to OA while protecting publishers' interests (and thus profits), with the goal presumably of ensuring the transition was smooth. As the UK Minister of State for Universities and Science [David Willetts](#) [explained](#) to the [Publishers Association](#) in May, "[G]old means that research funding includes the costs of immediate open publication, thereby allowing for full and immediate open access while still providing revenue to publishers."

OA advocates have therefore had to conclude that RCUK's policy is flawed. Writing in the [BMJ](#) in August, for instance, Suber [commented](#), "To fund the transition to gold without first harnessing the power of green incurs premature expense, leaves the transition incomplete, and puts the interests of publishers ahead of the interests of research."

The underlying fear is that by allowing publishers to lock their current revenues (and profit levels) into the new OA environment, the RCUK policy will miss an important window of opportunity to resolve the affordability problem confronting the research community.⁴⁸

It is a gloomy picture, but is it an accurate one? Hindawi does not think so. Once the transition to OA publishing is complete, he argues, market forces will ensure that publishers' prices are contained, and the overall costs of disseminating research will fall as a result – by a factor of 2-10.

The point to bear in mind, he says, is that the subscription market is a dysfunctional one. As such, prices are not automatically regulated in the way they are in healthy markets. By contrast, OA publishing *will* function correctly, and thus ensure that prices are controlled.

"Journals in an open access world must compete for authors by offering a compelling service at an attractive price, as one would expect to see in any competitive market," he explains. "As a reader, you don't have a choice between journals. If you need to read a particular piece of research, this piece is published in a particular journal, and you need access to that journal. But as an author, you do have a choice. Within a particular subject area, and within a particular academic quality band, there are probably a few choices for an author to select from. These few choices constitute substitutable options for these authors."

Hindawi's argument seems to be that in a subscription market librarians have no choice but to buy access to an entire journal in order to provide their institution's researchers with access to any single article in it – since no other journal can substitute for the one in which the desired article has been published. In an OA world, by contrast, authors will have the

⁴⁸ In fact, S Harnad envisages that publishers will much prefer to offer hybrid OA rather than gold OA, both because they can charge more for hybrid OA, and because it allows them to "[double-dip](#)" – i.e. continue to collect subscriptions, while also charging some authors APCs. As such, [he argues](#), prices will increase [very considerably](#), rather than fall.

choice of taking their papers to a number of different publishers (i.e. shop around). And since the paper will be freely available to all once it is published, there can be no monopoly on access.

This, says Hindawi, will drive prices down. “[T]he system will prove to be significantly less expensive to the academic community than the current system. I have no doubts in my mind about this.”

Caveat

However, Hindawi adds an important caveat. For such a scenario to occur, he says, researchers would need to be sensitised to pricing in a way they are not in a subscription world.⁴⁹ In other words, they would need to know exactly how much different journals in their field charged to publish a paper, and they would need to know that their choice of journal would have financial implications for them personally. In short, they would need to care about pricing.

“If the APCs are paid by an author’s institution or research funder in such a way that it does not impact their research budget, they would naturally pay much less attention, if any, to how much the journal charges for the publication of their paper”, explains Hindawi.

Hindawi’s argument is a persuasive one. But even if he is right, how likely is it that the conditions he describes will come into existence? After all, like most OA publishers, Hindawi currently operates an [institutional membership scheme](#) in which research institutions pay a flat annual fee in order to buy the right for all their researchers to publish their papers. As such, the cost of publishing a paper has no impact on an individual researcher’s budget.

In addition, a growing number of universities now operate [gold OA funds](#). These are central funds created exclusively to pay the costs of publishing in OA journals. But there is no indication that these operate in such a way as to ensure that researchers care about costs. Importantly, under its new OA policy RCUK will provide block grants to universities in the expectation that these will go into central OA funds like these.

So can we expect that RCUK money will be distributed to researchers in a way that directly affects their individual research budgets?⁵⁰ We do not know. Speaking to Suber, Thorley [made it clear](#) that this will be a matter for individual universities.⁵¹

What is necessary, says Hindawi, is that universities and funders “simultaneously mandate that researchers publish their results under a gold open access model and allow them to use their regular research budget to pay for the costs of publication. This will result in a system where researchers actually care about how much the publication cost of a particular journal is, and consequently will create a competitive market for open access journals.”

He adds, “In my opinion, this is better than setting money aside for open access publishing that cannot be used by researchers for anything else. Giving an author a budget for APCs

⁴⁹ Since it is the library that pays journal subscriptions, most researchers are unaware of the costs of scholarly communication. So far as they are concerned, research papers are free at the point of use.

⁵⁰ OUP’s David Crotty also [predicted](#) dire consequences.

⁵¹ As Suber [quoted](#) Thorley saying, “The RCUK will provide block grants to universities for paying APCs, which they will manage through the establishment of publication funds, and universities will decide how to spend the money to best deliver the RCUK policy.”

that cannot be spent on anything else makes them completely insensitive to how much they pay for publishing their research results as long as they are within that budget.”⁵²

As we have argued, however, it is far from clear that this is how RCUK money will be distributed.

Time will tell how events unfold in the UK, and whether the Finch/RCUK model is propagated around the world. As S Harnad [points out](#), the UK produces only 6% of the world’s research and, for now, green OA continues to be viewed as an essential component of any OA strategy in other parts of the world.

Alternatives

What happens if OA turns out to be as expensive and inflationary as subscription publishing, or even more costly? Universities cannot continue to stump up more and more money each year indefinitely. After all, money available for research is inevitably finite, and many countries are still in the grips of a serious financial crisis.⁵³

One obvious possibility is that those who hold the purse strings (funders and research institutions) may start to ration the number of papers researchers are able to publish. [Adam Tickell](#) (a member of the Finch committee) [hinted at](#) this possibility in *The Times Higher Education* in June.

Alternatively, publishers could find themselves increasingly being disintermediated, as researchers created and managed their own journals⁵⁴ – a possibility that was [explored](#) recently on an [open access mailing list](#).

OA advocates have long argued that one of the benefits of OA is that it makes pricing transparent. That is clearly beginning to happen.⁵⁵ But when researchers discover that they are expected to pay thousands of dollars for each paper they publish they become somewhat disenchanted, and tend to look for alternative ways of sharing their research.⁵⁶ Moreover, when they discover that the costs of running their own journal can be as low as those incurred by, say, the journal [Electronic Proceedings of Theoretical Computer Science](#))⁵⁷, their enthusiasm for researcher-led journals grows.⁵⁸

Another possibility is that researchers will begin to view the traditional journal as redundant. Of course, it would be ironic if the price transparency ushered in by OA led not to lower publication fees, but to a gradual abandonment of the traditional journal in favour

⁵² Executive director of Research Libraries UK (RLUK) [David Prosser](#) makes the same point in a [recent article](#) in *UKSG eNews*, arguing that the use of central funds could create a similar “disconnect” between author and publisher as exists between reader and publisher in the subscription system.

⁵³ David Crotty [estimates](#) that if the UK model was propagated worldwide the research community would need to find an additional £1 billion each year.

⁵⁴ Some researchers have been publishing their own journals for years. However, if all researchers were told that the number of papers they could publish was going to be rationed, or they resented having to pay the publication costs out of their research funds, a great many more could be expected to explore the possibility. Already, envious eyes are being cast over *The Journal of Machine Learning Research (JMLR)*, the current [poster child](#) of no-fee OA journals.

⁵⁵ Consider, for instance, the [responses here](#) to news that Springer is introducing an OA book option for which the average cost to authors will be €15,000.

⁵⁶ This is all the more likely as funders and institutions begin to seek alternative ways of assessing researchers than by the number of papers they have published in traditional journals.

⁵⁷ As [pointed out](#) on [Mathforge](#) earlier this year.

⁵⁸ See also [this](#).

of alternatives. However, the current debate over OA does seem to be encouraging researchers to conclude that the very notion of the journal is anachronistic in a networked world. As [Leslie Vosshall put it](#) recently in [The FASEB Journal](#), “Why is it that in these days of instant information dissemination via blogs, Twitter, Facebook, and other social media sites, our scientific publishing system has ground to a medieval, depressing, counterproductive near-halt?”

The key point is that, whatever happens, the level of profit that can be earned from publishing traditional scholarly journals (be it online or print) looks set to fall considerably. For publishers like Elsevier and Wiley – who are somewhat set in their ways – this is surely bad news.

For young, fleet-footed publishers like Hindawi, however, there will doubtless be plenty of opportunities. After all, even if the traditional journal fades away, we can expect there to be any number of potential new services that publishers could offer to help scientists share their research.

These services may not be as lucrative as traditional journal publishing, but they will surely be an attractive business proposition for companies willing to provide value for money. Importantly, such services are unlikely to attract the attentions of the get-rich-quick predators that Jeffrey Beall has set his heart on rooting out. And yet, ironically, many of the new providers may well turn out to be based not in the West, but in the developing world.

So long as he remains open to change, and willing to experiment, Ahmed Hindawi may well yet “make a dent in the universe”.



Ahmed Hindawi

The interview begins ...

RP: *Can you say something about your background? I think you began your career as a physicist.*

AH: I graduated from [Ain Shams University](#) in 1988 with a BSc in Physics. I then did a Master's degree at Ain Shams University with a dissertation on a particular non-Riemannian extension to Einstein's theory of general relativity with Professor Fahmy Mikhail and [Professor Mamdouh Wanas](#).

My wife Nagwa and I got married in 1992 and we moved to the USA as graduate students at the [University of Pennsylvania](#). I got my PhD in 1997 in High Energy Physics with [Professor Burt Ovrut](#).

After completing my PhD I went back to Cairo in mid-1997 and became a faculty member at Ain Shams University, where I taught a number of physics classes and did some research for about two years before resigning from this position in order to concentrate on managing Hindawi.

RP: *How and why did you get into scholarly publishing? And did you view Hindawi as just another start-up publisher, or did you believe you could bring something to scholarly publishing that was new or different? If the latter, what did you envisage providing that was new?*

AH: I was very lucky to be in the right place at the right time during my PhD program. As a member of the High Energy Physics community, I was constantly using the [arXiv](#) that was set up by [Paul Ginsparg](#) and had first-hand experience of the impact that the Internet could have on scholarly communication. We used the arXiv well before the Web came into existence via email, ftp, and gopher, and then by the mid-1990s the Web had taken over.

That was a very exciting time, and it was clear that the Web was going to change everything. [Tim Berners-Lee](#) invented the Web at a major High Energy Physics facility and did so in order to facilitate the sharing and updating of information among researchers. In other words, he invented the Web in order to disrupt the scholarly communication system. I thought that was truly sensational.

While at UPenn, I became interested in the role that the Web would play in the scholarly communication industry and the effect that initiatives such as the arXiv would have on the publishing industry. I tried to educate myself on the subject by reading everything that I was able to find, including many of the writings of [Stevan Harnad](#) from that time period.

It also happened that around the same time I got interested in typography and font design. I was a complete novice then, but I came across a wonderful little book by Robin Williams titled “[The Non-Designer’s Design Book](#).”

I still remember to this day how I felt going through that little book. It was as if someone was discovering music for the first time in their life. I really loved the subject and it quickly became a hobby of mine. I remember the many visits I made to the [Fisher Fine Arts Library](#) at UPenn digging around for books that I could read about the subject. I obviously didn’t have as much time as I wanted, but I was not trying to be a designer, I only wanted to know more about the subject and build an appreciation for it.

My interest in the Web and its transformational power, along with my newfound love for typography, and the realization of a business opportunity in Egypt (where I was planning to return once I finished my PhD), led to the decision to found a publishing company with Nagwa in 1997.

Our vision for Hindawi, at the time, was certainly different than Hindawi today, as the company has evolved in all sorts of ways over the last 15 years.

But the basic differentiator that we had in mind in 1997 was that we would be largely an online company that would use the power of the Web to disrupt the scholarly communications industry, just as Tim Berners-Lee had intended.

RP: As you say, you founded Hindawi with your wife Nagwa Abdel-Mottaleb. What role did Nagwa play in the creation and running of the company?

AH: Indeed, Nagwa and I co-founded Hindawi together in 1997. In the early years, Nagwa was involved in the day-to-day operations at Hindawi, in addition to her role in the strategic decision-making process.

Over the years, Nagwa shifted her involvement to several areas within the company. Although we didn’t have a formal division of responsibilities in the early years, I used to spend a significant amount of time on technical and business issues, while she would spend a considerable amount of time on building the management infrastructure and human resources of the company. For example, she worked on reorganizing the company every time we got to a new scale that made the previous organizational structure ineffective in one way or another.

Nagwa also created the Human Resources department and personally oversaw it for a couple of years. More recently, she initiated and led our efforts to get the [ISO 9001](#) certification.



Nagwa Abdel-Mottaleb

RP: Do you think it was an advantage or a handicap that you and your wife had no experience of scholarly publishing prior to founding Hindawi?

AH: It certainly would have helped to have had some experience with scholarly publishing at the time we started, but starting afresh without many preconceptions about how things are supposed to be done certainly has advantages, and it is also more interesting in many ways.

All in all, I can only say that I very much like the way that Hindawi turned out, both in terms of our approach to publishing and our internal organization. If Nagwa and I had had more knowledge of the industry it might have changed a number of things, and I am not sure whether I would have been as pleased as I am today.

Subscription journals

RP: As I understand it, you started the business by acquiring and launching subscription journals.

AH: We actually tried a number of things in the early days of the company.

Given that we had practically no money to invest, we offered publishing services to other publishers in order to earn money that we could then invest into our own publishing program. This also helped us in acquiring expertise and knowledge about the industry.

Another thing we tried was publishing conference proceedings, as they appeared to have lower barriers to entry than journal or book publishing. We approached a number of conference organizers and offered to publish their proceedings and make them freely available online, under what would today be called an open access model. We tried to convince conference organizers that this would make their conference more visible and the proceedings more useful to the scientific community.

However, we were not successful at this and couldn't really attract any conference proceedings to be published under this model.

RP: So how did you get into journal publishing?

AH: One of the conference organizers we approached was [Lokenath Debnath](#), who was the Chair of the Department of Mathematics at the [University of Central Florida](#). Lokenath had a journal that he had published independently since 1978 titled "[International Journal of Mathematics and Mathematical Sciences](#)." He was interested in moving the journal to a professional publisher to help it expand and flourish.

We were extremely lucky to come across this opportunity and I remain grateful to Lokenath for moving his journal to our new publishing program. We published the first issue of the journal in March 1999.

RP: This was a subscription journal.

AH: It was. At that time the journal had almost 200 subscribers with an annual subscription rate of \$110, for a total of about \$20,000 in subscription revenue as well as a similar amount in page charges, and it was publishing just under 100 articles a year.

Taking over this journal was an excellent start for our publishing program. Our focus after taking over the journal was to make it the best possible product on both the editorial as

well as the technical fronts. We started by digitizing the first 21 years of the journal, going back to Volume 1, Issue 1.

We also introduced reference links to the two most important mathematics A&I databases, namely Mathematical Reviews ([MathSciNet](#)) and [Zentralblatt MATH](#). In early 1999, I don't think even the American Mathematical Society was linking from its own journals to MathSciNet.

We were reasonably successful in growing the journal both academically and financially over the course of the next few years. Over the next couple of years, we launched a few new journals and we acquired a few others.

RP: What would you say was the most significant development in the early days of Hindawi?

AH: The most significant acquisition we made at the time was acquiring *International Mathematics Research Notices* ([IMRN](#)) from [Duke University Press](#) in 2001.

Duke University Press was the first client for our typesetting services back in 1998, the first client for our XML markup services, and the first client for our journal back volume digitization services.

I made my very first business trip to visit the Press in Durham, North Carolina in 2000, and I gave my first scholarly publishing presentation, titled "2010: A Publishing Odyssey," at an AAUP meeting organized by Duke University Press in 2001.

Duke University Press was at that time selling IMRN, and given that the journal was generating close to \$200,000 in revenue it was clear that it would sell for hundreds of thousands of dollars at the very least. The journal was a perfect fit for us, but there was no way for us to acquire it given our limited access to money at the time.

So in order to match the other bids that Duke received for the journal, we made an aggressive offer on a deferred payment basis, with the acquisition price to be paid over a number of years.

I am extremely grateful to the Press and especially to [Steve Cohn](#) for their trust and confidence in us, as they agreed to sell us IMRN on the deferred payment basis that we had proposed. This was the most significant journal acquisition that we had made up to that point, and it doubled our annual revenue.

RP: And clearly you did not stop there.

AH: Correct. We kept expanding our journal program via journal acquisitions and new journal launches, along with strong organic growth from a limited number of our journals.

The subscription revenue of the *International Journal of Mathematics and Mathematical Sciences*, for instance, grew from \$20,000 to almost \$200,000, and IMRN's subscription revenue grew from \$200,000 to over \$600,000.

A few other journals that we published had a good number of subscriptions, and our total subscription revenue had reached about \$1.25m in 2006.

Open Access

RP: What was it that drew you to OA?

AH: In the early years, we were very concerned with the fact that many of the journals we published had very few subscriptions. The most successful journal we published had about 250 institutional subscriptions. The journal was generating thousands of dollars per article, but these articles were not being read enough, at least in our judgment.

It was even worse for many of the less successful journals we had; many had two-digit, or in some cases even single-digit, subscriptions.

So in addition to not having enough subscription revenue to sustain these journals, we were very concerned about the readership of these journals. It just didn't feel right to call this publishing.

We tried a number of things to help improve the dissemination of our articles during this period. For example, we experimented with making the PDFs of our journal articles available for free in a non-printable format. The idea was to make the journal free for everyone to read, but still keep an incentive to subscribe.

We experimented with making the articles available to those who registered with us and requested that the article be emailed to them. We experimented with making the articles free to everyone during a certain period of the year. In fact, we experimented with nearly everything we could think of to increase the readership of the journals we published.

But in these early years we didn't experiment with what turned out to be the best opportunity of them all, open access.

Perhaps the biggest regret I have from building Hindawi over the past 15 years is the fact that we didn't move to open access sooner. If we did, it would have saved us a couple of years, but we didn't.

RP: Why was that?

AH: The reason we didn't move to open access sooner was mainly due to a few discouraging signs that we saw about the acceptance of publication fees among authors.

The first journal we published was in mathematics and had page charges that amounted to about \$200 per article. Our experience with this journal didn't suggest that our authors would tolerate significant increases in these page charges. Most of our editors-in-chief were concerned about introducing any page charges to their journals. Many of these journals were very new, and the page charges would have indeed made them less attractive to potential authors.

RP: So what changed?

AH: One of the journals that we acquired during the early years (from Springer) was called the *EURASIP Journal on Applied Signal Processing*. We started publishing the journal in 2001, with the support of the [European Association for Signal Processing](#), under the editorship of [Ray Liu](#).

Ray was a great editor-in-chief, and his contributions to the success of the journal during the years in which he was leading the journal were phenomenal.

Ray encouraged us to mimic the over-length charges that were required by [IEEE](#) and ask authors to pay about \$100 per page above a particular page limit. These charges seemed high to me at the time, but we started experimenting with them around 2002. Much to my surprise, authors were very accepting of these charges.

It was not too long before we thought that authors, at least in some communities like electrical and computer engineering, would be willing to support their articles' publication with enough page charges to allow us to make the articles freely available.

RP: In 2003, therefore, you began to experiment with [hybrid open access-journals](#), allowing authors to pay to publish in your journals to ensure that their work was made freely available on the Internet, even where it was published in a subscription journal.

AH: Yes, in 2003 we experimented with having optional page charges for a particular number of pages, and mandatory page charges above that number. Authors who paid the optional charges would have their articles published on an open access basis.

RP: Evidently you were sufficiently impressed with the results that you later converted Hindawi's entire portfolio of journals to gold OA – so any author publishing with Hindawi was required to pay an article processing charge.

AH: As you say, the experiment was successful enough to encourage us to move to open access. But this experiment was only a small part of the big picture, which included several angles.

RP: Can you expand on this?

AH: First, there was the subscription business angle. Although we had a certain amount of success in building our subscription program, after a couple of years it became clear that the subscription journal market is totally dysfunctional. It is probably the most dysfunctional market in the entire global economy.

RP: How do you mean?

AH: There was no way for a small publisher to build a truly global business at a large scale. The level of price inelasticity, and the non-substitutable nature of subscription journals, resulted in there not being an efficient market within which new journals can compete with existing titles for subscription revenue.

Second, there was the dissemination or accessibility problem. It simply was not acceptable to us to publish a paper in a journal with a few dozen institutional subscriptions, even if this was profitable. If you have a good product, it is natural to want your product to be used by the largest possible audience.

The third angle was our own strengths and weaknesses. Every organization has competitive advantages and disadvantages. We were aware that there are things that we excelled at, in comparison with our competitors, and things that we are not very good at as an organization.

In the early 2000s, it became clear to us that we are much better as a B2C business than a B2B business. For example, we were not good at building a sales force or fostering a strong relationship with libraries and library consortia.

On the other hand, we believed we did an excellent job in managing our relationships with thousands of authors, editors, and reviewers. It was becoming clear that open access would capitalize on our strengths and marginalize our weaknesses.

None of the above would have mattered if open access was not a viable business model, but once it became clear that open access can be a viable business model, there was not much hesitation.

RP: This had become evident to you as a result of the activities of other OA publishers I guess.

AH: Yes, in addition to our experimentation within Hindawi, we kept a close eye on the wider industry as well. The impressive growth of both BioMed Central ([BMC](#)) and the Public Library of Science ([PLOS](#)) positively contributed to our decision to switch our business model to open access.

RP: So you began the process of migrating your journals to OA. Can you talk me through that?

AH: In August 2004, we converted our first journal to a fully open access model, which was the [Journal of Biomedicine and Biotechnology](#).

A couple of months later, I was attending EURASIP's annual conference in Austria and I had the opportunity to discuss with EURASIP the conversion of the [EURASIP Journal on Wireless Communications and Networking](#) to open access. The journal was a recently launched title that had published only one issue at the time, and it became the second journal that we converted to open access.

We continued to convert our journals to open access over the course of 2005 and 2006. By the end of 2006, we had only six journals left under the subscription model. IMRN, which we had acquired from Duke a few years earlier, was the biggest of our remaining subscription titles, along with three much smaller spinoff titles.

IMRN was generating over \$4,000 per article and was clearly going to suffer if converted to an open access model. Mathematics is also one of the least well-funded subjects, which made it even harder to consider converting IMRN to open access. So, we decided to sell the journal, along with its three smaller spinoffs, to [Oxford University Press](#) in January 2007.

The following month we converted the remaining two subscription journals to open access and became a fully open access publisher. This was undoubtedly the best management decision we ever made at Hindawi, and we have never looked back.

RP: You said you were impressed by PLoS and BioMed Central. Nevertheless, converting all your journals to OA was a risky move.

AH: Yes, although, in hindsight, the decision to move to open access was clearly the right decision, at the time it was a major risk for us considering that in 2006 we were generating about \$1.25m in subscriptions and about \$0.5m in [Article Processing Charges](#).

Moving to open access was effectively going to kill about 70% of our revenue, and our average revenue per article was certainly going to drop significantly. So, when we decided to become a fully open access publisher it was unclear whether we would be able to survive on open access publication charges alone.

There was an additional financial difficulty that came with converting to open access. Subscription revenue usually comes a few months before the costs associated with it are incurred. We used to get paid in November and December for costs that would be incurred during the course of the following year.

With open access, we would be paid a few months after the costs associated with these articles started to be incurred. This would create a financing gap of about one year's worth of cash flow. It would have been almost impossible to overcome this difficulty; however the sale of IMRN to OUP generated a few million dollars that allowed us to bridge this gap.

No matter what the risks were, we were thrilled by the possibilities. Open access provided us with the opportunity to expand our publishing program in ways that were not possible under the subscription model.

In the subscription world, it is possible to have journals that are very strong academically but nevertheless fail to attract enough subscribers to make them viable. In open access, academic success and financial viability go hand in hand.

RP: *You say that you sold IMRN to OUP because you realised that its revenue would inevitably fall if it were converted to OA. You also said that when you decided to move to OA you realised that this would effectively kill about 70% of your revenue, and that your average revenue per article would drop significantly. What does all this tell us about the likelihood that many subscription journals will be converted to gold OA?*

AH: It is certainly difficult for journals that have a high revenue per article to convert to open access, since the currently accepted levels of article processing charges will not match the level of subscription revenue that they generate now. However, there are a couple of factors that might help bring these journals to open access.

The first factor is the increased recognition among researchers that having their research freely available is a good thing. Right now, only a small fraction of the journal literature is open access at the point of publication. But as this fraction continues to increase, many researchers will want their papers published on an open access basis.

Currently, most researchers really don't think much about why their articles are behind a subscription barrier, because most articles are behind a subscription barrier. It feels natural. It does not feel wrong or odd to put your papers behind a subscription wall that is controlled by a publisher. But if a large fraction of papers are published on an open access basis the situation may flip, and I would expect that many researchers will object to having their papers behind a subscription barrier.

The second factor is research funders mandating that articles arising from the research they fund be open access. This is sometimes called an external market force, but that depends on how you define the market.

If the market is the whole R&D sector, rather than the journal publication industry, then funder mandates are certainly internal market forces. Open access maximizes the return on investment spent on doing the research itself. I find it very natural that research funders would mandate open access. I would even find it irresponsible if they didn't.

I expect that the future is therefore more likely than unlikely to be fully open access.

The business

RP: *Hindawi has grown very rapidly: can you give me some sense of that growth in terms of journal numbers, staff numbers and sales. And can you say at what point Hindawi became profitable?*

AH: Ok. Let me give some numbers from early on, from the mid-2000s, as well as from the past couple of years.

We began publishing our first journal in 1999 and in that year we published a little more than 100 articles. In 2005, we had 21 journals and published around 1,300 articles. In 2010 we had 224 journals and published around 6,700 articles. Last year, we had 316 journals and published nearly 12,000 articles.

We currently have almost 400 journals and receive around 5,000 submissions a month. So, on average, each of our journals currently receives about 150 submissions per year. Given our acceptance rate of about 40% across our program, we expect to publish about 60 articles per journal this year, for a total of 24,000 articles.

With respect to employees, we hired our first staff in 1997. In 2005, we had 175 staff, and by 2010 this had grown to 345. We currently have over 600 staff and we are very actively hiring new employees to keep up with our growth.

RP: What about revenues?

AH: Our revenue in 2002 was around \$0.5m, and by 2005 it had grown to \$1.5m. Our revenue in 2010 was \$5.4m, and in 2011 was around \$12m, but that includes nonrecurring revenue from the sale of 12 journals that we sold to Springer in March 2011. We expect our revenue for the current year to be around \$12m, almost entirely from Article Processing Charges.

As for our profitability, it is very difficult to provide meaningful numbers about the first couple of years of the company. Our first financial statement after re-forming Hindawi as a shareholder company (which we did in mid-2001), came by the end of 2002 and showed a small profit margin. We have continued to be profitable every year since then and maintained profitability throughout our transition to open access.

RP: Is it possible to put some numbers on Hindawi's profits?

AH: Sure. Our net profit in 2011 was about \$2.3m. This figure does not include the nonrecurring income that was generated in 2011 as a result of the sale of the 12 journals to Springer. Our results for the first half of 2012 show revenues of \$6.3m with a net profit of \$3.3m.

RP: Can you say how many shareholders Hindawi currently has, and who they are? I assume the company is still registered in Egypt.

AH: The company is indeed registered in Egypt. Nagwa and I are the principle shareholders with 95.8% of the shares. The remaining 4.2% are owned by our senior management staff: Paul Peters (Chief Strategy Officer), Mohamed Hamdy (Editorial Manager), Fatma Sultan (Production Manager), Ahmed Awad (Head of Information Systems), and Hesham Youssef (Business Manager).

RP: You said that Hindawi's revenues now come almost entirely from article processing charges. What other sources of revenue does Hindawi have aside from APCs?

AH: We offer a print edition for many of the journals that we publish. The subscription revenue of these print editions is about \$200,000 for the current year, which is less than 2% of our total revenue.

Sometimes we also receive orders for hardcopy reprints of a particular published manuscript, but these are few and far between. Last year, reprint sales brought about \$40,000 in revenue, which is less than 1% of our revenue.

The remaining 97% or so of our revenue comes from articles processing charges.

RP: You also have [institutional membership and personal membership options](#). Can you say something about these, and how important a source of revenue you expect them to be going forward?

AH: The personal membership program is a new experiment that we started a few months ago to see if individual researchers would be interested in having an annual personal membership for a flat rate of \$3,000. We would then waive the article processing charges of any manuscript submitted during the next year where one or more of the authors are members.

So far, it does not look like this personal membership program is very appealing to authors. They seem to really prefer the simple, one transaction per accepted manuscript model and very few of these authors are interested in an annual membership. We are currently letting the experiment run its course, but it is very likely we will discontinue the personal membership program once we have enough data to confirm these early conclusions.

Our institutional membership program on the other hand is a couple of years old. It is based on a flat annual payment that is calculated based on the historical publishing pattern of the member institute with Hindawi.

We basically look at how much an institute spent, or would have spent, with us on APCs in the last 12 months, apply a standard discount of 10%, and use the resulting figure as a quotation for that institute's membership for the next 12 months.

So, institutions basically pay the costs of the previous year discounted by 10% as their cost for next year. We currently have 33 member institutes contributing about \$350,000 to our 2012 revenue, which is about 3% of our total annual revenue.

RP: Which do you prefer: membership schemes or single-transaction APCs?

AH: There are other institutional membership models used by BioMed Central and PLoS. In general, I am supportive of making open access easier for authors, and all institutional memberships certainly make it easier for authors to choose to publish in open access journals. But there is a downside to membership programs, especially those in which the institute covers the entire publication costs of an article.

RP: What is the downside?

AH: These programs, while encouraging more content to be published in open access journals, essentially remove the price sensitivity from the authors' decisions of where to publish. When authors pay the APCs directly from their research budget, they will almost certainly become more price sensitive.

This is not to say an author will publish a paper in a mediocre journal because the journal is free or inexpensive, but within a particular quality band of journals (both in terms of their academic quality and the quality of the services they provide), authors will prefer more competitively priced journals over those with significantly higher charges.

That is, of course, only if the authors are aware of the APCs of each journal, and if the money to pay for these charges is coming from their own research budget. If the APCs are paid by an author's institution or research funder in such a way that it does not impact their research budget, they would naturally pay much less attention, if any, to how much the journal charges for the publication of their paper.

So, if you believe that it is a good thing to have publishers compete on price within each particular quality band of journals, as I do, you wouldn't prefer for institutional memberships to be the primary source of revenue for OA publishers. You would want to keep authors in the loop and make sure they are making wise decisions about where to publish their articles.

RP: *I wonder what your experience in offering an individual membership scheme might tell us about the likely success of the new [PeerJ](#) service, which offers a lifetime membership model. Do you have any thoughts on that?*

AH: Well, I am sure we would have had higher success if we were charging \$99 for a lifetime membership rather than \$3,000 for a one year membership!

In the past, we tried a number of different pricing models for our APCs. However, we have realized how much authors appreciate the simplicity and transparency of the flat APC per accepted paper model. The PeerJ pricing model on the other hand is unnecessarily complex and will require a significant amount of administrative cost on the publisher's side, and an equal amount of administrative hassle on the authors' side.

If I were to make a guess, I would bet that PeerJ will switch to a simpler model in the future.

Pricing

RP: *Let's look in more detail at Hindawi's pricing. Your article processing charges appear to range from \$0 to \$1,500. Can you explain how you decide what to charge for a journal (is there a formula?), how Hindawi's pricing compares with other OA publishers, and why it differs from other OA publishers?*

AH: We don't have a formula that we use across our journal collection, but there are a few factors that contribute to how much we charge in each journal.

The most important factor is how well established the journal is; newer journals tend to have little or no article processing charges. The subject area of a journal is another factor; journals in the physical sciences tend to be priced at a lower level than those in the life sciences.

In addition, we publish a few series of journals that are devoted to the publication of particularly short manuscript types, such as [Case Reports](#) or [Dataset Papers](#), and the journals in these series are priced at a lower level.

For the most well-established journals that we publish, we tend to charge somewhere between \$1,000 and \$1,500 per article, which is comparable with journals from other open access publishers, but lower than most of the hybrid journals.

Across our entire journal collection, we currently collect around \$875 per article for those articles that are subject to article processing charges. If you include those manuscripts that we publish for free, the average goes down to about \$565.

RP: *I am not sure you answered the last part of my question: why do your charges differ from those of other OA publishers?*

AH: I guess I tried to convey that we are indeed less expensive than other OA publishers, but not as much as some people might think.

We try to be very competitive and we believe there is a reasonable amount of price sensitivity in the market that benefits publishers who price their journals more affordably.

RP: *I wanted to pursue this question because I know that Hindawi has been portrayed as being cheaper than other OA publishers (e.g. [here](#) and [here](#)). And the reason given for this is the availability of highly-skilled but lower-paid labour in Egypt. I believe you also located the company in the [Nasr City Public Free Zone](#), which I assume provides tax incentives. In other words, Hindawi's lower costs are viewed by many as the company's USP. Maybe that is not your view.*

AH: Our location does indeed enable us to be very competitive on price, but I don't think this is the main competitive advantage that we have in attracting high quality submissions from the scientific community. After all, if price was the only factor that authors cared about, they would publish in the thousands of journals that don't charge them any fees.

RP: *What then would you say was the company's USP?*

AH: I do not think that Hindawi has a single, specific USP. What we try to create and maintain is the highest possible quality and professional service in the industry, which includes a wide array of things.

RP: *Such as?*

AH: It includes, for example, having a well-designed, single-page submission process for authors to submit their manuscripts. It includes having attentive editorial staff members to keep in constant communication with the editors, authors, and reviewers throughout the entire peer review process. It includes ensuring a fast peer review process for all submitted articles, which is appreciated by authors of rejected and accepted manuscripts alike. It includes thorough copy editing and high quality production services for accepted manuscripts, including graphics enhancements, reference validation, etc. It includes having a world class Editorial Board for each of the journals we publish and making sure that each submitted manuscript is handled by the most appropriate editors. It includes having a simple and clean website that is not cluttered by advertisements, and which is equally search engine and human user friendly. It includes making sure our journals are indexed in all the appropriate secondary databases. It includes whatever we think our authors, editors, and reviewers would like to see in their favourite journals. Because, we indeed would like our journals to be considered by an increasing number of researchers as their favourite journals.

RP: *Can you give me some sense of how Hindawi's prices have changed over time, including the percentage difference between what you charged to publish in your first OA journal on launch, and what you charge to publish in that journal today?*

AH: Sure. The first journal we converted to open access was the [Journal of Biomedicine and Biotechnology](#) in August 2004. The article processing charge for the journal then was \$495 per article. Currently, we charge \$1,500 in this journal.

However, it would probably make sense to look at more aggregate numbers. In 2007, the year of our full open access conversion, we were charging an average of about \$750 per accepted manuscript. In 2011, we were charging about \$800 or so per accepted manuscript for those articles that were subject to publication charges.

If you include the manuscripts that were not subject to any APCs, these numbers would change to about \$600 per manuscript in 2007 and about \$500 per manuscript in 2011.

Editorial models

RP: *In November 2007, Hindawi announced a partnership to publish jointly with [SAGE](#) a portfolio of OA journals. This lasted for four years, ending in November 2011. What was the purpose of the partnership?*

AH: We wanted to combine our resources in creating a portfolio of open access journals, have a shared experience, and learn as much as we could along the way as we developed these journals together.

The original vision was for SAGE to do the market research, find an editor-in-chief for each new journal, work with the editor-in-chief to form the editorial board, and promote the journal to the scientific community.

Hindawi would, in turn, be responsible for handling all incoming submissions from the point of submission until the point of final publication, and provide the technology and infrastructure needed for that (e.g., our Manuscript Tracking System and Content Management System).

RP: *So what did Hindawi learn from the partnership?*

AH: In the first year or so, we launched three journals under this model, and during this phase a few things became clear. The first was that the whole process was not very scalable, as it took us quite a bit of time to develop these three journals.

The second was the fact that it is difficult to levy article processing charges at the very early stage of developing a journal.

The third was that it was becoming clear to us at Hindawi that the distributed editorial model that we started to use for many of our journals was working very well, and it was much more scalable than the editor-in-chief led model.

Since this distributed editorial model was working well for us, we discussed with SAGE a way to incorporate it into the partnership. We agreed to shift all of our development to this new model, in which Hindawi would be responsible for both the development of new journals and the handling of submitted manuscripts.

Under this new model, SAGE would contribute to the development of these journals by covering the cost of the article processing charges so that we can keep these journals free to all interested authors for a certain period of time.

The results of this experiment were very successful. We developed more than thirty journals during this phase of our partnership, and overall these journals are doing very well.

RP: *Why did the partnership end and what does its discontinuance mean for Hindawi?*

AH: From the beginning, our partnership with SAGE was intended to run for a limited period of time, after which point we would conduct a bidding process between us for each title in the collection in order for one party to acquire the other party's stake in each journal.

In 2011, we decided to conclude the partnership, and Hindawi acquired SAGE's stake in the 33 titles that were run using the distributed editorial model, and we continue to publish these titles today.

SAGE took over the publication of the three editor-in-chief led journals, which they continue to publish.

RP: *As you indicate, Hindawi has experimented not just with OA but also with editorial models. I believe you currently use a number of different editorial models for your journals, including the regular arrangement of having an editor-in-chief, and (as you have indicated) a distributed model (your community journals) in which there is no editor-in-chief. At one point you also introduced a product that you called the Scholarly Research Exchange – which operated somewhat like BMC’s [Biology Direct](#) – but subsequently discontinued it. Can you talk me through the different editorial models you use/have used, and what Hindawi has learned from experimenting in this way?*

AH: We no longer publish any journals led by an editor-in-chief, although this was the editorial model that was used for the first wave of journals that we acquired and launched during the early years of the company.

RP: *And this would be the traditional editorial model I think?*

AH: Yes. In its simplest form, we would have an editor-in-chief and a number of editorial board members. In its most complex form, we would have any number of editors-in-chief, managing editors, senior editors, advisory editors, honorary editors, associate editors, etc.

RP: *Talk me through how you moved from that model to the models you use today.*

AH: Most of the journals that we acquired had a somewhat ad-hoc editorial board structure and editorial workflow. This was either for historical reasons, or due to the personal preference of the editor-in-chief. Once we had a couple of dozen journals in our collection, it became clear that we needed a better way to manage our journals in a rational and systematic way.

We started trying to rationalize everything. We wanted to standardize the titles of the editorial board members as well as their editorial responsibilities. We also wanted to unify the editorial workflow used by each of our journals. Additionally, we wanted to enforce publisher-wide policies regarding what constitutes a conflict of interest that should prevent someone from reviewing a particular manuscript. There was a long list of things that we started to implement over the course of several years.

In the interests of transparency, we also wanted to publish our editorial workflows online, so that every author knew what happened to their submitted manuscripts, every editor and reviewer knew exactly what their responsibilities were, and every reader knew what happened in our peer-review process prior to the acceptance of each article.

This led us to want to publish the name of the editor who recommended the publication of each accepted manuscript in order to both acknowledge their invaluable contribution and to ensure that they were accountable for the papers they recommended for publication.

We also wanted to disclose the acceptance rates of each of our journals, the average time between submission and first decision, between submission and final decision, between submission and acceptance, and between acceptance and final publication.

In short, we wanted to rationalize everything we do. We also wanted to be as open, transparent, and accountable as possible.

It took us several years, but by 2007, our entire program was run in a very systematic way. During that year, Paul Peters and I were discussing the launch of a new journal that would cover all areas of physics, which was the widest scope of any of our journals at the time.

During our discussions about this new journal, we didn't feel confident that any individual researcher would be able to form a high quality editorial board or oversee the review process for a journal covering such a wide scope. So, we decided to set up the journal's editorial board without an editor-in-chief.

The idea was that the all the administrative responsibilities of the editor-in-chief would be transferred to our editorial department and all the scientific responsibilities would be transferred to the members of the journal's editorial board.

RP: This is what you call the distributed model?

AH: Yes, although I should point out that we did not invent this distributed editorial model. There are a number of journals that have been run in a very similar way for a number of years now, including the [Journal of High Energy Physics](#) and the journals in the [BMC Series](#) from BioMed Central.

Anyway, we started experimenting with this new editorial model in 2007 and it turned out to be very successful. Once we fully understood how to run the journals using this model, we started developing all of our new journals the same way. We then started shifting many of our existing journals to this new model.

By mid-2011, we had converted all of our journals that had previously been led by an editor-in-chief to this distributed editorial model, which is now used to run more than 200 of our journals.

RP: What about the Scholarly Research Exchange?

AH: In 2008, we decided to experiment with another new editorial model and launched Scholarly Research Exchange for that purpose. As you noted, the journal's editorial model was similar to Biology Direct.

Essentially, Scholarly Research Exchange was trying to be a platform rather than a regular journal; a platform that scholars can use to communicate their research findings and engage in discussions about them.

Within such a platform, the idea was that the publisher would have the rather limited role of instituting the rules of the system and ensuring that these rules are followed. It was basically a Web 2.0 platform for publishing and evaluating manuscripts with an additional monitoring function conducted by the publisher.

RP: But you subsequently closed the Scholarly Research Exchange. Why?

AH: It failed, big time. We had no choice but to discontinue it.

RP: Why did it fail?

AH: Maybe because it was too radical. Maybe because we didn't execute well enough. Maybe because the transparent peer review process was difficult for researchers to accept. I am not certain, but we learned one thing for sure: authors prefer a peer-review process with little overhead on them. Scholarly Research Exchange created significant overheads on its authors.

So in 2010, we took everything that we learned from the Scholarly Research Exchange, and launched ISRN, a new series of journals that employs a less radical editorial model in which every manuscript is sent to a number of editorial board members who collaboratively work to evaluate it. This new editorial model proved to have the right balance between innovation and tradition and seems to be working really well.

Currently, therefore, all of our journals are either run using the more traditional distributed editorial model, or this new collaborative editorial model.

RP: *Ok, so today you use two different editorial models, neither of which involves the use of an editor-in-chief. But can you outline in more detail for me how the distributed model differs from the collaborative model?*

AH: Sure. The distributed editorial model is the more traditional model. Every manuscript that is submitted to us is first screened in-house for obvious issues, including running it via [CrossCheck](#) for plagiarism detection.

Once the manuscript is cleared, it is sent to a member of the editorial board. The editor can reject the manuscript right away if they believe that the manuscript's quality does not warrant publication in the journal. Otherwise, they send it to a number of external reviewers.

We provide each editor with a list of several potential reviewers for the manuscript at hand, but the editor is free to select any reviewers from outside this list if they so wish.

The reviewers are then given a few weeks to review the manuscript and to submit their review reports. After that, the editor reads all the review reports and decides to either reject the manuscript, ask the authors to revise their manuscript based on the review reports, or to accept the manuscript.

If a revision is needed, the authors revise their manuscript, and then send it back to the editor for their evaluation of the revised manuscript.

RP: *How does the collaborative model differ from this?*

AH: The collaborative editorial model is more innovative and requires a number of editors to work on the same manuscript together.

Once the submitted manuscript is cleared by our in-house screening team, it is sent to a number of the journal's editorial board members. In the first phase of the evaluation process, the editors are really acting as peer-reviewers. Each editor reads the manuscript and submits their review report and a recommendation to either accept or reject the manuscript.

After this phase is complete, if the majority of the recommendations are to reject the manuscript, the manuscript is immediately rejected. Otherwise, the peer review process enters a second phase in which all the review reports are communicated to the editors. In this phase, the editors now act as traditional editors, in the sense that each editor is able to see all the review reports alongside the manuscript and is asked to make an editorial recommendation, which might or might not be the same as their earlier recommendation from the first phase of the peer review process.

If, after this second phase, the majority of the recommendations are to accept the manuscript, the manuscript is accepted. Otherwise, the manuscript is rejected.

I would add that an important aspect of our execution of both the editorial models we use is our reliance on data, without which we would not be able to direct submitted manuscripts to the most appropriate editors or suggest the most appropriate reviewers.

In order to be able to carry out these functions, we have licensed the underlying data from a number of secondary databases, including the three largest of these databases: [Web of Science](#), [Scopus](#), and [PubMed](#). Each of these databases contains tens of millions of records of published articles, and using this data we are able to computationally find the most appropriate editors and reviewers for every submission that we receive.

RP: As you say, your decision to dispense with editors-in-chief is not unique, but it is I think controversial. In 2008, physicist [John Harnad](#) wrote in [Physics World](#), “Although it seems to be trying to maintain adequate refereeing standards, the publisher [Hindawi] has chosen to automate its peer-review process, presumably in order to minimize production costs and keep publication charges to authors relatively low ... to a degree that has led to some corners apparently being cut.”

J Harnad added, “For example, roughly half of Hindawi’s 150 journals are dubbed ‘community based’ and have no editor-in-chief in charge, which means there is no-one with suitable scientific expertise determining the choice of the editorial-board members responsible for the selection of referees or overseeing the process. Correspondence with referees is also largely handled through an automated process of e-mail messages. These appear to be written, signed and sent by the board member, but that person may, in fact, have never seen or approved the text. If these procedures are continued unamended, and suitably qualified editors-in-chief are not appointed for these journals, it seems unlikely that many such board members will agree to continue providing their services.”

I assume J Harnad was referring to the first editorial model, not the ISRN model. But he seemed to be concerned with two issues: First, that Hindawi is (inappropriately) taking on responsibilities that rightly belong to the research community. And second, that the way the process works means that the authors will sometimes assume they are communicating with a fellow researcher, when in reality they are dealing with an unnamed Hindawi employee – a kind of sleight of hand. Could you comment on this?

AH: My understanding is that our manuscript tracking system basically works the same way as manuscript tracking systems of other publishers.

There are two types of email messages that are sent on behalf of the editorial board members. The first is the email message to potential reviewers that have been selected by the editor to review the manuscript at hand. The second is the email message communicating the editor’s decision to the authors of the manuscript.

In the second case, the editor will see the email message that is being sent on their behalf and has an opportunity to edit the message (e.g., by adding their particular criticism of the manuscript) and the editor’s personal email address is included in the carbon copy field of the message.

In the first case, we don’t carbon copy the editor on the email that is sent to potential reviewers because the review request email contains a private link that the reviewer can use to access their review reports forms within the system. So, along with each review request email that is sent, we send an independent email confirmation to the editor that the reviewer they selected was contacted on their behalf.

Each email message has both a personality name and an email address. These messages are sent with the editor’s name in the personality field and the email address of the editorial

office at the publisher's domain in the email address field. The recipient can easily recognize the name of the editor communicating with them, but can also easily recognize the email address of the journal at the publisher's domain. Our manuscript tracking system is used by tens of thousands of authors, editors, and reviewers, and we see no trace of misunderstanding by the recipients of these messages.

All other messages that are sent through the system, such as submission acknowledgements, reviewer reminders, thank you messages, etc., are sent in the name of our in-house editorial staff.

Completing the picture

RP: *Let's complete the picture of Hindawi's business before moving on. You mentioned earlier [Datasets International](#), a group of journals that publish dataset papers. You also have two "wide scope" journals called [The Scientific World Journal](#) and [Scientifica](#). Would I be right in thinking that the dataset journals aim to do something similar to [figshare](#), and the two wide scope journals are envisaged as potential mega journals (in the mould of [PLoS ONE](#))?*

AH: Our vision for Datasets International is to be a high-end platform for communicating datasets in all areas of science. By that I mean something more than a simple dataset repository where no processing at all happens on the deposited datasets before making it available to the research community. Datasets International will be the home for an array of subject specific journals.

Each dataset will be associated with a Dataset Paper that provides the necessary background and metadata of the dataset being published. We began developing Datasets International less than a year ago, and we are now at the stage of publishing the first dozen or so accepted articles.

The Scientific World Journal is a 10 year old journal that we acquired last year, and Scientifica is a new journal that we launched a few months ago. We do indeed intend for both of these to become mega journals like PLoS ONE.

RP: *What editorial model do the two wide scope journals use?*

AH: They both use the collaborative editorial model that we use for the ISRN series of journals.

RP: *Hindawi also [publishes books](#). I assume they are OA. Can you say how the book publishing works?*

AH: As I mentioned, in the early years at Hindawi we published a number of conference proceedings. These were intended to be freely available online at the point of publication, so in a way they were open access; although the term open access had not been coined at that time.

We also published a number of monographs and edited volumes in the mid-2000s, but these were not open access. We concluded that we would not be able to scale that business in a meaningful way and so decided to discontinue the book publishing program.

We currently make all of the previously published books freely available online, but we have no plans for publishing any future books.

RP: There has been a lot of discussion about OA books in recent years, with differing opinions on OA's applicability to books. What are your views on this? Is the OA publishing model only really relevant to journals?

AH: The concept of the journal as a brand is quite important to the success of open access as a business model. The journal brand is what makes open access publishing attractive to authors since they seek to publish in the highest quality journals they can get their articles into.

The journal as a brand is what prevents open access publishing from deteriorating into vanity publishing, since journal publishers need to build and maintain the brand of the journals they publish, and consequently need to employ strict editorial standards. The concept of the journal as a brand, as a stamp of quality, is the basic reason for the success of open access in this sector of the publishing industry.

There are certainly parallel concepts in scholarly book publishing, but they are not on the same level as those in journal publishing. Books tend to stand on their own, much more than journal articles. The parallel concept to a journal in the world of scholarly books would be either a book series or an entire book publisher.

Strong publisher brands within the book publishing sector may be able to create a gold open access program. If the desire of authors to get their books published within a particular book series or with a particular publisher is strong enough, and if the academic community cares as well about where the book has been published, open access could be viable as a business model.

There is of course the added complication that the level of processing charges that would be needed in order to publish a high quality book would probably be an order of magnitude higher than those needed for a journal article.

So, in my opinion it is much harder, but not impossible, to do open access book publishing as opposed to open access journal publishing.

RP: When talking about your partnership with SAGE you mentioned your manuscript tracking and content management systems. Rather than use one of the available commercial systems Hindawi developed its own publishing platform. Doubtless, this required a considerable investment, and clearly it requires ongoing investment. I realise that the various proprietary publishing platforms are far from cheap to licence, but do you think you might have saved money had you licensed one of these, rather than develop your own system? If nothing else, now that free open-source publishing platforms like [Open Journal Systems](#) have become available you would be in a better position to migrate to a lower-cost platform. Indeed, there are even blog-based scholarly publishing systems like [Annotum](#) available now. So I wonder if you regret having invested so much money in developing your own platform.

AH: I am extremely pleased with the way our systems are built and used by our staff, as well as by our authors, editors, reviewers, and readers. Back in the early 2000s when we started developing these systems, there weren't many good options for us other than building our own systems. However, even today, I believe we are better served by building our own tools.

One of the reasons for this is being able to build them in a streamlined way with extremely simple interfaces specifically tailored to our needs and the needs of our authors, editors, and reviewers. We value this simplicity more than anything else.

In addition, we have a number of highly integrated systems, including our Business Development System, Data Analytics System, Manuscript Tracking System, Content Production System, and Content Management System, which each need to integrate with one another.

The commercially available tools may be great for a typical journal publisher, but I doubt very much they would provide us with anything close to what we need. We are a very analytical business and the amount of data processing within our company is much higher than that at other publishers. Even if these available systems were able to provide us with some of our needs, we would still need to build a large number of tools for ourselves.

RP: *I believe all Hindawi journals are published under the [Creative Commons Attribution Licence](#). Not all OA journals use such a liberal licence; certainly, it is far from being the norm with hybrid OA journals. How important in your view is it for OA journals to be published under a liberal copyright licence, and why?*

AH: Extremely important, I would say. The worldwide expenditure on R&D is more than one trillion dollars a year. This is a significant amount of investment that is made annually to advance our knowledge as well as our scientific and technological abilities.

The business model used by publishers should be an enabler, rather than an impediment, to achieving such advances. I believe the liberal Creative Commons Attribution License is required to maximize the impact of scientific research. Unnecessary, and quite frankly unjustified, limitations create hurdles for the use of the scientific literature and lessen the value that the society gets from the underlying scientific research itself.

RP: *What are your views on researchers being able to text and data mine the contents of journals? What does Hindawi do to assist them in this?*

AH: I am a big supporter of anything that helps researchers fully utilize the scientific literature in their research in order to advance science. Text and data mining are a prime example in this area.

On our side, we implemented [OAI-PMH](#), so researchers, or even repositories, are able to retrieve metadata about our publications in a systematic and scalable way.

We also make the full [corpus](#) of the articles that we have published available in XML format for those who would like to obtain the full-text of all our articles in one go.

RP: *Do you plan to launch any new brands in the next two years? If so, what will be their focus?*

AH: No, we do not currently have plans for launching new brands in the foreseeable future. However, we have a series of about 30 journals that is devoted to the publication of Case Reports in all areas of medicine. This series is currently hosted on our main Hindawi platform and we plan to move it to its own platform in the next few months.



Hindawi's offices in Cairo

Impact

RP: *From what you said earlier, it is clear that Hindawi's wholesale conversion of its journals to OA was good for its bottom line. But is it possible to say whether the decision has seen an improvement in Hindawi's citations, or the Impact Factor (IF) of its journals? And can we say whether it has improved the quality of the papers it publishes?*

AH: We obviously care a great deal about the quality of our journals and keep an eye on a number of metrics related to the quality of the papers that we publish. One metric that we use is the average [h-index](#) of the most senior author of each published paper. That is, we take each published paper in our journals, compute the *h-index* of each of its authors, select the highest *h-index* for that paper, and then average this *h-index* over all published papers.

In 2006, which was the year just before our full open access conversion, this average *h-index* was 8.7. By 2011, this number had risen to 16.2, which shows a significant increase over the five years since we moved to an open access model.

Part of this increase may be attributed to the shift in subject area coverage within our program. But in general we attract higher quality papers today, from more senior authors, than we did a few years ago.

RP: *Your answer addresses the quality of the senior authors who publish in Hindawi journals. I wonder if you could clarify the situation with regard to the IF of Hindawi journals. If I understand the [information](#) posted on the Hindawi web site correctly, only around 30 of Hindawi's 400 journals currently have an impact factor. By contrast (again, if I understand correctly), around 120 of BioMed Central's 220 journals [have impact factors](#). If this is right, what should we make of this difference?"*

AH: There is no question that BioMed Central did an excellent job in getting these journals indexed in the Web of Science. However, one has to take into account that while BioMed Central launched most of their journal titles in the early 2000s, Hindawi did not really publish that many titles until more recently. In fact, of the journals that we publish today, there are only 39 that we published back in 2007.

RP: *While I realise that some people have started to use the h-index as a tool for measuring journal quality, the h-index was designed to assess the work of individuals rather than journals, and it is essentially a count of the citations received by an individual scientist, not a count of citations to the papers published in a particular journal. As such, the figures you cite would appear to be an index of the quality of*

individual researchers, not necessarily the quality of the papers they published with Hindawi. Would you agree? If so, is it not problematic to use the h-index as a measure of the quality of Hindawi's journals?

AH: One advantage of looking at the *h*-index of our authors is that it gives a more immediate indication of the quality of our journals. Citations, on the other hand, can take at least a couple of years in order to provide a meaningful indication of the quality of a journal.

I do agree with you that it is possible that we are able to attract senior researchers (as judged by their *h*-index), but that these authors are somehow sending us their worst papers. This is theoretically possible of course. However, I don't see anything that suggests this may be the case.

If you want a citation metric that is based on the papers published in our journals, and not on the authors of these papers, one number that you can look at is the percentage of articles that get cited once or more in the couple of years following their publication. 71% of the articles published in our journals in 2009 have been cited once or more since their publication according to Scopus, which is very good if I may say so myself.

RP: Citations are only one way of trying to assess journal quality, and there is no shortage of people who are critical of such statistical approaches. Another way of testing quality is to sit down and read some papers. My personal experience suggests that many OA papers tend not to have been meticulously proofread before publication. This is a different kind of quality issue of course, but if it is hard to understand what a researcher is saying in his or her paper, it is hard to benefit from their work, even if you do decide to cite it because it seems to be relevant. To try and get some insight into the textual quality of Hindawi papers I took a look at the three papers that were listed as newly published on Hindawi's front page today (8th September). These papers are [here](#), [here](#), and [here](#). Personally, I felt all three papers could have benefited from clearer language. The second one in particular struck me as really rather poor. Entitled "Herbal Products: Benefits, Limits, and Applications in Chronic Liver Disease", the first sentence of this paper reads: "Complementary and alternative medicine soughts and encompasses a wide range of approaches; its use begun in ancient China at the time of Xia dynasty and in India during the Vedic period, but thanks to its long-lasting curative effect, easy availability, natural way of healing, and poor side-effects it is gaining importance throughout the world in clinical practice." I did not feel that the text improved as I read on. Would you say that the quality of this particular paper is good enough? And how representative would you say it is of the quality of Hindawi papers?

AH: I took a quick look at this article, and I indeed agree that the quality of the English in this manuscript is not as good as it should be, particularly in the opening sentence that you quoted. Although we do provide copy editing for all accepted manuscripts, the fact is that there is still variation in the resulting quality of the English usage among our published articles.

In regard to the scientific content of the article, it would be difficult for anyone who is not an expert in this field of research to give an informed opinion about this. However the authors of this manuscript seem very qualified to write a review on chronic liver disease, which is the research area covered by this review article. According to Scopus the senior author on this manuscript has published more than 100 articles relating to liver disease over the past 30 years, and has an *h*-index of 25.

While it is true that the publication records of the authors of this manuscript are not necessarily indicative of the quality of the manuscript itself, it is the best proxy that I have

since I am not qualified to assess the scientific content of this article. However, given that the manuscript underwent external peer review and was subsequently recommended for publication by an Editorial Board Member of the journal, I have no reason to question the scientific merit of this article. I would still agree that the quality of English in this article is not as good as it should be, and I believe that most of the articles that we publish do have significantly better English than the sentence that you quoted above.

As for the other two articles, I do not see any problems either with their content or their English usage. While the language of these articles may not be particularly eloquent, this is largely unavoidable given that they are research articles focused on very technical subjects (insulated gate bipolar transistors in one case and glyphosate resistance within a particular strain of weed in the other case).

RP: *We mentioned The Scientific World Journal. I understand this journal was recently excluded from the Journal Citation Reports ([JCR](#)). Can you give me the background to this, and say why it was excluded?*

AH: We acquired *The Scientific World Journal* in late 2011. A few months ago it was brought to our attention that two articles were published in the journal with excessive citations to a journal titled [Cell Transplantation](#), both of which were peer reviewed under the previous management of the journal.

The two articles were authored by members of the editorial board of *Cell Transplantation*, and their review process had been overseen by a former member of the journal's editorial board who is also a Section Editor for *Cell Transplantation*.

RP: *What has been Hindawi's response to this?*

AH: When we learned about these two articles, we took every step we could to remedy the situation. We retracted the two articles on the grounds that they violate our anti-citation manipulation policy, we applied sanctions against those involved in these two cases, and we developed in-house computational tools to look for similar patterns of citation distortion in all future submissions prior to beginning the peer review process.

From what we were able to determine, the previous editorial leadership of the journal was not involved in facilitating the citation manipulation that took place. Moreover, *The Scientific World Journal* did not receive any unusual citations from *Cell Transplantation*, and in fact throughout the entire history of the journal, *The Scientific World Journal* has only received one single citation from *Cell Transplantation*.

As such, the characterization of this situation as citation cartel, which was the description used in a [blog post](#) on [The Scholarly Kitchen](#), is categorically incorrect.

RP: *Do you agree with Thomson Reuters' decision to exclude The Scientific World Journal from the JCR?*

AH: While it is very regrettable that *The Scientific World Journal* didn't receive an Impact Factor in the current JCR, we fully understand and support Thomson Reuters in taking a firm stance against citation manipulation in general, and we are in communication with them to explain the whole situation of this particular case in order to get the journal back into the JCR as soon as possible.

We believe that citations are an important part of the scientific record and we have zero tolerance for any form of unethical behaviour, including citation manipulation.

RP: Do you think that citation abuse like this is more or less likely to occur in journals that do not use editors-in-chief in the manner of Hindawi?

AH: We recently applied the computational tool that we developed in-house for detecting possible cases of citation manipulation to the published literature from the past couple of years and have found a few dozen cases of extreme citation distortions within journals that are included in the Journal Citation Report.

Many of these cases are articles written by the editors-in-chief of the journals themselves. I think it is understandable that editors-in-chief have a strong desire to see their journals get as a high impact factor as possible. And it looks to me that some of them at least don't believe it is unethical to publish an article that "reviews" the last year's volume of the journal, or publish an article that performs a "bibliometric study" based solely on the last year or two of their journal!

Apart from abuses by editors-in-chief themselves, most other forms of citation manipulation require some sort of coordination between the authors of the offending article and the handling editor of that article. This can happen in different ways, but allowing the authors to indicate or suggest the editor who should handle their submission seems to me to be the largest vulnerability.

This is one of the reasons why we do not ask submitting authors to suggest reviewers or editors who they would like to review their manuscript, and we actively check for potential conflicts of interest between the authors of a submitted manuscript and the editors who are put in charge of the manuscript's review process.

I believe the editorial models that we use in running our journals have the least possible chance of exposing their journals to such cases of citation abuse, particularly when combined with the active screening that we now perform on all submissions to check for any cases of citation manipulation prior to beginning the peer review process.

RP: The JCR is a private journal evaluation system operated by the for-profit company Thomson Reuters. The proprietary nature of JCR, and the secrecy surrounding some of its workings, has been a source of criticism within the research community for some time now. What are your views on this issue, and do you think the criticism of JCR is relevant to what happened with The Scientific World Journal?

AH: I don't think there is any secrecy surrounding the impact factor. The impact factor is a well-defined metric that is computed based on a well-publicized mathematical formula. I don't have any reservations about the JCR or the impact factor in and of itself.

However, I do have criticisms of Thomson Reuters that centre around two issues.

RP: What are these?

AH: The first is related to the quality of the data within their databases. In particular, the quality of their links between citing articles and cited articles is terrible.

I understand it would be expensive for them to clean up their data so that citations between articles are properly recognized for all articles within their database, but this is essential in order for products like the Web of Science and the JCR to be truly reliable and authoritative.

My second criticism is that they have a low degree of consistency in a number of areas. The most important is their evaluation of journals to include in the WoS and JCR. I really think that they should be more consistent in their evaluations of which journals to accept and

which to reject, and to base these evaluations on objective metrics with a much greater degree of transparency than what they provide today.

In addition, they should be more consistent in analyzing journals for cases of citation manipulation, and in the exclusion of these journals from the JCR when cases of citation manipulation are found to have occurred.

Challenges

RP: *In a recent Ithaka [case study](#) of Hindawi it states, “To achieve its financial goals, Hindawi has had to shift its emphasis from building a subscriber base to increasing the volume of articles published and setting fees that cover costs.” It also says, “Because Hindawi’s revenue model depends on the number of articles published, the company experiments constantly with ideas for new journals, with a focus on launching those journals rapidly.” What sort of challenges does Hindawi face in having to keep launching new journals (and rapidly), and to constantly increase article volumes, particularly as more and more competitors enter the market?*

AH: There is nothing wrong with being a small or medium size business. If we were to stop growing today our costs would go down, our margins would go up, and we would be able to continue running the company quite comfortably. However, this is not what we want. What we want is to become a large publisher. What we want is to be impactful. What we want is to make a dent in the universe.

Having said that, it is obviously naïve to think that launching new journals, in and of itself, means growth. There are many metrics one can look at, but the number of journals should not be one of them.

Back in the early 2000s, we set a goal for ourselves: “10 by 10.” The goal was to publish ten thousand articles in the year 2010. We obviously also had goals related to improving the quality of our journals and our publishing services, but as far as our size, we had the simple, aspirational goal of “10 by 10.” We only missed that goal by a few months; we published less than ten thousand articles in 2010, but more than ten thousand articles in 2011. The number of journals in our collection was never a metric that we were very concerned about.

Our new aspirational goal is “10 by 20”. That is, publishing 10% of the annual number of articles worldwide by the year 2020. This means we need to grow by a factor of 10 or so over the next 8 years.

RP: *In other words, your focus is on the number of articles you publish, not the number of journals?*

AH: Correct. What truly matters is not the number of journals that a publisher has, but the flow of high quality manuscripts that they can attract.

Nevertheless, we do need to provide the scientific community with enough venues for publishing their work. Authors have a range of needs and expectations for the journals that they prefer to publish in.

Some authors prefer to publish in wide scope journals that cover a broad field of research. Our [Journal of Applied Mathematics](#), for example, received almost 2,000 submissions in the last 12 months, and it will probably publish about 2% of the 30,000 to 40,000 articles published in Applied Mathematics this year.

Other authors prefer journals that are much narrower in scope. Our [*International Journal of Antennas and Propagation*](#) received about 500 submissions in the last 12 months and it will likely publish about 250 out of the 4,000 or 5,000 articles published in this field of research this year. This represents an even larger market share within this particular community, but we would need to have at least a couple of hundred journals of this size to cover all fields of science.

As a publisher, we would like to have enough successful journals to be able to address the entire market, including many journals that cover a relatively small subject area. Even within the same subject area, we may need multiple journals that are differentiated by their editorial model, manuscript types, etc.

RP: *You will understandably be pleased that Hindawi is doing so well. But I wonder how you might respond to someone if they suggested that the growth Hindawi is experiencing is being driven more by the needs of a commercial company to make money than by the needs of the research community to communicate research?*

AH: I see no contradiction between our desire to make money and serving the needs of the scientific community. We make money by serving the needs of the scientific community. Simple and clear!

The way commercial businesses work in general is by creating a value for society, and in the process of doing so capturing part of that value for themselves. In competitive markets, the value created by a business for society far exceeds the part that is captured by the business itself. In some situations, a business might create a large negative externality (e.g., environmental pollution) that requires government intervention; but overall, successful, profitable businesses are beneficial to any society.

In 2012, Hindawi will publish about 20,000 articles with total revenue of about \$12m. If these 20,000 articles were to be published by existing subscription publishers, it would cost the scientific community about \$80m to \$100m; and these articles would not have been made open access. I like to think that this represents a significant saving for the scientific community and that it is in society's best interest for companies like Hindawi to flourish and expand.

RP: *Given the flood of new OA publishers setting up shop today, and the increasing number of subscription publishers migrating to OA, the market will surely soon be saturated. Presumably therefore there is a limit to how much Hindawi can grow in the future?*

AH: I have heard the assertion that we don't need new publishers or new journals within the scholarly publishing industry many times before; that we have enough publishers or enough journals already; that we would be better off with no new entrants into the market. I find this very difficult to understand. I never heard anyone asserting that we have enough automakers, or airlines, or software companies, or scientific equipment manufactures! Never.

As consumers, we love to see more competition, new entrants, new products, etc. Always. Except when it comes to scholarly publishing!

The potential for abuse

RP: *In speaking about OA books you said that it is journal brands that prevent OA from deteriorating into vanity publishing. As you will know, this is an issue that metadata librarian at the University of Colorado Denver [Jeffrey Beall](#) takes an interest in. Beall maintains a list of what he calls "predatory OA publishers" – which he [describes as](#)*

publishers that “unprofessionally exploit the gold open-access model for their own profit”. At one time Hindawi was on Beall’s [watchlist](#) – on the basis, as he put it, that it has “Way too many journals than can be properly handled by one publisher.” Many criticised him for this, although some supported him. Beall has subsequently discontinued his watchlist, but Hindawi’s ISRN [is still listed](#) by Beall as a predatory publisher⁵⁹. What are your views on Beall’s list, the fact that ISRN is on it, and what is your opinion of Beall’s criteria for describing some OA publishers as “predatory”?

AH: I am not sure what I can say about this given that it is not clear what criteria is used to create this list of predatory OA publishers. I am proud of the fact that we have four hundred journals that are both healthy and well managed, and so I cannot understand how this is something that is being held against us.

As for ISRN, I obviously would have preferred if it was not included in this list, but I am not sure what criteria were used to categorize ISRN in this way, and so I cannot really comment on it.

RP: *If it helps, when I contacted Beall, he said, “ISRN stands for ‘International Scholarly Research Network.’ I think it is deceptive to call something a network when in fact it is just a publisher’s brand. To me, ‘network’ implies a system for interaction, and the brand doesn’t really supply that. I’m also sceptical of their policy of not having editors”. Given Beall’s comment, do you have any further thoughts on his decision to include ISRN in his list of predatory publishers?*

AH: Unlike words such as Society or Association, I don’t think the word Network has any particular established academic meaning that makes it inappropriate to use as an imprint or brand name for a journal publisher.

We have never thought that anyone would be confused about who we are or what we do when they visit the ISRN website. CNN stands for Cable News Network, but I am not sure what the “system for interaction” is that CNN provides. PLoS stands for the Public Library of Science, but as a publisher they are certainly not a library. But I don’t think anyone gets confused about what CNN is or what PLoS is. The same goes for ISRN, I believe.

As for not having editors, this is not true. As I explained, each of the journals in the ISRN series is run by a world-class editorial board of senior researchers who are experts in the subject matter of the journal.

RP: *One of the most common complaints one hears about OA publishers is that in their rush to grow they constantly bombard researchers with spam messages inviting them to join editorial boards and/or submit papers. Hindawi itself has been accused of this (e.g. [here](#)). It has also been accused of bulk-emailing badly targeted invitations (e.g. [here](#)). It is for this reason that some researchers supported Beall’s inclusion of Hindawi on his predatory publisher list. As one [commented](#) at the beginning of this year, “At least in terms of spam I receive, I think it makes sense to keep Hindawi on the watch list.” Can you respond to these criticisms, say exactly how Hindawi recruits researchers, and indicate roughly how many invitations are sent out each week?*

⁵⁹ As noted in the introduction, Beall recently removed ISRN from his list of predatory publishers. I became aware of this after I had asked Hindawi this question (and after I had received his reply). When I contacted Beall to ask about his decision he explained, “Despite their misuse of the word network, ISRN was always a borderline case anyway. It has been more difficult for me to classify it as predatory.” He added, “I think my inclusion of ISRN may have hurt my credibility regarding classing the others as predatory.”

AH: I obviously recognize that there are a number of academics who are annoyed when they receive unsolicited email messages announcing a new journal, a special issue, or a scientific conference. On the other hand, I believe that most academics are happy to receive announcements that are relevant to their research interests provided these messages are not excessive.

Although I prefer not to give an aggregate number of how many messages we send, I can say that the typical researcher received about three email messages from us in the entirety of 2011.

We take great care in making sure these messages are as close as possible to the subject areas of the researchers that we contact, and in cases where a researcher prefers not to receive similar messages in the future, we most certainly honour their request.

RP: *Is it possible for a gold OA publisher to avoid spamming researchers if it wants to grow rapidly?*

AH: Whether or not it would be possible to avoid using email as a way to raise awareness about a new product or a service within our industry, I don't think this issue is particular to open access journals.

For example, it would be very difficult to organize a new scientific conference without the ability to email potential participants of the conference. In addition, I think most researchers would appreciate being informed about such a conference provided that it is within their field of research, and would prefer an email announcement to other forms of communication, such as phone calls or physical mailings.

RP: *Recently, Beall also [commented](#) on the [messages](#) that ISRN has been emailing to researchers inviting them to contribute “spotlight” articles. These are described as review articles, and invitees are told that they must contain 100-300 citations. In return, authors are offered \$1,000. The recipient of one of these invitations – Dr [Colin McLeod](#) – is quoted by Beall as saying, “It turns out that the journal in question is in the process of being launched and as yet has no articles listed on its home pages. This makes me wonder whether this is a new twist on the standard commercial open publishing operation. By inviting, and indeed paying for, review articles from people who are well known (and possibly even respected – whether I am respected in my field or not is up to others to judge!), they can quickly gain a level of acceptability, something that I presume is becoming ever more difficult as more and more people become aware of how much of a scam these journals can be. It might also ensure that the articles are well written, relevant, and therefore, well cited, helping to provide a higher impact factor.” Can you comment on this, and say something about the objective of these invitations, and how you target the recipients?*

AH: There is nothing new about commissioning review articles and offering an honorarium to researchers willing to take the time to write them. It is a common practice and I am not sure what the downside of it is.

Our objective is simple, to publish well-written, comprehensive review articles that readers will find useful to read. Yes, this will hopefully raise the awareness of the journal that publishes these review articles. Yes, these articles might get cited, which will enhance the journal's reputation as well. Do I see anything wrong with that? No.

As long as the articles are peer-reviewed, just like any other articles, and as long as we make them open access under the creative common attribution license, just like other articles, I do not see why anyone would be concerned about us publishing solicited review articles.

Subscription journals that commission similar review articles get the same benefits that we do, in addition to thousands of dollars in subscription revenue. I don't have any particular objection to that, but it seems odd to me that there would be concerns about an open access publisher doing the same thing and then making these articles freely available for anyone to read.

We are planning to publish a handful of these spotlight articles in most of our journals each year, and we are soliciting these articles from the top one to two per cent of academics within the subject area of each of these journals.

RP: *Whatever Beall's views on Hindawi, do you agree with him that some OA publishers engage in questionable business practices? If so, what characteristics have you observed that you personally view as unethical, or at least undesirable?*

AH: Yes, I do accept that some OA publishers engage in questionable business practices and I also do accept that the potential for abuse under the open access business model is higher than that under the subscription model.

The most important characteristics that I find undesirable are the lack of professionalism in forming editorial boards of journals and in handling the peer review process of submitted articles.

In some cases, we have seen journals that have their entire editorial board composed of editors whose last names start with the first one or two letters of the alphabet. It looked like the publisher formed the editorial board by listing the first few names from some sort of directory!

In another [case](#), a journal accepted computer generated nonsense that looked like a scholarly paper! So, clearly no peer review process had actually been performed before the paper was accepted for publication.

RP: *Hindawi is a founder member of the Open Access Scholarly Publishers Association (OASPA). I think it fair to say that OASPA has not managed to tackle the problem of unethical and undesirable behaviour that some OA publishers engage in. Whatever one might feel about Beall's criteria, when I interviewed him recently he said he currently lists 38 independent journals and 111 publishers as being predatory on his site. He added that he is adding 3-4 new ones each week. In fact, OASPA has been [accused](#) of harbouring predatory publishers. Certainly, two publishers have withdrawn from the organisation after becoming embroiled in controversy. Would you agree that OASPA has failed to address the problem adequately?*

AH: I believe that OASPA is doing a good job of ensuring that its members adhere to the organization's [code of conduct](#), and in cases where complaints about one of its member organizations have been brought to the attention of OASPA they have been investigated.

As to whether OASPA has adequately addressed the problem of unethical or undesirable practices by OA publishers who are not members of OASPA, I don't think this is something that one can reasonably expect OASPA to do. At the end of the day, OASPA is a voluntary membership organization without any authority to prevent organizations who are not OASPA members from publishing an OA journal.

In the future, it is certainly possible that research funders and/or universities may require their researchers to submit only to journals published by OASPA members if they would like to use their research budget to pay for any article processing charges, which would create a strong incentive for all open access publishers to join OASPA.

In the absence of any such mandate from research funders and universities, OASPA will continue to work on bringing in new members on a voluntary basis and working with these members to ensure that they uphold best practices.

RP: You may know [Charles Greenberg](#), a Yale University librarian who runs a blog called [openbiomed](#). Greenberg writes regularly about predatory publishers, and he suggested I ask you the following question: “Do you think the [plethora of questionable publishers](#) is diluting the collective reputation of open access research? Can OASPA start to provide more oversight or a ‘seal of approval’ similar to the Health on the Net Foundation Code of Conduct ([HONcode](#)) that serves as a benchmark for credible medical and health Web sites?”

AH: As I said, I think OASPA is doing a pretty good job of ensuring that its members follow best practices, and in that sense OASPA membership can be seen as a “seal of approval.”

However, in order for a seal of approval to be useful for the purpose you described, millions of researchers around the world would need to be convinced to actively look for this seal of approval prior to working with or publishing in a given journal, which would not be an easy task.

RP: Greenberg is also a proponent of open reviewing. In a blog [post](#) earlier this year he suggested that one way of addressing the problem of predatory publishers might be to embrace open peer review. Why, he asks, does not Hindawi become a leader by jumping on this bandwagon? “Secret peer review,” he added, “is the Achilles’ heel of subscription publishers with the number of retractions coming out now”. Does Greenberg have a point?

AH: I personally find transparent peer review (which is the term I prefer to use in describing a peer review process in which the review reports and the identity of the reviewers are published alongside the accepted manuscript) very attractive.

Transparent peer review can be equally well applied to subscription or open access journals, since open access is really about a journal’s business model, not its editorial model. We have tried transparent peer review in Scholarly Research Exchange, and our conclusion was that those academics who like it really like it, but the majority of academics are not really comfortable with it.

I believe what we currently do in all of our journals, which is to publish the names of the academic editors who handled the submitted manuscript and recommended its publication along with the manuscript itself, is the next best thing. It is what we found to be the maximum transparency that academics are currently comfortable with.

RP: Does Hindawi issue retraction notices when articles it has published are withdrawn? If so, where do these notices appear? And how many articles have been retracted in the past two years?

AH: In the past two years, we have retracted a total of 8 published papers.⁶⁰ We have [publicly available web pages](#) listing all retractions that we have issued in the past.

In addition to this page, the retraction notice is displayed on the web pages of the retracted articles.

⁶⁰ Fifteen papers have been retracted in total.

The transition

RP: *If you are right to say that the future is more likely than unlikely to be fully open access then it seems to me a key issue is how the research community makes the transition from a subscription world to an OA world. As you know, the UK [Finch Report](#) was published recently. This follows the deliberations of a committee set up last year by the UK Minister for Universities and Science [David Willetts](#), who tasked it with establishing how access to research could be expanded. The report recommended that the UK move unilaterally to OA, and that it do so by means of Gold OA. This has proved highly controversial, not least because the Committee estimated that it would cost an additional £50 -60 million a year. Consequently, some OA advocates have complained bitterly that the Committee succumbed to lobbying by publishers. Meanwhile, research-intensive universities like UCL are [complaining](#) that they will have to find new money to enable their researchers to publish their research without any additional funding from the government, at a time when their budgets are under huge pressure. Yet others complain that, if implemented, the recommendations will allow subscription publishers to exploit the hybrid OA model to “[double dip](#)” (i.e. earn revenues from APCs while continuing to charge subscriptions). From the perspective of Hindawi I assume Finch is good news, but I would be interested in your views on the Report?*

AH: I agree with the recommendations of the Finch report in general and believe they can help move the scholarly journal system to open access. I don't share the beliefs of those who argue that [green open access](#) can be a long term solution on its own. And even if it was, and I am not saying that it is, would this actually be desirable?

RP: *Green OA advocates argue that green is a better approach since it means that researchers can continue publishing in subscription journals but provide OA by self-archiving their papers in their [institutional repository](#). Since this is often done after an embargo period, the assumption is that subscriptions will not be cancelled, and so publishers will continue to be able to recoup their costs.*

AH: Yes, but is it desirable to have a system where publishers publish journals and sell subscriptions to libraries that are not actually needed in order to access the content that is published in these journals? Given how broken the current subscription market already is, it is hard to imagine what would happen if library subscriptions were to become a kind of voluntary payment rather than a true value-based transaction.

In contrast, a [gold open access](#) model can provide full open access to the final published version of scholarly articles, while at the same time forcing publishers to compete with one another both in terms of price and in terms of the value added services that they provide.

RP: *What about the danger that by using hybrid OA subscription publishers will be able to “double dip”?*

AH: I sympathize with the concerns regarding “double dipping,” but I think double dipping is unfortunately one of the many manifestations of the dysfunctional nature of the subscription journal market. If I publish 20% of a journal's content under a gold open access model, but keep the subscription rate the same, this amounts to raising the subscription rate of the toll access part by 25%.

If there was true competition within the subscription market, this price increase would cause many libraries to cancel their subscription to this journal and in its place subscribe to a more affordably priced journal. However, given that 80% of the articles in this hypothetical journal are not open access, and very well may include content that a library

needs to subscribe to, libraries will have little choice but to continue subscribing to the journal until the quantity of toll access content in the journal is negligible.

This is anything but a functional market.

RP: You think this is a transitional issue alone?

AH: Yes. I understand the concerns about the about the high cost of transitioning to a gold open access model, but these can be avoided only if we are willing to come up with radical ways of inducing a sharp and immediate transition to open access. Given these transitional costs, I would think that it is a good idea to shorten the time frame for the transition to an open access future rather than extending it.

RP: *Clearly there are two ways of looking at Finch: first, one could argue that the extra money it envisages being needed will simply be a transitional cost required to enable the UK research community migrate to OA, after which prices will fall; second, one could argue ([as does Keith Jeffery](#)) that OA publishing will be no cheaper than subscription publishing. Can you envisage a scenario in which the consequences of governmental intervention (as advised by the Finch Report) might enable subscription publishers to convert to OA but lock their current revenues into the new environment in the process? After all, the Finch recommendations appear to have been made partly in order to protect publishers from the market pressures you expect to characterise the OA publishing market.*

AH: There are two issues here. The first is whether open access publishing is going to be as expensive or even more expensive for the academic community than the current toll access system. The second issue is about the cost of the hybrid system that we have today in which open access and toll access coexist, whether within the same journal or within two different groups of journals.

Regarding the first issue, it is my belief that open access is a much more competitive market, that journals within the same quality band will have to compete on price, and that the system will prove to be significantly less expensive to the academic community than the current system. I have no doubts in my mind about this.

Regarding the second issue, I agree that subscription publishers are likely to be able to retain their current revenues from their subscription business during the transition to open access.

As I said, this is one of the manifestations of how broken the journal subscription market is. If we had a functional market, you would not have to worry about subscription publishers lowering their subscription prices as the amount of toll access content they publish goes down. If we had a functional market, librarians would simply be able to cancel those journals that don't lower their subscription rates as the amount of toll access content they publish goes down.

But librarians don't have this ability, because their patrons need to access this toll access content at whatever cost the publishers demand, because every publisher has a complete monopoly over the toll access articles they publish.

RP: *There has been a great deal of debate about the first issue, and opinions are sharply divided. Can you expand on why you believe that OA publishing will prove cheaper than subscription publishing?*

AH: Yes. It is absolutely clear in my mind that open access publishing will be significantly less expensive than toll access publishing. My best guess would be that the cost of the

journal publishing system will go down by a factor of 2-10 as we transition from where we are today to a fully open access future.

You wouldn't see this drop in cost if you took a single publisher and tried to analyse what their cost would be if they switched to open access. Most of their costs would remain largely the same. There may be some cost cutting on print and distribution or sales staff, but nothing really significant. However, the big change will come because open access is a much more competitive market than the subscription market.

In the subscription business, there is almost no direct competition between journals on the basis of price. Every publisher has a complete monopoly over the articles they publish, which at its core is the very meaning of a copyright.

If I was a mathematician and wanted to read the proof of a particular theorem I came across in my research, that proof is published in a particular paper and I cannot just read any other paper, I need this particular one. I am basically, as a consumer, at the mercy of that publisher, since no one else can give me a substitute for what I need.

That is why having a subscription to *Science* is not a substitute for having a subscription to *Nature*. That is why having a subscription to JAMA is not a substitute for having a subscription to NEJM.

Simply put, this is a dysfunctional market.

Market failure

RP: *Your point about subscription publishing goes to your earlier reference to the price inelasticity of the subscription model, and the non-substitutable nature of subscription journals. It also reminds me of what antitrust economist Mark McCabe [said to me in 2002](#). STM publishing, he said, is “a true market failure”. I suspect this is now a widely-held view.*

AH: Indeed, the market failure of the subscription journal market is more widely recognized today than a few years ago. However, there are many who don't recognize the economic basis of this failure. They simply assume since the toll access business model produced a market failure, open access will produce a similar market failure. But the root of the dysfunctionality of the market is the business model, not the publishing activity or the financial incentives of the publishers.

One of the thought experiments that can illustrate this dysfunctionality is the following. Imagine there are ten publishers of subscription journals with similar scope (e.g., oncology) in a single room. The ten journals will not be exactly identical, of course. There would be some variations in their quality, number of articles, how much they charge their subscribers, their exact scope, etc. But think of them as journals that compete in this subscription world. The library budgets are strained and the publishers are not able to charge more than last year, because the libraries simply don't have the money to pay them.

Now imagine one of the publishers announces that they are cutting their price in half. Or even going open access, effectively dropping their price to zero starting immediately. In any competitive market there would be an outcry from the other publishers in the room. Everyone would be in horror. The pressure that this would put on everyone else's prices would be enormous. Everyone would feel that they will be displaced out of the market; that they will lose their market share quickly, if not immediately.

Not in the subscription journal market. In this market, everyone will cheer. Having one publisher cut their price or convert to open access will relieve pressure on library budgets a little, and consequently all of the other publishers will be able to raise their prices a little next year. Great news! Only in the subscription journal market.

RP: And certainly not in an OA market?

AH: Correct. Open access publishing is a completely different animal. Journals in an open access world must compete for authors by offering a compelling service at an attractive price, as one would expect to see in any competitive market.

As a reader, you don't have a choice between journals. If you need to read a particular piece of research, this piece is published in a particular journal, and you need access to that journal.

But as an author, you do have a choice. Within a particular subject area, and within a particular academic quality band, there are probably a few choices for an author to select from. These few choices constitute substitutable options for these authors.

And, once the paper is published in an open access world, the publisher cannot use any monopoly over that piece of research to generate revenue. There are no monopolistic powers in open access publishing.

This will bring a significant amount of competition between journals and publishers, which will lead, in my opinion, to a dramatic reduction in the revenues generated by the journal publishing industry.

In the above example, if the ten oncology journals were all open access, assuming that they were reasonably close in scope and quality, and one journal decided to lower their article processing charges by fifty per cent, you would see the fear in the eyes of the other publishers since they would rightly be concerned about being displaced from the market.

The less competitive journals in this scenario would shrink and eventually exit the market, as any non-competitive business does in our modern day economy, and you will see the other journals struggling to raise the quality of their services and reduce their prices in order to stay competitive.

In an open access world, publishers are still able to make long-term investments and generate profits, but inefficient publishers will find it very difficult to continue in business.

RP: You don't mention branding in this scenario. Do you not think that a great many researchers would happily pay \$10,000 plus to publish an article in Nature, Science or Cell, which is the figure [cited recently](#) by Nature's editor-in-chief Philip Campbell? If they were, would not these journals still have a kind of monopoly power, and be able to charge whatever they want?

AH: You are absolutely right that the journal as a brand is central to the journals' ability to charge for the service of being published in it. Without the concept of the journal as a brand, we will see complete commoditization of the whole industry. This scenario can take place if article level or author level metrics, such as the *h*-index, replace journal level metrics, such as the journal impact factor.

However, as long as the journal remains a stamp of quality, publishers of high quality journals can charge higher APCs than those with lower quality journals.

In an open access environment there is competition between journals, but it is mainly between those journals that are comparable in quality. In an open access world where journals continue to be important brands, *Science* will never have to really compete with many of the mainstream journals. But it will have to compete with its likes, such as *Nature* or *Cell* for example.

Now, if it takes \$10,000 to publish an article in *Science* or *Nature*, they will have to charge at least as much. And my expectation would be that researchers would be happy to pay those charges.

However, if one of these journals, or a new entrant, can publish a journal at the same quality level but at a lower cost, this new journal will be able to lower their publication charges and eventually take a greater and greater share of the market from the more expensive journals.

There is nothing monopolistic about high prices, per se. As long as there are a number of competing businesses that are producing similar products that consumers can choose between, high prices are not signals of monopoly, but of high quality.

For example, BMW does not have a monopoly in the car market, but their cars are most certainly priced at a higher level than many other automakers.

RP: *As we noted earlier, in moving from subscription publishing to hybrid OA, and thence to gold OA, hybrid publishing turned out to be no more than a transitional tool for Hindawi. But could you envisage some publishers and/or journals continuing to use the hybrid model indefinitely? What in your view are the pros and cons of hybrid versus gold OA?*

AH: I do not have any principle objections to the hybrid journal model. If it works, it works. However, I really like the simplicity of the pure gold open access journal model.

RP: *Some have [suggested](#) that one implication of the Finch recommendations, if implemented, would be that universities and funders would start to ration the number of papers that their researchers were able to publish, on the basis that it was the only way that costs could be controlled, or at least the only way that these funders and institutions could afford to have their research disseminated. Do you see that as likely? If so, what would be the implications for OA publishers like Hindawi?*

AH: Publishing the results of a research project should be viewed as part of the scientific research process itself, since there is very little value to society in conducting a research project if the results are not made public.

The cost of publishing these research results under a gold open access model is a small fraction of the money spent on carrying out the research itself, at least within most fields of STM research, and provides an incredible return on investment for research funders by maximizing the impact of the research that they have funded.

I can't imagine why a research funder would provide hundreds of thousands of dollars in grant funding to a researcher in order to conduct a research project, but then deny them a few thousand dollars to publish their results under a gold open access model.

Having said that, we have to accept that no matter how small the cost is with respect to the total cost of conducting the research itself, it is still a cost that needs to be paid for somehow.

RP: So what is the best way for funders and research institutions to make the necessary funds available such that costs can be controlled?

AH: In my opinion, the best way to do this is to simultaneously mandate that researchers publish their results under a gold open access model and allow them to use their regular research budget to pay for the costs of publication.

This will result in a system where researchers actually care about how much the publication cost of a particular journal is, and consequently will create a competitive market for open access journals.

In my opinion, this is better than setting money aside for open access publishing that cannot be used by researchers for anything else. Giving an author a budget for APCs that cannot be spent on anything else makes them completely insensitive to how much they pay for publishing their research results as long as they are within that budget.

I am a great supporter of having functional and competitive markets in every sector of the global economy, and I see no reason to exclude the scholarly publishing industry.

The ingredients to success

RP: Over the years, a great many people have set themselves up as publishers. Some have failed, some have succeeded but remained bit players, and others (like Hindawi) have grown rapidly and become very successful. What would you say have been the key ingredients to Hindawi's success: was it a willingness to take risks; was it the early adoption of OA; was it a determination to expand readership; was it creativity or was it ambition? How would you define the combination of elements behind Hindawi's success?

AH: There is indeed a combination of elements behind the success of any company. One basic factor in our case has been the aspiration to grow, which we have had since we started the company in mid-1997. There is nothing wrong in running a small, stable company, but we never felt that this is what we wanted to do. Not only do we aspire to grow, but we are also very committed to achieving this growth.

Over the past 15 years this has involved taking significant risks, stretching our finances, and forgoing short term gains for longer term growth. Our early adoption of open access certainly was a major factor in helping our growth, and as I mentioned earlier, I consider not moving to open access even sooner to be the biggest mistake that we ever made at Hindawi.

Apart from the aspiration to grow and the good fortune of converting to open access at a relatively early stage, I think the major factor behind our success has been our unique approach to publishing.

RP: This goes to our earlier discussion about Hindawi's USP I think. How would you define your unique approach to publishing?

AH: Well, we have a very analytical approach to journal publishing that differs a great deal from the traditional business of managing personal relationships the way that many scholarly publishers do. Rather than depending on these kinds of personal relationships, we treat publishing as a systematic process that is based on analyzing data and developing clear and well-documented workflows in all areas of our business. "In God we trust, all others must bring data" is a famous quote by [W. Edwards Deming](#) that says it all.

This analytical, data driven approach to publishing has been absolutely essential to our growth, since it has enabled us to expand our publishing program quite substantially over the past several years while providing a consistently high level of service to the research community.

The evidence of this can be seen in the tens of thousands of authors, editors, and reviewers who contribute to our publishing program each year, and it is hard for me to imagine that we would have been nearly as successful in attracting these researchers to work with us if we hadn't focused so much attention on building systematic workflows and data driven systems from the very beginning.

Futures

RP: You said earlier that you believe open access is the future. But can you say more about how you see scholarly journal publishing developing in the next ten to twenty years? For instance, is the mega journal the model for the future? And do you see the payment of APCs becoming the primary business model for publishing?

AH: I think that mega journals will play an increasingly important role in the future. But I doubt that a few mega journals will completely take over the market. I think we will continue to have a relatively large number of journals, but I also think that this relatively large number will be much smaller than what we have today.

The average size of a journal today is about 80 articles per year. If you exclude the long tail of journals, the average is still somewhere between 100 and 200 articles per year. I think this average will increase in the future.

My best guess would be that vast majority of articles will be published in journals publishing a thousand articles or so per year. We only need a couple of thousand journals of that size rather than the 25,000 journals we have today.

I have no justification for these guesses, but that is the most likely future that I can predict. As for the APCs, yes, I do think that gold open access supported by APCs is going to be the primary business model.

RP: Can you envisage pre-publication peer review giving way to post-publication peer review?

AH: I have to admit that the idea of the post-publication peer review is a very seductive one. It is something that seems great on an abstract level. In this digital world, we have practically an infinite shelf space, so why not just publish everything as it is created and then sort them later into different quality bands?

However, post-publication peer review would require significant adjustments to the current system because in such a system being published in a given journal will cease to have any particular quality signal. Journals will cease to exist as stamps of quality and the whole system of evaluations will have to adjust to use post-publication reviews to judge the quality of published papers.

One basic requirement of such a system is to have a good level of participation from peer reviewers. We will need at least a few post-publication review reports for every published paper in order to be able to judge its quality level or impact within its field of study. However, getting peer reviewers to participate in this new system of post-publication peer review is not a question of technology; it is a question of human motivation and behaviour.

RP: What are the issues here in your view?

AH: Reviewers volunteering their time and effort to review submitted manuscripts are motivated by a number of things. Post-publication peer review takes away at least three of these motivating factors that I believe are important to reviewers.

The first is the fact that, as a reviewer, you are being asked for your review. It is easy to underestimate this factor, but the truth is most of us will be motivated to do something if we are asked to do it much more than if we had to take the initiative to do it on our own. Just the mere action of asking someone to do something, let alone if that request is coming from an editor that you most likely know and regard, increases the chances of that person doing what they are asked to do.

Another motivating factor that is lost in a post-publication peer review system is the fact that reviewers have the ability to influence the outcome of the peer-review process. Reviewers appreciate the fact that the decision of whether or not this particular manuscript will be published in this particular journal will be based, at least in part, on their opinion. This is an important and gratifying aspect of participating in the pre-publication peer review process, which would not exist in a system based on post-publication review.

The third factor that is lost in a post-publication peer review system is the fact that reviewers, in the current pre-publication peer review system, get to read a manuscript in their field of research a few months before its actual publication, which would not be the case in a post-publication review process.

These are serious obstacles for getting post-publication peer review to a successful level. My best guess would be that the peer-review system will essentially continue as we know it today for the foreseeable future.

RP: *As we noted at the beginning, you founded Hindawi with your wife Nagwa. Is she as actively involved today as she was then?*

AH: She is still involved, but a few years ago Nagwa and I came across a UN Arab Development Report that included shocking figures about the number of book titles that get translated into the Arabic language.

The report indicated that there is only about 1 book title per million citizens, per year, across the whole Arab world that is translated into the Arabic language; compared to other nations where the number is usually a few hundred titles per million citizens.

Nagwa and I have a very deep appreciation for the value of books and translations, so we decided to do something about it. In 2008, we started a new company with the mission of translating books into Arabic from other languages. More recently, we converted this company into a not-for-profit organization called the [Arab Foundation for Education and Culture](#) (AFEC). AFEC currently translates a few dozen books each year into the Arabic language and makes them freely [available online](#).

Consequently, Nagwa is now devoting most of her time to running AFEC and only gets involved in Hindawi on a more strategic level. She still attends our weekly management meetings. She also participates in the decision making process on an as-needed basis.

RP: *Finally, what effect do you expect the current political instability in Egypt and the North Africa and Middle East Region to have on the sustainability of Hindawi over the long term?*

AH: Egypt is going through a historical transformation at the moment and I like to think that we are on the path to true democracy. I am sure there will be some bumps along the way on the political front, but I believe Egypt will become part of the free, democratic world and will have a more business friendly environment.

Consequently, I expect private businesses and entrepreneurship to flourish over the next few years, and I am confident that Hindawi will be able to continue growing as Egypt is embarking on this new and hopefully prosperous era.

RP: *Thank you very much for taking the time to answer my questions. I wish you all the best for the future.*



Hindawi is currently enlarging its office space in order to increase staff capacity from 700 to 2,000.



Richard Poynder 2012

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