Gowers's Weblog

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Elsevier journals — some facts

A little over two years ago, the Cost of Knowledge boycott of Elsevier journals began. Initially, it seemed to be highly successful, with the number of signatories rapidly reaching 10,000 and including some very high-profile researchers, and Elsevier making a number of concessions, such as dropping support for the Research Works Act and making papers over four years old from several mathematics journals freely available online. It has also contributed to an increased awareness of the issues related to high journal prices and the locking up of articles behind paywalls.

However, it is possible to take a more pessimistic view. There were rumblings from the editorial boards of some Elsevier journals, but in the end, while a few individual members of those boards resigned, no board took the more radical step of resigning en masse and setting up with a different publisher under a new name (as some journals have done in the past), which would have forced Elsevier to sit up and take more serious notice. Instead, they waited for things to settle down, and now, two years later, the main problems, bundling and exorbitant prices, continue unabated: in 2013, Elsevier's profit margin was up to 39%. (The profit is a little over £800 million on a little over £2 billion.) As for the boycott, the number of signatories appears to have reached a plateau of about 14,500.

Is there anything more that can be done? One answer that is often given is that the open access movement is now unstoppable, and that it is only a matter of time before the current system will have changed significantly. However, the pace of change is slow, and the alternative system that is most strongly promoted — open access articles paid for by article processing charges — is one that mathematicians tend to find unpalatable. (And not only mathematicians: they are extremely unpopular in the humanities.) I don't want to rehearse the arguments for and against APCs in this post, except to say that there is no sign that they will help to bring down costs any time soon and no convincing market mechanism by which one might expect them to.

I have come to the conclusion that if it is not possible to bring about a rapid change to the current system, then the next best thing to do, which has the advantage of being a lot easier, is to obtain as much information as possible about it. Part of the problem with trying to explain what is wrong with the system is that there are many highly relevant factual questions to which we do not yet have reliable answers. Amongst them are the following.

1. How willing would researchers be to do without the services provided by Elsevier?

2. How easy is it on average to find on the web copies of Elsevier articles that can be read

legally and free of charge?

3. To what extent are libraries actually suffering as a result of high journal prices?

4. What effect are Elsevier's Gold Open Access articles having on their subscription prices?

5. How much are our universities paying for Elsevier journals?

The main purpose of this post is to report on efforts that I and others have made to start obtaining answers to these questions. I shall pay particular attention to the last one, since it is about that that I have most to say. I will try to keep the post as factual as possible and give my opinions about some of the facts in a separate post.

How willing would researchers be to do without the services provided by Elsevier?

I have two small pieces of evidence. The first is an interesting comment that was made on a Google Plus post of mine by Benoît Kloeckner, who wrote the following.

In France, when the national consortium "Couperin" was dealing with Springer for the 2012-2014 contract, we issued a petition asserting that some terms (notably interdiction to unsubscribe from a number of journals) were unacceptable and that we, mathematicians, would agree not to get access to Springer journals. This was done to give negotiators more strength, but had little effect despite a significant number of signatures.

This points to a problem that I will discuss in more detail in my next post: that different subjects have different needs. Part of the reason mathematicians find the current system so objectionable is that we have already got to the stage where we don't really need journals for anything other than the very crude measure of quality that it gives us, since a fairly high, and ever increasing, proportion of the articles that interest us are freely available in preprint form. But in some subjects, such as biology or medicine, this is much less true, and as a result people rely far more on journal articles.

I tried to take the temperature in the mathematics faculty in Cambridge by asking my colleagues to complete a very brief questionnaire: there were two questions, with multiple-choice answers. The questions were as follows.

1. How easily could you do without access to Elsevier journals via ScienceDirect and print copies?

2. For those who negotiate on our behalf to be in a strong bargaining position, they have to be able to risk our losing access to Elsevier products (other than those that are freely available) for a significant length of time. How willing would you be for them to take that risk?

In case the results were interestingly different, I got people in DAMTP (the department of applied mathematics and theoretical physics) to answer one copy of the questionnaire and people in DPMMS (the department of pure mathematics and mathematical statistics) to answer another. The results were as follows. There were 96 responses from DAMTP and 80 from DPMMS. I give the DAMTP figure first and then the DPMMS figure, both as percentages.

1. How easily could you do without access to Elsevier journals via ScienceDirect and print copies?

(i) It would be no problem at all. [27.1, 23.8]

(ii) It would be OK, but a minor inconvenience. [26.0, 38.8]

(iii) It would be OK most of the time, but occasionally very inconvenient. [24.0, 32.5]

(iv) It would be a significant inconvenience. [14.6, 5.0]

(v) It would have a strongly negative impact on my research. [8.3, 0.0]

2. For those who negotiate on our behalf to be in a strong bargaining position, they have to be able to risk our losing access to Elsevier products (other than those that are freely available) for a significant length of time. How willing would you be for them to take that risk?

(i) Very willing [46.9, 55.7]

(ii) Willing [31.3, 39.2]

(iii) Unwilling [14.6, 3.8]

(iv) Very unwilling [7.3, 1.3]

Thus, if the responses were representative, then in both departments, most people would not suffer too much inconvenience if they had to do without Elsevier's products and services, and a large majority were willing to risk doing without them if that would strengthen the bargaining position of those who negotiate with Elsevier.

Another question I might have asked is how much the answers would have changed if the departments were to subscribe to just a few important journals. That is an important question, since it might be that the University of Cambridge should follow the examples of Harvard, MIT, Cornell and others (that link is from 2004 so the situation may have changed), stop paying for a Big Deal contract and switch to paying for individual journals at list prices instead.

It is very easy to find websites where surveys like the one I conducted can be set up for no charge. (But be a little careful: I accidentally chose one called Surveymonkey that allowed only 100 responses, as a result of which I had to ask people to do it again.) I would be extremely interested if other people could do similar surveys in their own departments, both in mathematics and in other subjects.

How easy is it on average to find copies of Elsevier articles freely available in preprint form?

My impression has for some time been that in mathematics a significant proportion of articles are available on the arXiv or on authors' home pages, to the point where I almost never need to look at the journal version. There also appears to be a distinct positive correlation between the quality of a journal and the proportion of its articles freely available. And there seem to be national differences in the extent to which people make their papers available. But until recently

it was a rather long and tedious process to obtain any hard figures about this.

Recently, however, Scott Morrison has set up a website called The Mathematics Literature Project, to which you can contribute if you have the time. Although one still has to input the information manually, Scott has written software that automates the process to some extent and makes it much quicker. The project is still in its infancy, but it already demonstrates that a large proportion of articles in various different journals, not all of them Elsevier journals, are indeed freely available in preprint form. And there is some evidence for the correlation with quality: for example, Discrete Mathematics is a less good journal than the Journal of Combinatorial Theory A and B, and a lot fewer of its articles can be found. (For JCTA the proportion is over 80%, whereas for Discrete Mathematics it is more like 30%.)

Thus, there is plenty of evidence that mathematicians at least do not really need their universities to pay large sums of money to Elsevier. Unfortunately, because of bundling, that fact on its own has had almost no effect on prices.

To what extent are libraries actually suffering as a result of high journal prices?

I'm tempted just to suggest that you go and talk to a librarian. You won't be left in much doubt about the answer, at least qualitatively speaking. In brief, libraries suffer because bundling means that they have very little control over their budgets. If Elsevier raises its prices, then libraries simply have to pay them or else lose the entire bundle, so effectively they are forced to make cuts elsewhere. And this happens. For example, Phil Sykes, former chair of Research Libraries UK, shared a document with me that includes many interesting figures, one of which is that between 2001 and 2009, mean expenditure on books went up by 0.17%, which is a substantial real-terms cut, while mean expenditure on journals went up by 82%. Apparently, the expenditure on books as a proportion of total expenditure went down from 11% to just over 7% between 1999 and 2009.

But this distortion is not confined to books. Journals that belong to a large bundle are artificially protected, at the expense of other, potentially more useful, journals that do not belong to the bundle. If you think that this is just a theoretical possibility, then take a look at the example of the Université de Paris Descartes. This is the top university in Paris for medicine, the university you try to get into if you are French and want to be a doctor.

It would seem a safe bet that a top medical university would subscribe to at least some journals from the Nature publishing group, such as Nature Medicine, which describes itself as the premier journal for medical research, or Nature, which likes to think of itself as the premier journal full stop. But no: subscriptions to all Nature journals as well as many others were cancelled this year. In the long list of cancelled subscriptions, you won't find any mention of Elsevier journals, because they are bundled together.

From time to time, a library decides that enough is enough. A couple of years ago, the mathematics department of the Technisches Universität München decided to cancel all its subscriptions to Elsevier journals. And very recently the entire Universität Konstanz, also in Germany, decided to cancel its license negotiations and replace its license by "alternative procurement channels". Given the evidence that we are becoming less reliant on journal

subscriptions, it would seem rational for other libraries to consider whether to take similar measures.

What effect are Elsevier's Gold Open Access articles having on subscription prices?

Recall that Gold Open Access refers to the practice where a publisher makes an article freely available online in return for an article processing charge (APC), which is typically paid by an author's institution or by a grant-awarding body. Elsevier now has various journals that are funded that way, as well as "hybrid" journals — that is, journals to which libraries still subscribe but which allow authors to make their articles open access in return for an APC. The proportion of Elsevier articles for which APCs have been paid is currently very small, but it is likely to increase, since various funding bodies are starting to insist that the academics they fund should make their articles open access, and often (but not always) the assumption is that this should be done via an APC.

A few months ago, it occurred to me to wonder what would happen if the proportion of Gold Open Access articles did indeed increase. Would Elsevier continue to rake in its subscription revenue and receive the APCs on top? This would seem particularly unjust in the case of hybrid journals, since libraries with Big Deal contracts cannot cancel their subscriptions to them, and in any case if several of the articles are not open access they may well not want to. So there would seem to be a danger that Elsevier is receiving substantial article processing charges that are not needed to cover the cost of processing (the additional cost of making an article open access is at least an order of magnitude less than the APCs), or to compensate Elsevier for loss of subscription revenue.

I then discovered that, not surprisingly, many other people had been concerned about this point. There is even a technical term for the practice of effectively charging twice for the same article: it is called *double dipping*. I found a page on Elsevier's website where they stated that they had a no-double-dipping policy. However, that mentioned only the list prices of journals, so it did not address my concern at all, given that most libraries have Big Deal contracts. I decided to write to Elsevier to ask about this, and the result was that they updated the relevant page.

I think one can summarize what they say on the page now as follows: they set their prices based on the number of non-open-access articles included in the Freedom Collection; this has gone up, so they feel no compunction about charging more for the Freedom Collection. So they are at least *implying* that if enough open-access articles were published that the total volume of non-open-access articles went down, they would lower their prices.

That leaves me with two concerns. The first is that if their Big Deal contracts are confidential, then we have no way of knowing whether they are sticking to their official policy. The second is that what matters should not be the number of open access articles as a proportion of the whole, but the proportion of open access articles *amongst the articles that people actually want to read*. If, for example, half the articles in journals such as Cell and The Lancet became open access but Elsevier launched a handful of joke journals that published a comparable volume of articles, then the value of the non-open-access component to libraries would have gone down substantially, but according to Elsevier's stated policy their charges would not be decreased.

On top of all that is a remarkable scandal that has attracted a great deal of attention recently, which is that Elsevier has been double dipping in the most direct way possible: charging people to download articles for which APCs have been paid. Mike Taylor spotted this about two years ago. Elsevier's response, coordinated by Alicia Wise, was less than swift, not surprisingly given their strong incentive to drag their feet about it. Peter Murray-Rust has been vigorously campaigning about this issue. If you're interested, you can check out the March 2014 archive of his blog and work backwards.

How much are our universities paying for Elsevier journals?

Now we come to the big question. One of the most annoying aspects of the current situation in academic publishing is that the big publishers don't want us to know what our universities are paying for their journals, so they insist on confidentiality clauses. As a result, we can't tell whether we are getting good value for money, though there is plenty of indirect evidence, and even some direct evidence, that we are not.

Some information already available

There have been a few attempts in the past to use freedom-of-information legislation to get round these confidentiality clauses, some successful and others not. Also, some information has been made available by other means. Here are the cases I know about, but this list is very likely to be incomplete. (If I am notified of further useful information, I will be happy to add it to the list with appropriate acknowledgement.)

1. In 2009 public-record requests were made by Paul Courant, Ted Bergstrom and Preston McAfee to a large number of US universities asking for details of their Big Deal contracts with publishers. They had considerable success with this, obtaining information from 36 institutions. Elsevier made strenuous efforts to prevent the disclosures, contesting the request to Washington State University, but a judge ruled against them. See this page for further details. Together with Michael Williams they wrote an analysis of what they discovered, which will soon become available in preprint form (at which point I will provide a link — they have kindly let me see it in advance and quote from it the information below) and has been submitted for publication. From that preprint (Table A.5 in the appendix) we find the following. The first figure I give here is the cost in dollars of the Elsevier Freedom Package and the figure in brackets is the enrolment. (The latter is not by any means a perfect measure of the size of a university, but it gives at least some idea.)

University	Cost in dollars	Enrolment
Arizona Universities*	2,724,888	123,473
Auburn	1,252,544	22,654
Clemson	1,296,044	16,582
Colorado State	1,319,633	24,409
Cornell	1,969,908	20,340
Georgia State	934,764	25,135
Louisiana State	1,198,237	28,467
New York U.	1,878,962	40,291

U of Alabama	1,018,614	22,971
U of California**	8,760,968	218,320
U of Colorado	1,725,023	28,333
U of Denver	467,406	10,036
U of Georgia	1,854,419	33,079
U of Idaho	750,808	10,008
Illinois Universities***	2,319,383	72,751
U of Iowa	1,420,484	27,361
U of Maryland	1,760,173	31,573
U of Michigan	2,164,830	39,447
U of Tennessee	579,815	27,635
U of Texas, Arlington	620,042	20,136
U of Texas, Austin	1,539,380	46,537
U of Wisconsin	1,215,516	35,295
U of Wyoming	497,014	10,478

*A consortium of three universities in Arizona
**A joint license for ten University of California campuses
***A joint license for three University of Illinois campuses

There's much more in their article, including details of deals with other publishers such as Springer and Wiley.

One related thing I have found, which interests me a lot because of its relevance to this post, is a judgment from Greg Abbott, the Attorney General of Texas, that the University of Texas should release details of its contracts with publishers. The part that interests me starts near the bottom of page 3, where there is a detailed discussion of what constitutes a trade secret. Roughly speaking, information is a trade secret of one company if disclosing it to other companies would cause substantial competitive harm to the first company. The Attorney General concludes in robust terms that the Big Deal contracts do not meet the definition of a trade secret, which I agree with because the different publishing companies are not competing to sell the same product.

2. There is a fascinating blog post by David Colquhoun written in December 2011, which I would certainly have referred to before if I had been aware of it, in which he discusses in detail the situation at his institution, which is University College London. In it, he says, "I've found some interesting numbers, with help from librarians, and through access to The Journal Usage Statistics Portal (JUSP)." The word "interesting" is an understatement. The first number is that UCL then paid Elsevier €1.25 million for electronic only access to Elsevier journals. But as interesting as that headline figure is his analysis of the usage of Elsevier (and other) journals. As one might expect, but it is very good to see this confirmed, there are a few journals that are used a lot, but the usage tails off extremely rapidly.

3. In this country, there have been Freedom of Information requests to De Montfort University in 2010 (successful), Swansea University in 2014 (unsuccessful), and the University of Edinburgh in 2014 (successful). I recommend at this point that you read the refusal letter by Swansea. For reasons that I'll come to, it is fairly clear that the letter was basically written by Elsevier, so it gives us some insight into their official reasons for wanting to keep their

contracts secret. As I'll discuss later, their arguments are very weak.

There was also a successful request to Swansea in 2013, but this one asked for the amount spent on all journal subscriptions, rather than just Elsevier subscriptions. It reveals that the amount went up from £1,514,890.88 in 2007/8 to £1,861,823.92 in 2011/12. (From the wording, it seems that these figures include VAT, but I'm not quite sure.) That's a whopping 23% increase in four years. Of course, that may be because Swansea University decided to increase significantly the number of journals it subscribed to, but that explanation seems a trifle unlikely in the current economic climate. Whatever the explanation, the amount of money is very high.

The successful request to Edinburgh was made on January 16th by Sean Williams. The response was delayed, but on April 8th they finally responded, giving full details for two years and the totals for three. This reveals that Edinburgh spends around £845,000 plus VAT per year.

4. Recently there was a long negotiation between Elsevier and Couperin, a large consortium representing French academic insitutions. (Actually, I say long, but Elsevier apparently has an annoying habit of not beginning the process of negotiation in earnest until close to the end of the existing contract, so that the other side must either make decisions very quickly or risk large numbers of academics temporarily losing access to Elsevier journals.) The result was what one might call a Huge Deal, one that gave complete access to ScienceDirect to all academic institutions, from the very largest to the very smallest. Couperin professed to be pleased with the deal. I do not yet know whether that satisfaction is shared by the universities that are actually paying for it. If you want to know how much France is paying for access to ScienceDirect, then I recommend typing "Elsevier Couperin" into Google. After at most a couple of minutes of digging, you will find a document that tells you. Three important aspects of this deal are (i) that it lasts for five years, (ii) that the total amount paid to Elsevier is initially lower than before but goes up each year and ends up higher and (iii) that the access is now spread to many more institutions. What I do not know is what the effect of this is on the large universities that were paying for Elsevier journals before. Does the fact that many more institutions are involved mean that prices have gone down substantially? Or are most of the institutions that have newly been granted access paying very little for it and therefore not saving much money for the others? It would be good to have some insight into these questions. The bottom line though, is that Elsevier's profits in France are protected by the deal.

5. Brazil too has a national agreement with Elsevier, and refuses to sign a confidentiality clause. Somewhere I did once find, or get referred to, a page with details about the deal, but have not managed to find it again. My memory of it was that it was rather hard to understand.

My attempts to use the Freedom of Information Act

In early January, I decided to try to find out more about what UK universities are paying by making a request under the Freedom of Information Act. As in France, the negotiations are carried out by a consortium: the British one is called JISC collections. (It's surprisingly hard to find out what JISC stands for: the answer is Joint Information Systems Committee.) Initially (to be precise, on the 8th of January), I wrote to Lorraine Estelle, who is the head of JISC collections. I made a FOI request, and the information I asked to be told was how much JISC had agreed to pay Elsevier in the most recent round of negotiations, and how that payment was

shared between the institutions represented by JISC.

She suggested that we should speak on the phone, which we did. I learned some important things from the phone call, which I will come to later, but I did not get the information I had actually asked for. She explained why on the phone, and some time later, when I found that I couldn't quite remember her explanation, I asked for a clarification in writing. She provided me with the following.

Your question: As I understood it, you didn't actually have the data that I was asking for. Is that correct? And do you mean that you negotiated a total — which, presumably, you would know — but do not know how it was split between the various universities?

Answer: We do have the data and we do know the split – but because we do not actually aggregate the subscriptions ourselves for the Elsevier deal, I have to get the total sum and the split from Elsevier.

I interpret that as meaning that for legal purposes she did not have the information in a form that might have obliged her to disclose it under the Freedom of Information Act.

And thus, I was passed on to Alicia Wise. As many people who have had dealings with Alicia Wise have found, including Peter Murray-Rust in his attempts to stop Elsevier charging for access to open access articles, this is not a good situation to be in.

Obviously she didn't say, "Of course, I'd be happy to provide you with that information." But I'd have been satisfied with a clear statement from her that she was not prepared to provide it, and I couldn't get that either. Here is a sample of our correspondence. (Incidentally, owing first to some misunderstanding and then, apparently, to Alicia Wise wanting to check that Lorraine Estelle had not given me any confidential information, which she hadn't, the correspondence didn't even begin until about a fortnight after Lorraine Estelle had passed on my request.)

Her first email message, sent on February 5th, explained that Elsevier makes "an array of pricing information publicly available" and provided some links. These were to list prices of journals, which, because of bundling, give no indication of what universities actually pay. She also proposed that we should meet, or perhaps talk on the phone. I wrote back on the 7th suggesting that a phone conversation would be more convenient. I got no response for four days, so on the 11th I sent my reply again, which prompted a suggestion of several possible dates for a meeting. She said,

Sorry, should have sent you a receipt acknowledgment. We've worked out internally that Chris Greenwell and I should, together, be able to answer questions that arise (although I am also contemplating inviting someone from our pricing team along in case you have very very detailed questions!)

At this point I had a little worry, so I put it to her.

But before we actually arrange anything, and in particular before we decide whether it is better to meet physically or by phone, perhaps it is worth clarifying what could come out of such a meeting. The main question I asked in my FOI request was the following: "there is one particular thing I would like to know, and that is details of the most recent round of negotiations between JISC and Elsevier. I would like to know what annual payment was agreed, and how that payment was shared between the higher education institutions represented."

If you are prepared to answer that question in full (I'm talking actual amounts of money rather than the general principles underlying the negotiations), and without binding me to any confidentiality agreement, then we have something serious to talk about. If not, then I'm not sure there is any point in having a discussion. However, in the second case, it would still be useful to know your reasons for not being prepared to divulge the information.

She responded as follows.

Thanks for this. I continue to think a call or meeting would be helpful as my immediate question is what hypothesis do you have, or are you testing, that require data at this level of granularity? The data you request are commercially sensitive. I am wondering if publicly available data – for example the attached which is from publications by the Society of College, University, and National Libraries (http://www.sconul.ac.uk/) – might serve your purpose? If we could understand better what you are after and why, we might be better able to come up with data that helps you. (And, yes, we would have even greater flexibility if you were prepared to consider treating some information in confidence but I appreciate you might be unwilling to do so.)

To which I said this.

Thanks for sending those slides, though of course you must have known perfectly well that they would not be of any help to me.

I can't see what is unclear about what I am after. As I said, I would like to know what the UK universities represented by JISC are paying annually for Elsevier journals (a combination of Core Collections and access to Science Direct). My main reason for wanting to know that is that I think it is in the public interest for people to know how much universities are spending.

However, there are more specific reasons that I am interested in the data. One is that because the cost to universities of their Core Collections is based on historic spend on print journals, there is the potential for very similar universities to pay very different amounts for a similar service from Elsevier. I have been told that this is the case — for example, Cambridge suffers because historically college libraries have subscribed to journals — but would like to have the data so that I can confirm this.

If you won't give me this information on the grounds of commercial sensitivity, then just let me know, and it will save us all time.

That was on February 12th. Her next reply came on March 7th, and said this.

Thanks for this. I did intend for the slides to be useful to you, but now that you have explained more clearly what you are after can see this was not the case. They have, however, helped to move our conversation on. We are focused on delivering value for money to all our customers, including Cambridge. The most direct way to find out the information you are looking for with respect to Cambridge might be a conversation with the library there?

So after all that, I still didn't have a straight answer. However, by then I had long since lost patience: on February 19th, I submitted Freedom of Information requests to all 24 Russell Group universities, with the exceptions of Cardiff, where my email kept bouncing back, and Exeter, which I missed out accidentally. (Later I sent requests to them too.) My request was as follows.

Dear [Head of university library],

I would like to make a request under the Freedom of Information Act. I am interested to know what [name of university] currently spends annually for access to Elsevier journals. I understand that this is typically split into three parts, a subscription price for core content, which is based on historic spend, a content fee for accessing those journals via ScienceDirect, and a further fee for accessing unsubscribed titles from the Freedom Collection, also via ScienceDirect. I would like to know the total fee, and how it is split up into those three components.

Many thanks in advance for any help you can give me on this.

Yours sincerely,

Timothy Gowers

Some results

When I sent these requests, I had very little idea what my chances were of finding anything out at all. Lorraine Estelle had told me that JISC Collections are firmly against confidentiality clauses, but that Elsevier had insisted. But also, and crucially, there was a clause about FOI requests that made it not completely certain that they would fail. Unfortunately, this clause cannot be made public. (Yes, you read that correctly: the confidentiality clause is itself confidential.) However, as we shall see, the responses by some of the universities give some indication of what is probably in it.

In the end, the result was that, to my surprise and delight, a substantial majority of universities decided to give me the information I wanted, though many of them gave me just the total and not the breakdown into its three components. Here are the figures from the 18 universities that were brave and public spirited enough to give me them, together with Edinburgh, which, for reasons I don't understand, refused to give any figures to me but provided them to Sean Williams. The figures *exclude* VAT, which adds a not exactly negligible 20% to the cost, but at least that goes back to the taxpayer rather than swelling even further the coffers of Elsevier. The price is rounded to the nearest pound. I obtained the enrolment figures from this page.

University	**Cost**	**Enrolment**
Birmingham	£764,553	31,070
Bristol	£808,840	19,220
Cambridge	£1,161,571	19,945
Cardiff	£720,533	30,000
*Durham	£461,020	16,570
**Edinburgh	£845,000	31,323
*Exeter	£234,126	18,720
Glasgow	£686,104	26,395
King's College London	£655,054	26,460
Leeds	£847,429	32,510
Liverpool	£659,796	21,875
Manchester	£1,257,407	40,860

Newcastle	£974,930	21,055
Queen's U Belfast	£584,020	22,990
Sheffield	£562,277	25,965
Southampton	£766,616	24,135
UCL	£1,381,380	25,525
Warwick	£631,851	27,440
*York	£400,445	17,405

*Joined the Russell Group two years ago.
**Information obtained by Sean Williams.

The universities for which I still do not have the information are Imperial College London, London School of Economics and Political Science, Nottingham, Oxford, and Queen Mary University of London. I still have hopes of finding out the figures for Imperial, Nottingham and Oxford, and will provide them if I do.

A striking aspect of these amounts is just how much they vary. How does it come about, for example, that University College London pays over twice as much as King's College London, and almost six times as much as Exeter? In order to explain this, I need to say something about the system as it is at the moment. It is here that I am indebted to Lorraine Estelle.

The present system (as it is in the UK, but my guess is that these remarks apply more generally) would be inexplicable were it not for the fact that it grew out of an older system that existed before the internet. Given that fact, though, it makes a lot more sense. (I don't mean that it is fair — just that its existence is comprehensible.) If you were an Elsevier executive managing the transition from a world of print journals to a world where most people want to read articles online, what service would you offer and what would you do about prices? Since it costs almost nothing to make articles that are already online available to more people, and since it is convenient for a university to have access to everything, the obvious service to offer is complete access to all Elsevier journals. But what should you charge for this service?

Up to now, different universities have spent significantly different amounts on Elsevier journals, so if you start all over again and work out a price for the complete package, either some universities will have to pay much more than they did before, which they would probably be unwilling to do, or some universities will end up paying much less than they did before and profits will suffer quite badly. So you try to devise a system that will give universities the new service at prices that are based on the old service. That way, no university ends up paying significantly more or less than it did before. But because this is unfair — after all, now different universities will be paying very different amounts for the same service — you feel that you can't let the universities know what other universities are paying.

The current system in the UK is very much as the above thought experiment would lead one to expect. So it is easy to see why Elsevier wants confidentiality clauses. It also explains the rather strange structure of the deals that universities have with Elsevier. Typically they have a certain "core content" (roughly, the journals they subscribed to before the transition), for which they pay something close to list prices and receive print copies. They then pay a small extra fee for permanent electronic access to that core content, and another small extra fee for electronic access to all other Elsevier journals, but this time only while the university continues to have a contract with Elsevier. Of course, in such a situation a university would like to cut down its core content to zero, but that is not allowed: there are strict controls on what they are allowed to

cancel. The buzz phrase here is "historic spend", which roughly means what universities spent on print subscriptions before the transition to electronic access. The system ensures that what universities pay now closely matches their historic spend.

Here is how Lorraine Estelle explains it.

Prior to the move to online journal, each institution subscribed to titles on a title by title basis. When NESLI was set up, our negotiations were confined to the "e-fee" or "top-up fee". This was the fee that institutions needed to pay in order to have access to all a publisher's content in electronic format. Their "subscribed titles" plus all other titles from that publisher. (This is the deal that has become known as "The Big Deal' and adopted by all major publishers).
The "e-fee" or "top-up fee" was (and usually is still) contingent of the institutions maintaining the level of spend for the "subscribed titles".

This article provides the background to NESLI http://www.uksg.org/serials/nesli back in 1998

As institutions have moved to e-only – we negotiate with most publishers on the total cost across the consortium. However, in most (but not all) deals the division of spend across the UK library consortium is uneven – and still depends on the level of historic spend on subscribed titles. So an institution that used to subscribe to many titles, will still pay more than one that used to subscribe to fewer.

We negotiate the total increase – known as the price cap, the cancellation allowance (which means institutions can cancel a percentage of historically subscribed titles and still retain e-access), and the licence terms and conditions. This is not unique and it is the model employed by most academic library consortia across the world.

The deal is negotiated by Jisc Collections – but we do have support and input from the institutions. Oversight of our negotiations is provided by our Electronic Information Resources working group http://www.jisc-collections.ac.uk/About-JISC-Collections/Advisory-Groups/Electronic-Resources-Information-Group/ It is very rare for an institution to negotiate its own deal, because it would be difficult for them to get the same terms on an individual basis. The few exceptions are where an institution has a special relationship with a publisher – University of Oxford for OUP titles, for example.

All this is important, because it shows that a certain picture of how Elsevier operates, one that I used to believe in, is an oversimplification. In that picture, Elsevier insists on confidentiality clauses in order to be able to screw each university for whatever it can get. However, such a description is misleading on two counts. First, Elsevier negotiates with JISC rather than directly with universities, and secondly, the amount that universities pay is based on historic spend rather than on what Elsevier manages to wring out of them.

I say "an oversimplification" rather than "wrong" because if Elsevier *did* operate in the way I had previously imagined, the results would probably be rather similar. What is the maximum that Elsevier would be likely to persuade a university to pay? It would be very hard to persuade a university to agree to a huge leap in prices, so in each year one would expect the maximum to be whatever the university paid in the previous year plus a small real-terms increase. And all the evidence suggests that that is more or less exactly what Elsevier has managed to achieve.

Another factor that is perhaps worth briefly discussing is the fact that Durham, Exeter, Queen Mary University of London and York joined the Russell Group only two years ago. This

probably helps to explain why (apart from QMUL, which refused to provide me with its figures) these universities are paying significantly less than most of the others. Whether Elsevier had an explicit policy of charging less to supposedly less prestigious universities (though the list of universities not in the Russell Group contains several that appear to me to be at least as prestigious as several that are in the Russell Group), or whether there is merely a strong correlation between membership of the Russell Group and historic spend on Elsevier journals, I don't know. I think the former may be the case, since I have heard librarians talking about a "banding system" (I don't know any details about how it works), and also because Bergstrom et al mention in their paper that in the US there is a classification of universities into different types according to how research intensive they are, with prices depending to a considerable extent on this classification.

A further factor that may possibly explain some of the data is that some institutions have recently merged with others. For example, The University of Manchester, one of the universities that pays most, merged in 2004 with UMIST (University of Manchester Institute of Science and Technology), and UCL merged in 2012 with The School of Pharmacy, University of London. The latter fact may help to explain why they are paying so much more now than what David Colquhoun said they were paying in 2011.

Although the differences between the amounts that different universities pay are eye-catching, it is important to be clear that they are a *symptom* of what is wrong with the system, and not the problem itself. The problem is quite simply that Elsevier has a monopoly over a product for which the demand is still very inelastic (the lack of elasticity being largely the fault of the academic community), with the result that the prices are unreasonably high for the service that Elsevier provides. (It bears repeating that the refereeing process and editorial selection are not paid for by Elsevier — those services are provided free of charge by academics.) If Elsevier were to equalize the prices (or equalize some suitable quantity such as price divided by size of university, or price per use) while keeping the aggregate the same, this would *not* solve the underlying problem.

How the costs break down

As I have explained above, the price that a typical university pays to Elsevier in its Big Deal is divided into three components. One is a "subscription fee", which is to pay for a certain collection of journals at something comparable to their list prices. Another is a "content fee", which is to pay for electronic access in perpetuity to those titles (via ScienceDirect). The third is a "Freedom Collection fee", which is to pay for electronic access to the rest of Elsevier's journals, but this access, unlike the access covered by the content fee, is lost if you cancel the Big Deal.

I have got breakdowns from seven universities, but rather than give them here, I would rather simply make a few general points about them.

1. The content fee (that is, the fee for electronic access to the subscribed titles) is, in all the cases I know about, very close to 5.8824% of the subscription fee. Since 1/17=0.05882352941, I think that is saying that the content fee is exactly one seventeenth of the subscription fee, with the tiny differences coming from rounding errors. Of course, the precise details here are unimportant: what matters is that it is a very small amount compared with the subscription fee itself.

2. The Freedom Collection fees do not have an obvious relationship with the subscription fee,

but, amusingly, with the seven examples I have, the more you pay for the latter, the less you pay for the former. That actually makes some kind of sense, since the more you are paying the content fee, the bigger the chunk of the Freedom Collection you are already subscribing to. I haven't managed to reverse-engineer any kind of simple quantitative relationship between the two prices, however.

3. The inverse relationship in point 2 might seem to make things fairer, and to a very small extent it does, but we are talking about fees of between £10,000 and £25,000 here, so even for a university with a small subscription fee the price of the Freedom Collection fee is well under a tenth of its subscription fee. In fact, it doesn't even make up for the discrepancy in the content fees, because the price is not high enough to do so. Of course, it is grotesquely misleading to say that the Freedom Collection costs so little, because the price you pay for it is conditional on not cancelling the subscriptions that keep the subscription fee extremely high. Indeed, the entire "breakdown" is misleading for that reason: the effective cost of the Freedom Collection is far higher than its nominal cost.

The moral of all this is that the figures giving the total cost are what matter. What universities actually need is electronic access to Elsevier's journals. In order to get that access, Elsevier insists that they nominally pay for something else, namely subscriptions that they are not allowed to cancel (even when they are duplicates, as has happened in Cambridge because of college libraries, and probably in Manchester and UCL as a result of mergers). But that is of no practical importance. It's a bit like those advertisements that say "FREE OFFER!" and then in very small print they add "when you spend over £X," which of course means that the so-called free offer is not free at all.

The universities that refused to give me information

While I was still not at all sure that I would get any information about prices, I comforted myself with the thought that an institution that refuses a FOI request has to give reasons, and those reasons might well be informative. For example, they might reveal that the main reason for confidentiality is to protect Elsevier's profits, which would conflict with Elsevier's official reasons.

Or would it? If you've read this far, then your reward is the following rather wonderful video (which has done the rounds for a while, so you may have seen it) of David Tempest, from Elsevier, explaining why confidentiality clauses are necessary. Many thanks to Mike Taylor for obtaining it. A transcript can be found on his blog.

You can see the movie 'David Tempest explains why Elsevier subscription-contract confidentiality clauses' on You Tube

https://www.youtube.com/watch?v=4JsNT1gKe7I#t=14

The person who asked the question is Stephen Curry, from Imperial College London. I'm sorry to say that, as mentioned above, Imperial is one of the universities I have not managed to get figures from.

David Tempest's lapse aside, Elsevier usually does not admit that the confidentiality clauses are there to protect its profits. But the refusal letters I received tell a different story. A good example is the first response I had from any university (other than an acknowledgement),

which was a refusal from Queen's University Belfast. I will quote it in full.

Dear Mr Gowers

Freedom of Information Request – Elsevier Journals

My letter, dated 21 February 2014, in relation to the above refers. [sic]

Having reviewed your request and consulted with appropriate colleagues, I would respond as set out below:

I would like to make a request under the Freedom of Information Act. I am interested to know what Queen's University Belfast currently spends annually for access to Elsevier journals. I understand that this is typically split into three parts, a subscription price for core content, which is based on historic spend, a content fee for accessing those journals via ScienceDirect, and a further fee for accessing unsubscribed titles from the Freedom Collection, also via ScienceDirect. I would like to know the total fee, and how it is split up into those three components.

I can confirm that whilst the University does hold this information, it is not being provided to you as it is considered exempt under Section 43(2) of the Act.

Section 43(2) of the Act provides that information is exempt if its disclosure under the Act would be likely to prejudice the commercial interests of any person, including the public authority itself.

Commercial interests relate to the ability to successfully participate in a commercial activity. This could be the ability to buy or sell goods or services or the disclosure of financial and planning information to market competitors. It is, therefore, necessary to decide whether release of this information will have an impact on the commercial activity of Elsevier or the University.

In making this determination, the University has consulted with Elsevier regarding the disclosure of the requested information and whether such disclosure would be likely to prejudice Elsevier's commercial interests.

In written representations to the University, Elsevier has indicated that the disclosure of the amount of money spent annually on access to Elsevier journals would reveal pricing information, specifically the licensing fees that have been negotiated with the University in circumstances that may include a level of discount.

The disclosure of this information would be likely to have a detrimental effect on Elsevier's future negotiating position with that of the University and, indeed, the wider HE sector – which represents a large percentage of their market.

The University accepts this argument and also considers that disclosure of information that would reveal pricing would also be likely to prejudice the commercial interests of the University itself, insofar as it could have a detrimental impact on the future negotiation of tailored solutions for licensing of Elsevier's products and discounts from list prices.

Section 43(2) is a qualified exemption and the University must, therefore, consider where the balance of the public interest lies.

The University accepts the need for transparency and accountability for decision making. The requirement, however, for transparency and accountability needs to be weighed against the harm to the commercial interests of third parties or the University itself through disclosure. The University has, therefore, weighed the prejudice caused by disclosure of the requested information against the likely benefit to the wider public.

In considering arguments in favour of disclosing the information, the University has taken into account the wider interest of the general public in having access to information on how public funds are spent. In this instance, there is a public interest in demonstrating that the University has negotiated a competitive rate in relation to the procurement of Elsevier's products and services.

The University considers, however, that this public interest is already met by the significant amount of pricing information that Elsevier currently makes publicly available – such information is available at:

http:\www.elsevier.com/librarians/journal-pricing and
http:\www.elsevier.com/librarians/physical-sciences/mathematics/journal-pricing.

In relation to those factors favouring non-disclosure, the University has a duty to protect commercially sensitive information that is held about any third party. In this instance, disclosure of the amount of money spent by the University on Elsevier products would reveal pricing information that was acknowledged by both the University and Elsevier at the time the contract was entered into as being commercially confidential. Disclosure of this information would be likely to prejudice not only the commercial interests of Elsevier but also the interests of the University itself, along with the relationship that the University has with its supplier.

It is reasonable, therefore, in all the circumstances of this case that the exemption should be maintained and the requested information not disclosed.

If you are dissatisfied with the response provided, please put your complaint in writing to me at the above address. If this fails to resolve the matter, you have the right to apply to the Information Commissioner.

Yours sincerely

Amanda Aicken
Information Compliance Unit

I responded as follows.

Dear Amanda Aicken,

Thank you for your response to my Freedom of Information Request (reference FOI/14/42). You invited me to write to you if I was dissatisfied with it. I have a number of reasons for dissatisfaction, so I am taking you up on your invitation.

My main objection is that I disagree with several of your reasons for declining my request. I will present them as a numbered list.

1. You say that the disclosure of the information I ask for would be likely to have a detrimental effect on Elsevier's future negotiating position with that of the university. You also say that it

would be likely to prejudice the commercial interests of the university itself. I do not find these two statements easy to reconcile. Could you please explain how it is possible for *both* parties to lose out?

2. You agree with me that there is a public interest in demonstrating that the university has negotiated a competitive rate in relation to the procurement of Elsevier's products and services. You go on to say that this public interest is already met by the information that Elsevier has made publicly available online. However, this is manifestly untrue. The only figures provided by Elsevier are for the list prices of their journals. But since universities pay for Elsevier's Freedom Collection with a Big Deal, the list prices do not give me any way of verifying that the university has negotiated a competitive rate. Indeed, they do not even allow me to work out the order of magnitude of how much Queen's University is paying to Elsevier. Please would you either retract your statement that this public interest has already been met by Elsevier, or else explain to me how to use the list prices to estimate the total amount paid by Queen's University?

3. Your letter implies that there are direct negotiations between Elsevier and Queen's University of Belfast. However, this is also not true. The negotiations are mediated through JISC. Therefore, there is no obvious mechanism whereby disclosing the prices would cause any commercial harm to the university.

4. It has not escaped my notice that the letter you sent is remarkably similar to a letter sent by the University of Swansea to somebody else who made a similar request. It is clear that you used that letter as a template, or else that you and the University of Swansea used the same template, perhaps provided by Elsevier. This suggests to me that you have not considered the balance of arguments for and against disclosure with sufficient independence.

In summary, the main two points that I cannot accept are that the financial interests of Queen's University are likely to be prejudiced by the disclosure of this information, and that there is sufficient information in the public domain to enable me to determine whether the university has negotiated a competitive rate. If you are going to refuse to disclose the information, then I would like it to be for reasons that are not obviously false.

Yours sincerely,

Timothy Gowers

The Swansea letter I referred to is this one, which I have already mentioned. It was the formulaic nature of the response, with ghastly Orwellian phrases such as "tailored solutions" and misleading references to "a level of discount" that appeared not just in these two letters but in many other refusal letters that I was to receive, that got me annoyed enough to express my dissatisfaction, which in the case of Queen's University Belfast and a handful of other universities eventually resulted in success. The response I received to my letter above was as follows. It did not really address my arguments, but since it gave me the information that was not a big concern.

Dear Mr Gowers,

Freedom of Information Request — Elsevier Journals — Internal Review

Your email to Mrs Amanda Aicken, dated 5 March 2014, requesting an internal review of the

University's response to your Freedom of Information request on the above, refers.

On 21 February 2014, you submitted a request for information in relation to the University's annual expenditure on access to Elsevier Journals. You requested details of the total fee and how this is split up into three components: a subscription price for core content; a contnet fee for accessing those journals via ScienceDirect; and a further fee for accessing unsubscribed titles from the Freedom Collection.

On 4 March 2014, the University responded to your request, confirming that whilst this information was held, it was not being provided to you as it was considered commercially sensitive information and, therefore, was exempt under Section 43(2) of the Act. The University had made this determination following consultation with Elsevier, which had indicated that the disclosure of the requested information would prejudice its commercial interests by revealing pricing information. In particular, Elsevier argued that disclosure of the information would reveal the licensing fees that had been negotiated with the University in circumstances that may have included a level of discount.

I understand that you, subsequently, lodged a complaint in respect of the University's response to your request and this complaint has been handled as an internal review of the decision not to provide the requested information.

You have expressed dissatisfaction with the response on the grounds that you 'cannot accept (are) that the financial interests of Queen's University are likely to be prejudiced by the disclosure of this information, and that there is sufficient information in the public domain to enable me to determine whether the University has negotiated a competitive rate'.

I have now completed my review and my findings are detailed below.

I have reconsidered the nature of the requested information and the application of the exemption to withhold this information. In doing so, I have taken into account written advice from relevant senior staff in the University's McClay Library and advice received from JISC regarding the detail of the contract with Elsevier. I have also noted your comments regarding the need for transparency and the public interest in demonstrating that the University has negotiated a competitive rate in relation to the procurement of Elsevier's products and services.

At the time of your request, the University was clearly of the view that disclosure of the requested information would be likely to have a detrimental effect on Elsevier's future negotiating position with that of the University and, indeed, the wider HE sector. An additional, albeit secondary argument, was the possibility that disclosure would prejudice the interests of the University itslef with respect to the relationship that the University has with Elsevier as a supplier. I am persuaded that that [sic] this was not, in the circumstances, an unreasonable view.

I do, however, believe that on balance, the public interest in disclosure was greater than that in maintaining the commercial interests exemption. I also understand that subsequent to your original request, several institutions have disclosed information, either in relation to the total annual expenditure on access to Elsevier Journals, or on the detailed breakdown of expenditure as requested.

In light of the above, it is my view that the information should now be disclosed. I am, therefore, providing the requested information in relation to 2014 — this is provided in the table

below.

I have had several correspondences like this. I would like to pick out a couple of excerpts from other refusal letters that are not essentially contained in the Belfast letter. I had this rather chilling paragraph from Queen Mary University of London.

However, in addition to the reasons outlined above already, revealing this information to the world at large may damage the relationship that QML has with Elsevier including the prospect of legal action that may be taken against QML. This could result in QML being unable to offer Elsevier products which would have the knock-on effect of impacting our resources, our research and even student recruitment. Since these would imperil QML's finances, in financially tough times and while receiving less and less from the public purse, this cannot be said to be in the public interest.

It would be interesting to know what Elsevier said to them to provoke that. Because of this paragraph, I felt sorry for QMUL and decided not to request a review of their decision.

However, the following paragraph from Oxford had the opposite effect on me.

Maintaining confidentiality with regard to the information requested enables the University and Elsevier to arrive at a fair and competitive negotiated and customised price. Full pricing transparency would mean that the best pricing model publishers could offer would be list price, which would be likely to result in increased costs to the University. Disclosure of pricing terms would inhibit publishers' ability to develop flexible, tailored solutions suitable for a particular customer's needs.

Part of my response to that was that the statement beginning "Full pricing transparency" was manifestly false: publishers could offer any model they like. Also, that "tailored solutions" phrase is a red rag to a bull: knowing about how the system works, and how little it is "tailored for a particular customer's needs", I cannot read it without getting annoyed. I have requested a review from Oxford but not yet heard back (though they should, legally, have responded by now).

Incidentally, although I wrote initially to librarians, they were legally obliged to pass my requests on to their Freedom of Information offices, so the letters I got back were (mostly) from bureaucrats. So when I got refusals, this did not necessarily reflect the wishes of the librarians, who stand to gain from the prices being known.

Why pick on Elsevier?

When it comes to high prices and confidentiality contracts, Elsevier are not the only offenders, though there is some anecdotal evidence that they are the leaders, in the sense that other publishers use Elsevier as a benchmark to see what they can get away with. So why submit Freedom of Information requests for Elsevier contracts without doing the same for Springer, Wiley, Taylor-Francis, etc.?

There is no good reason. My answer to this inevitable question is that I do not regard the work of finding out about journal prices as finished. I will report on this blog if and when I or other people find out about other publishers and other universities.

Quick preview

There is a great deal more that could be said about journal prices and what should be done about them. However, this post has passed the 10,000-word mark, so I shall leave further discussion for a second post. Among the questions I intend to address are the following, many of which concern other big publishers just as much as they concern Elsevier.

1. Is it fair to say that Elsevier is a monopoly?

2. Does Elsevier's pricing policy violate competition law?

3. What would be a fair system for charging for electronic access to a large collection of journals?

4. Are the current prices really all that unreasonable, given the importance to science of journal articles?

5. Is it better for university libraries to form consortia or should they negotiate individually?

6. What would be the implications for Cambridge (and perhaps other universities too) of a switch to paying list prices for individual journals?

7. Different subjects have very different publishing cultures and very different needs. Are they better off campaigning together in a single open access movement or would it be better to have a fragmented movement, with different subjects campaigning separately for their different interests?

8. What more can be done to accelerate a move towards a cheaper journal system?

Comments made on Thursday April 24th 2014

1. *Joe Turner (@bucksci)* Says:
   April 24, 2014 at 11:00 am | Reply Have you (or will you) appeal to the Information Commissioner?
2. *ferniglab* Says:
   April 24, 2014 at 11:02 am | Reply Great post and thanks for digging out these data, most useful in discussions on campus on where we should spend out money.
3. *Mike Taylor* Says:
   April 24, 2014 at 11:16 am | Reply I've only read the opening of this very long blog-post, but I want to respond straight away to an early statement:
   "I don't want to rehearse the arguments for and against APCs in this post, except to say that there is no sign that they will help to bring down costs any time soon and no convincing market mechanism by which one might expect them to."
   While recognising that there are good reasons to have reservations about APCs. I think both halves of this statement are incorrect.
   First, on costs. We know that the average cost to the world of a subscription paper is

about $5000 US. That comes from the STM Report for 2012, which reported subscription revenue of $9.1 billion on about 1.85 million published articles. By contrast, even the publisher-inflated Finch Report estimate of APCs put them in the range £1500-2000 ($2500-$3400), which is little more than half as much. But the more realistic average APC calculated by Solomon and Bjork (2012) across 100,000 articles was about $900 — less than a fifth of what we currently pay for subscriptions. (And that ignores the finding of multiple studies that over half of OA journals do not levy APCs at all.)

Second, on mechanisms: we all know that there is no market in subscriptions, because each journals holds a monopoly on the articles that appear in it. If I want to read an article in *Cretaceous Research* but I don't like Elsevier's inflated price, I can't get it from Wiley instead. By contrast, publishers offering services to authors have to compete on a paper-by-paper basis. If I don't like Elsevier's $3000 APC, I can choose instead to use PLOS ONE for $1350, or indeed PeerJ for $99. That's a market; and markets drive prices down.

In short, if we could flip today to an APC-dominated rather than subscription-dominated world, we as a community would save 82% of what we're paying now; and we could expect that cost to continue to fall.

Again, for avoidance of doubt, I am not saying that APCs are without problem — just that the purely financial case for them is very strong from the academy's perspective.

- *gowers* Says:
  April 24, 2014 at 12:18 pm I question what you say about mechanisms. If authors paid out of their own pocket, then what you write would make sense. But if APCs are being paid by university or other funds, then there is a conflict of interest between an author who wants to publish in an expensive but prestigious journal and a university that wants to save money. I suppose if you have two very comparable journals then there will be pressure on them to charge comparable fees, but again only if those paying the charges get to call the shots to some extent — and that is fairly problematic.

  Also, the "any time soon" qualification was important in the first half of what I said. I agree that if we could switch to an APC-only system tomorrow, then it would be a lot cheaper.
- *Mike Taylor* Says:
  April 24, 2014 at 12:22 pm You're right of course that the downward pressure on prices is greatly weakened when people are spending Other People's Money. That's why I've been advocating for RCUK's APC funds to cover only a certain amount — £1000, say, in the short team — leaving researchers who want to be in more expensive journals to pay the difference — or half the difference, or some other formula. The important thing is for people making expensive choices to feel some of the pain of that expense.
- *Anonymous* Says:
  April 24, 2014 at 2:02 pm I think you are severely overestimating the extent to which most mathematicians – especially early-career researchers – have any choice about publishing in prestigious journals. The only reduction of demand would come from the shrinking of the sector as a whole, as researchers would be forced to pay thousands of pounds out of pocket for any possibility of career advancement. Or simply to keep their existing jobs. Or, in the case of postdocs, to ever get a long-term job in the first place.
- *Mike Taylor* Says:
  April 24, 2014 at 2:27 pm You may well be right — my own field is less

dependent on (though not wholly free of) judging the quality of researchers' work by what brand-name is attached to it.
In any case, when that prestige is literally bought by paying a higher APC, I think we can legitimately expect that people will start to regard it with a bit more skepticism. "Oh this paper must be superb, he paid $6000 to have it published in the Awesome Journal Of Spiffy Maths".

4. *Anonymous* Says:
April 24, 2014 at 11:23 am | Reply For information on banding check out: https://www.jisc-collections.ac.uk/Help-and-information/JISC-Banding/

5. *Piero Giacomelli (@pierogiacomelli)* Says:
April 24, 2014 at 11:45 am | Reply For what I see it is very easly to access sciencedirect outside university proxy and download illegal copy of papers

6. *John* Says:
April 24, 2014 at 11:48 am | Reply Great article, a lot of work. I work in a Library, but directly with sub budgets, much this all rings true.
To pick up on a couple of things:
you mention banding – you can find out details here https://www.jisc-collections.ac.uk/Help-and-information/JISC-Banding/
Jisc Collections (fun fact, Jisc no longer stands for anything, hence no longer all capitals) negotiates on Universities' behalf but doesn't act as a middleman, hence wont know exactly what is spent.
In terms of the Russell Group spending more. I can't say for sure, partly they are larger Universities compared to 1994 Group (which was made up of smaller Universities), would probably of had larger subscriptions, and larger budgets, and oxbridge and similar would often have many subs to the same journal for their various libraries (moving to online, was somewhat painful for them i understand).
In terms of how the payment is broken down. We also pay a one-off fee for the backfiles to a journal or collection of journals, and then pay an ongoing (small) hosting fee per year.
For the Core titles, we have a choice of print and online, or online only. (common with all publishers). The former has a higher cost, plus to cost of doing something with print journals, space and processing. But you do not pay VAT (and as you note the cost of core titles is the largest part). Online only isn't 20% cheaper and hence costs more than the P&E price.
As an aside APCs are proving a real nightmare, many many phone calls per APC.

7. *Richard Van Noorden* Says:
April 24, 2014 at 11:55 am | Reply Adding a little more on banding: it appears that the institutions paying the most – UCL, Manchester, Cambridge in your list – are those in the top JISC band (see https://www.jisc-collections.ac.uk/Help-and-information/JISC-Banding/New-JISC-Bands-for-HE-HEIs-listed-by-band-1-10/ though the old banding, which was in operation until April 2014, is at http://www.jisc-collections.ac.uk/Help-and-information/JISC-Banding/HE-A-J-banding-list/).
The banding is based on " all relevant income: this is all the income each institution receives in relation to research, teaching and other knowledge-based activities such as consultancy".
It's probably no accident that UCL, Manchester and Cambridge also have the most full-time academic staff; this seems a better measure than the size of student enrolment, re why these institutions are in the top bands and pay the most in subscription fees.

8. *Ernesto Priego* Says:
April 24, 2014 at 11:55 am | Reply Thank you very much indeed for this.

I look forward to your next entry. Number 7 is an important question, but I worry that a fragmented open access "movement" (for lack of better term at the moment) would allow for the more conservative forces in more conservative fields to keep arguing that, for instance, open access is something that scientists can do but humanists can't. There might be different historical attitudes to ownership and authority in the humanities than in the sciences (perhaps) but some of us in the humanities and social sciences would very much prefer as much openness as possible. The drive for open access in the humanities has benefitted from the impulse and attitudes towards open access in STEM fields; fragmenting that front would, I fear, have negative consequences for the thrust we need at the moment…

9. *telescoper* Says:
April 24, 2014 at 12:47 pm | Reply Reblogged this on In the Dark and commented:
Read this, and weep as you learn that Elsevier's ruthless profiteering continues unabated…

10. *Pavel Zorin* Says:
April 24, 2014 at 1:33 pm | Reply I woudl like to state a complementary point of view on the problem of journal pricing and address Question 8 in your concluding remarks.
In the countries I am familiar with, research libraries are funded from public sources. If the effective prices of the required publications rise, through bundling or any other mechanism, then this is also a problem for the funding agencies which face either rising costs or diminishing efficiency of the researchers when their access to literature becomes restricted. One course of action would be therefore to have our professional associations or associations of universities lobby for increased funding or legislation changes that would benefit the cause of providing better access to literature to all interested researchers in other ways. In summary, I think that, whatever is the issue, it should also be addressed at political level.

11. *aubreymcfato* Says:
April 24, 2014 at 2:04 pm | Reply Reblogged this on Questo blog non esiste and commented:
Lunghissimo post da parte di Tim Gowers, che dichiara qui quanto spendono le università inglese per le riviste Elsevier. Una cosa da ripetere anche in Italia.

12. *E* Says:
April 24, 2014 at 3:03 pm | Reply Richard van Noorden makes a good point about using staff numbers instead of student enrolment. Also could you plot the data that you present in the table?

    - *gowers* Says:
    April 24, 2014 at 3:46 pm I would have liked to do that but couldn't find data on staff numbers. If someone could provide me with a suitable link (even better would be numbers of staff doing subjects that have significant numbers of Elsevier journals, but that's probably asking too much), I would be happy to add the numbers to the table.

13. *Zen Faulkes (@DoctorZen)* Says:
April 24, 2014 at 3:45 pm | Reply I plotted the data in your two tables that linked costs and university enrolment:
US universities: https://twitter.com/DoctorZen/status/459337721761103872
UK universities: https://twitter.com/DoctorZen/status/459341032132714496
I'm interested that the slopes of the lines and the amount of scatter seem rather different in the two countries.

14. *Zen Faulkes (@DoctorZen)* Says:
April 24, 2014 at 4:08 pm | Reply Blog post with slightly better versions of both graphs

tweeted above: http://neurodojo.blogspot.com/2014/04/cost-of-elsevier-journals-by-university.html

- *Zen Faulkes (@DoctorZen)* Says:
  April 24, 2014 at 6:17 pm Updated blog post to include plot of Richard Van Noorden's data.

15. *Richard Van Noorden* Says:
April 24, 2014 at 4:22 pm | Reply Here is total income, 2011/12 (http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=1900&Itemid=239) , vs cost paid to Elsevier. Sorry, I can't work out how to format replies.
University Cost Total income (2011/12), thousands
*Exeter £234,126 272824000
*York £400,445 263212000
*Durham £461,020 263970000
Sheffield £562,277 450920000
Queen's U Belfast £584,020 286314000
Warwick £631,851 440088000
King's College London £655,054 554220000
Liverpool £659,796 433744000
Glasgow £686,104 439839000
Cardiff £720,533 425539000
Birmingham £764,553 471997000
Southampton £766,616 437873000
Bristol £808,840 426741000
**Edinburgh £845,000 700887000
Leeds £847,429 537554000
Newcastle £974,930 386293000
Cambridge £1,161,571 1322128000
Manchester £1,257,407 807311000
UCL £1,381,380 871210000

- *Richard Van Noorden* Says:
  April 24, 2014 at 4:27 pm [Total income is as stated, not in 'thousands'. I.e. Cambridge's was £1.3 billion]
- *gowers* Says:
  April 24, 2014 at 5:45 pm I had a look at Cambridge's income a few days ago and plan to discuss in my next post whether it is reasonable for a university to pay 0.1% of its income on Elsevier journals. The fact that it's a fairly small proportion isn't necessarily all that relevant: for example, a £20 cup of coffee would be a manageably small proportion of my daily salary, but still outrageously expensive. I think what matters is more like the proportion of what the university has left when certain obviously necessary things such as salaries (which are in the region of half Cambridge's turnover), electricity bills, building maintenance, etc. etc., are paid for.
  Anyhow, thanks very much for providing this table, and thanks to you and to Zen Faulkes for your graphical representations. Here are two more of the latter, which I think are not yet linked to.
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16. *Richard Van Noorden* Says:
April 24, 2014 at 4:25 pm | Reply HESA staff numbers are here: http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=1898
HESA student numbers are here: http://www.hesa.ac.uk/content/view/1897/239/

17. *Mike Taylor* Says:
April 24, 2014 at 4:41 pm | Reply That letter from Queen's University Belfast is really something. From the craven substance — "We'd tell you the prices were it not for the very real danger that knowing this stuff would enable universities to negotiate better prices in the next round" — to the malformed URLs.
Really, they might just as well have just said "We'd tell you but we're Elsevier's bitches" and left it at that.
    - *Mike Taylor* Says:
    April 24, 2014 at 4:50 pm I mean, seriously:
    The disclosure of this information would be likely to have a detrimental effect on Elsevier's future negotiating position with that of the University.
    Isn't that *exactly* the same as saying "a positive effect on the University future negotiating position with Elsevier"?
    - *gowers* Says:
    April 24, 2014 at 5:31 pm Indeed. It was this inconsistency (with their later claim that disclosing the information could prejudice the commercial interests of the university) that made me feel I had no option but to request a review.
    I'd like to stress that there's nothing special about Belfast here. I had refusal letters from many universities, including several that eventually gave me the information, and they were all clearly modelled on the same document, giving almost exactly the same reasons, including the same buzz phrases such as "may include a level of discount" and "tailored solutions". The template was, I presume, Elsevier's response to being notified of the FOI requests.
    That's funny about the malformed URLs — I hadn't spotted that.

18. *Academics investigate Big Deals | Bibliographic Wilderness* Says:
April 24, 2014 at 7:27 pm | Reply […] Elsevier journals — some facts; from Gowers' Weblog […]

19. *Anonymous* Says:
April 24, 2014 at 7:29 pm | Reply Here's a blog post from 2011 about Purdue University in the U.S. spending $2.9 million for a one year contract with Elsevier.
The article also includes references to what several other U.S. universities pay.
http://www.infodocket.com/2011/12/19/scholarly-publishing-purdue-university-signs-new-one-year-2-9-million-contract-with-elsevier/
This blog post (same source) has some numbers from the U. of Pittsburgh.
http://www.infodocket.com/2012/02/09/university-of-pittsburgh-reacts-to-elsevier-boycott-incl-info-on-elseviers-contract-with-pitt-libraries/