These are slides for a talk I will give on 24 Oct 2013, at a symposium on open access publishing, organized by the Ebling Library, UW–Madison.

I’m a statistician. My research focuses on genetics, and most of my papers are in genetics journals.

So in commenting on open access, I’m focusing on scientific publications, and perhaps more narrowly, on the biological sciences.
I’ll begin with an illustration of what I mean by access.

The other day I was reading a manuscript and saw an article of interest.
If I paste the article title into Google Scholar, I immediately find the paper and can go directly to the journal.

But I was sitting at home on my couch.

And they charge $40 for a 7 page paper!
I went back to some of my early papers, and found these outrageous prices.

$18 for a 2-page paper?

I understand that the publishing industry has a long history of screwy pricing, but you’d have to be either desperate or stupid to pay this.

And for that 1999 Genetic Epidemiology article, published by Wiley, you have to register in order to find out that it’s $35 for just 24 hours of access.
Access in action

One useful trick that I’ve learned (for folks at UW–Madison): If you paste `ezproxy.library.wisc.edu` into the URL for an article, then after entering your password, you can sometimes get access to the article.

But it didn’t work in this case.
So I go back to the library catalog, search for the journal, get to the journal site again, find the paper, and...
Finally.

I finally have a PDF of the paper.
If I’d used PubMed rather than Google Scholar, I could have gotten to the published paper in just a few clicks, because the manuscript is in PubMed Central.

PubMed Central is only for federally-funded research, has a one year embargo, and (as here) might not include the published version of the paper.

PubMed Central is a good thing, but one generally can’t wait a year, it’s unfortunate that the published versions aren’t always included, and from an author’s point of view it can be a real hassle.
As another example, I was interested a paper from the Journal of Dental Research.

It’s less than a year old, so it’s not available in PubMed Central.

I ordered a copy by inter-library loan, but it didn’t include the supplemental methods, and those are behind a paywall at the journal!
I was reduced to venting on twitter.

But then I got the appendix I wanted by email (twice!), within an hour of my tweet. (Thanks, MM and KW!)
Open access is all about money.

Most of the costs behind a research paper are paid by grants or institutional funds. For most journals, peer review and editorial oversight are unpaid.

There are real costs associated with journals, but in the end they are all paid from the same sources (grants and institutional funds).

Do we really want to give away the product of our research and then buy it back repeatedly, at great profit to the publishers?

And shouldn’t the literature be available generally and not just to those with access to well-funded research libraries?
The Open Access discussion often gets tied up with discussion about peer review, predatory publishing, and journal impact factors.

But to me, it is a completely separate issue, whether we want stringent peer review before publication or instead leave the evaluation entirely to post-publication review.

On the other hand, the current culture is to evaluate researchers based on the perceived quality of the journals in which they’ve published. This makes it difficult to change to open access.

If everyone’s still going to send their best work to Science, Nature, & Cell, then that work will continue to be locked up behind pay walls.
Paying for it

- **Traditional approach**
  - subscriptions
  - page charges

- **Open access**
  - bigger page charges
  - submission charges?

- **Endowments**

- **Direct grants to journals**

The usual way in which publishing costs are paid are through a combination of subscriptions (both institutional and individual) and direct charges to the author.

In the new open access model, the page charges are increased in order to eliminate the subscription fees. One might have a fee for all submitted manuscripts and not just those accepted for publication.

I’ve not seen much discussion of other alternatives, but I would prefer to see endowments established, particularly for society journals. Alternatively, journals might be funded directly through grants.
To illustrate the costs, here are the pages charges for three of my papers from 2012, for a combined $7000.

$2,548

$1,650

$2,891
Here’s the invoice for the most expensive of those three papers.

The charges would have been “just” $1700, but I paid an additional $1200 to have it freely available (otherwise it would have been behind a pay wall for one year).
The page charges, and the continued reliance on impact factors, lead to difficult choices, particularly for young investigators.

Should I pay for open access, or should I let the subscribers pay and use the savings to do more experiments?

Should I support open access journals, or should I continue to go after Science, Nature, & Cell?

The best scientists may confidently maintain their pure publication record.

But more mediocre scientists, who may be just scraping by, probably don’t feel they have that luxury. A Nature paper can “make you.”
What can we do?

- Send our best work to open access journals
- Support junior faculty to keep their papers open
- Pay attention to the quality of the work (not the impact factor of the journal)
- Raise endowments for trusted journals
- Reform copyright law

We need to send our best work to open access journals.

We need to find ways to support our junior colleagues, so that they may do so as well.

We need to evaluate people based on their work and not by the name of the journal in which it appeared. We all may say, “Science and Nature are often crap and there are lots of fantastic papers that appear elsewhere.” But somehow when we see Nature or Cell on someone’s CV, we still have an immediate, positive reaction.

I would like to see endowed journals, open forever.

The quickest way to free the product of federally funded research would be to reform copyright law. If the product of our research were forced open by law, the publishing industry would figure out how to pay for it in short order.

But given the state of politics in the US, I’m not too optimistic about that.