



Digital Access to Knowledge: Research chat with Harvard's Peter Suber

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Digital access to knowledge: Research chat with Harvard's Peter Suber

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How much access is there to cutting-edge research online? The reality is that access to the world's deepest knowledge — that produced by professional researchers — remains contested in the digital space.

The Internet is democratizing access to many forms of information — but not necessarily all forms at the same rate. Twenty years ago, scholarly journal articles were found only on library shelves, or came as hard copies through mail subscriptions. With the Internet, the possibility of access changed, but academic publishers continue to charge fees for subscriptions

to many important journals, with the goal of maintaining traditional business models. For journalists, bloggers, private businesses and interested citizens, and of course researchers, Internet pay walls still restrict access to much of this knowledge, even some that is taxpayer-funded. Whether or not the digital trends that have transformed the news media and music industries may yet reshape the world of scholarship remains to be seen.

[Peter Suber](#) is director of the [Harvard Open Access Project](#) and a fellow at the Berkman Center for Internet & Society. His new book, *Open Access*, examines an emerging movement to bring research to everyone who might want to make use of it. Suber envisions a richer online world in which more scholarship is made open, in part for researchers themselves and in part for journalists and other “bridge builders” between knowledge and society to report it, summarize it, translate it into lay terms, make it more visible — and start connecting it with public policy issues or new developments in other fields.

“Imagine what would happen if all journalists who write about scholarship had access to primary sources themselves,” Suber says. “Imagine if they could put links to primary sources in their publications, and imagine if readers could click through for free online access to those primary sources.”

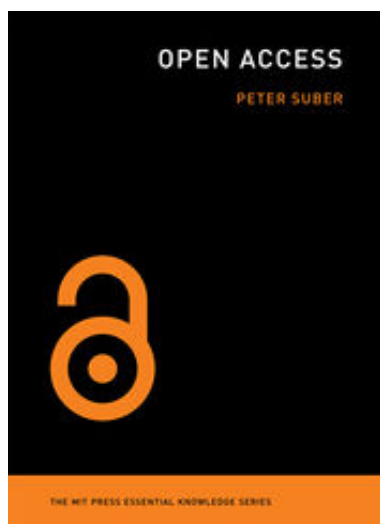
Open access to scholarship is a topic that not only affects the resources available to the media in the future but is a live political issue here and abroad that touches on core issues relating to technology and democracy. As part of our ongoing “[research chat](#)” series, Journalist's Resource recently caught up with Suber to discuss the current state of access to research in the digital age:

Journalist's Resource: For people interested in the democratization of knowledge and information,

what should they know about the open access movement?

Peter Suber: The primary focus of the open access movement is peer-reviewed journal literature. Most journal literature is based on research funded by taxpayers. We want open access to publicly funded research partly out of simple fairness to taxpayers. But we also want open access to peer-reviewed research as such, regardless of how it was funded, in order to help researchers and accelerate research. Researchers need it as authors in order to reach the people who can build on their work, and they need it as readers in order to find and retrieve the literature they need.

Not every member of the public cares to read peer-reviewed research. But a surprisingly large number of people do care. When the [National Library of Medicine](#) became open access in 2004, traffic increased 100-fold, which was a big surprise to the people at the NLM. There was unmet demand from the lay public. Even today, more than 40 percent of the visitors to [PubMed Central](#) come from non-.edu domains. There's huge demand from non-professional researchers.



We shouldn't say the primary audience consists of researchers and the secondary audience of lay people. The primary audience consists of everybody who cares, regardless of their professions or purposes. We don't know yet all the people who care. Moreover, it turns out to be more expensive to discriminate and give access to the people we decide are worthy and deny it to everyone else. Giving access to everyone is easier and cheaper than setting up the apparatus of exclusion.

Even if you aren't interested in reading peer-reviewed research, you benefit from open access. You depend on the medicines, the machines, and the policies made by people who make use of research and in that sense who make use of access to research. So, either you benefit directly, as a researcher, or indirectly, as a consumer of the fruits of research. The only people who oppose open access are some academic publishers, not even all of them. And even academic publishers want to accelerate research insofar as they benefit as individuals from advances in better medicines, longer batteries, cleaner energy, or more-informed decision-making.

JR: Of peer-reviewed research right now, what percentage is open access?

Peter Suber: About 20 percent. That's in all fields. Physicists were the first to make their research open access about 20 years ago, which is ancient history in Internet time. Other disciplines didn't make a serious start until a decade ago. In particle physics, nearly 100% of new research is open access from birth. Other fields are moving to catch up.

In the beginning, we thought the rate would be even faster. Open access was technically easy and legally easy — even economically easy. But it wasn't culturally easy. Now that I've been in this a long time, and have come to appreciate the cultural obstacles, I've come to think that 20 percent in a decade is fast. We're watching deep institutional change take place before our eyes.

The growth of open access is accelerating. The institutions that are in the best positions to influence the decision about open access are all getting on board with open access. These are universities and funding agencies. Individual researchers are also getting on board. The U.K. just adopted a series of policies that will essentially require open access to all publicly funded research within the next two years. It's the largest country to take that nationwide step. Denmark took that step just a month earlier. We're reaching a kind of tipping point where major research institutions and even major research nations are pulling in

the same direction.

JR: Which issues in this area would you like to see more media coverage of in the United States? What are the key issues in this area of access to knowledge?

Peter Suber: I'd like Americans to know that the National Institutes of Health requires open access to the results of all NIH-funded research. That's really big. One reason it's big that the NIH is the largest funding agency for non-classified research in the world. It has a research budget of over \$30 billion, which is larger than the GDP of about 140 nations. That whole budget comes from taxpayers. In 2005, the agency started encouraging open access the research it funds, and in 2008 it began to requiring it. Some publishers still lobby against the NIH open-access policy. But the policy is a smashing success and the publishers' [most recent attempt to repeal it](#) was quickly rejected by Congress and even withdrawn by its own sponsors. One hundred percent of surveyed publishers now accommodate the policy. If they thought the costs or risks to them exceeded the benefits, then they could refuse to publish NIH-funded authors. But not one has chosen to do that.

I'd like journalists to understand that this is happening. I'd also like them to avoid certain misunderstandings when they do report on it. The NIH policy does not require researchers to publish in open access journals. It requires them to deposit their peer-reviewed manuscripts in an open-access repository, no matter where they choose to publish. It doesn't seize or invalidate copyrights belonging to publishers. It requires grantees to retain certain rights so that publishers don't acquire them in the first place. It's a policy regulating grantees, not publishers.

Harvard has a [set of similar policies](#) now, and deposits the new work of Harvard authors in the Harvard institutional repository, [DASH](#) (Digital Access to Scholarship at Harvard). Since the NIH policy came first, we can say that Harvard has the university equivalent of the NIH policy. In both cases, authors retain key rights, and use them to authorize OA, which enables them to avoid copyright problems.

There's a bill before Congress, the [Federal Research Public Access Act](#) (FRPAA), to expand the NIH policy across the federal government. It would cover the 11 largest funding agencies in the government and subsume the NIH policy. It would actually strengthen the NIH policy by reducing the permissible embargo on new research from 12 months to six months. This bill has been introduced in three separate Congresses, and each time has gained more support than the time before. Because this is an election year, it's hard to say that FRPAA will pass this time around. But any reporter interested in open access should cover that bill. It has bipartisan support at a time when almost no policy proposal has bipartisan support.

JR: At the 30,000-foot level, what's at stake with this bill? How would you explain it to the general public?



Peter Suber: Let's say \$60 billion of taxpayer-funded research is being locked away in private journals whose prices are increasing faster than inflation. Access to peer-reviewed literature is actually decreasing. Library budgets are shrinking each year. Harvard is the wealthiest library in the world, and must make budget-driven cancellations every year. It has already said several times that journal prices are unsustainable.

Good research is being funded, completed, and published. But a growing number of the people who need it — for example, to translate this research into new medicines — don't have they

access they need.

What's the bottom line for the general public? You want open access to publicly-funded research both as a spender of money –as a taxpayer– and as a beneficiary of research –as a medical patient, a consumer of energy, and a breather of the air. When your government spends your money on non-classified research, you want that research to be as widely available and useful as possible. It's your buck and your bang.

JR: How does broader access to knowledge relate to the functioning of democracy?

Peter Suber: The federal funding agencies have a mission to serve the public interest.

They fund valuable research, and most of us just assume that the published articles reporting that research find their way into the hands of all the people who need it. That is now a false assumption. Over the past 30-40 years, the prices of subscription journals have risen faster than inflation, creating larger and larger access gaps for more and more research.

When the Internet came along, it actually gave us a way to close those gaps. If we don't do that, then we're putting the private interests of publishers ahead of the public interest in public access to publicly-funded research. The longer we wait, the longer we are compromising the public interest.

Congress has held three hearings on open access. In each one, publishers were called to testify, and were asked, "Have you been harmed by the NIH policy? Can you point to any harm?" In each case, they have been unable to point to harm. They have not been able to point to lost jobs or cancelled subscriptions. They can point to reduced downloads, but reduced downloads don't harm publishers unless they lead to cancellations, which has not happened.

Open access would be justified even if it did cause some harm to academic publishers. But it's not causing harm. The Congressional witnesses effectively admit it. And we see it in other evidence as well. Elsevier, the largest publisher of academic journals, made profits of 37 percent in 2010. The same year ExxonMobil made only 28 percent.

Academic publishers fear that the harm is coming. Maybe it is, and maybe it isn't. The case for open access is based on real needs, and the case against it is based on conjecture and fear. Let's adopt an OA policy for publicly-funded research and see what happens. One day, if publishers can show evidence that the policy harms them, then we can look at the evidence and decide, in light of that evidence, what's in the public interest.

Journal prices are a market failure. But in the wake of that market failure, the lack of a comprehensive policy requiring open access to publicly-funded research is a failure of democracy.



JR: A lot of people complain that academic research is written and presented in such a way that it's too arcane — that it's written for a small group, maybe six other people in the world, and it doesn't seek to inform the public. Do you think that if the rate of open access increased up to 80 or even 100 percent, it would change the presentation of scholarship itself, perhaps incentivizing scholars to communicate more clearly?

Peter Suber: Yes and no. First, let me defend one kind of obscure scholarship. Some cutting-edge research is truly of interest to just six other people in the world — like finding the

tenth decimal place for a natural constant. But it matters that we get that extra precision. Someone should be working on that problem. One way that science makes progress is by getting consensus answers to a large number of small problems. One purpose of academic freedom is to protect researchers

trying to answer questions that might have no market value. The answers might anger people, as we see in evolution or climate change, or they might bore people, like the tenth decimal place of a natural constant. If academic rewards depended on the popularity of our results, we'd solve very few important problems and everyone would lose out.

On the other hand, lots of research is, or could be, of interest to a very large number of people. But it may be written in such a way that deliberately punts that opportunity. Lots of scholars think they'll get more credit by appealing only to other scholars, not the general public. And they may be right about that. Simply as a prediction about how their professional colleagues would treat them, they may get more credit when writing just for the inner circle than when writing for a wider circle.

If new research becomes open access by default, I don't think the people studying the tenth decimal place of a natural constant will change their style. Nor would they need to change their style. But people writing research that might be of interest to a larger public might try to change their style. It would be a shame if they didn't, let me put it that way. If journal editors or tenure committees saw papers that were just as rigorous but more intelligible, they should rejoice. They shouldn't hold that against authors, as if clarity were a vice. By the way, I've seen authors punished for popularizing, when in fact they're doing good research that happened to be well written. It's a shame that we do that today. It would be a bigger shame if we did that in the age of open access.

There's another way that research could become more relevant to the public, and that is through journalism. When literature is open access, then it's suddenly within reach of journalists. Today, journalists are even worse off than the university faculty. A given university library may subscribe to a small fraction of research journals, but at least faculty have access to that fraction. Journalists don't have even that much, and tend to learn about breakthroughs by attending conferences and then getting papers by back channels, such as email.

Imagine what would happen if all journalists who write about scholarship had access to primary sources themselves. Imagine if they could put links to primary sources in their publications, and imagine if readers could click through for free online access to those primary sources. That would change things. It wouldn't merely change science journalism. It could also change political journalism, fact checking, and reader knowledge.

Even when scholars are not writing for the general public, journalists could be the bridge. Journalists have always tried to play that role, but it's been hard for them without access. Open access could change that. I expect to see a world of intermediaries grow up, which will help translate academic research into intelligible terms. We need translators who can help bridge these gaps. Open access won't suffice, but it is necessary for that.

JR: If bloggers and media members want access to social science scholarship, are there open access sites that you'd recommend?

Peter Suber: The obvious first stop for anyone looking for social science research is SSRN.com — the [Social Science Research Network](#). It's a network of repositories, each one devoted to a topic or field. They are all open access and they're all searchable. In some social-science fields, SSRN is the first place authors think about distributing their work.

If you're looking for open access research in any given field, not just the social sciences, you can go to the [Directory of Open Access Journals](#), the [Directory of Open Access Repositories](#), or a place like [Google Scholar](#). In Google Scholar, the left-hand column lists all the studies matching your search, and the right-hand column lists the subset of those studies free to the reader, either because they're open

access or because the reader's institution has paid for access.

Tags: research chat

By [John Wihbey](#) | October 16, 2012