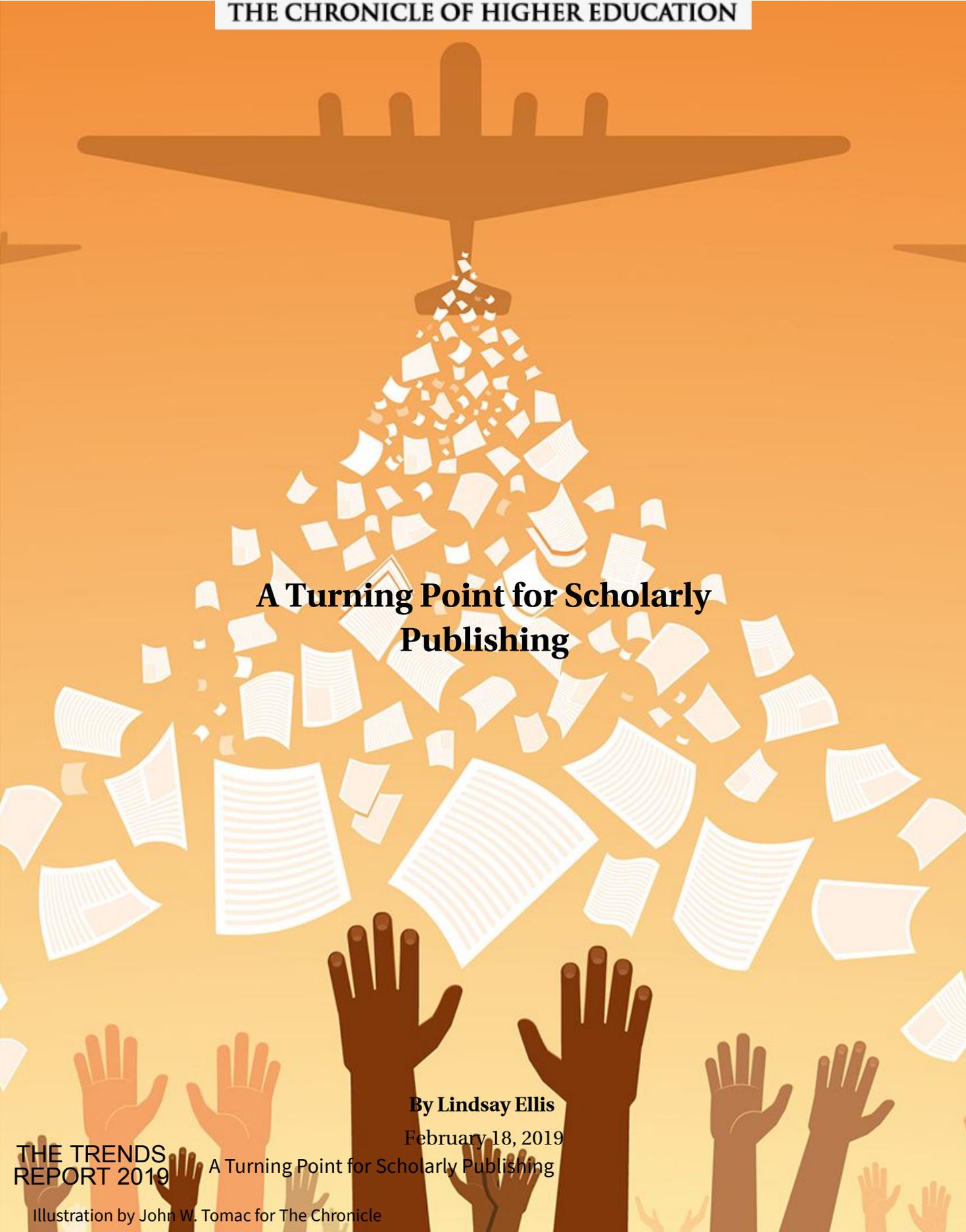


THE CHRONICLE OF HIGHER EDUCATION

An illustration on an orange background. At the top, a hand holds a tray. From the tray, a large number of white papers are falling downwards. At the bottom of the frame, several other hands are reaching up, some appearing to catch the falling papers. The papers are scattered throughout the central area of the image.

A Turning Point for Scholarly Publishing

By Lindsay Ellis

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THE TRENDS REPORT 2019 A Turning Point for Scholarly Publishing

Illustration by John W. Tomac for The Chronicle

Update: On February 28, 2019, the University of California system [canceled](#) its contract with Elsevier.

Debate over the future of scholarly publishing felt remote to Kathryn M. Jones, an associate professor of biology at Florida State University — that is, until she attended a Faculty Senate meeting last year.

There she learned that the library might renegotiate its \$2-million subscription with the publishing behemoth Elsevier, which would limit her and her colleagues' access to groundbreaking research. Horror sank in. Like other experimental scientists, Jones regularly skims articles published in subscription journals to plan future experiments. What would happen if she couldn't access that body of important work with the click of a button?

Though initiatives to make published research more freely available have for years poked at the publishing industry's armor, these efforts — known as the open-access movement — have not toppled the norms of how academic work is distributed and read. Titans like Elsevier, Springer Nature, and Wiley own troves of journals that enjoy immense respect in academe. In the dominant system, a person can read newly published research in one of two ways: pay a one-time fee to obtain an article locked behind a paywall, or get it through a campus library, which may pay millions of dollars for subscriptions.

That may soon change. Smaller-scale efforts are mixing with top-down decisions — through universities' subscription negotiations and a major European plan that mandates open-access publication for certain research — to put unusual pressure on publishers.

Don't think these battles are confined to the library or an individual discipline. The changes have the potential to alter nearly everything about how research is disseminated — and therefore how departments spend money, researchers collaborate, and faculty careers advance.



“There is reason to believe we are at a true tipping point in transforming this industry,” says Jeffrey K. MacKie-Mason, university librarian at the University of California at Berkeley, who helped lead that university system’s negotiations with Elsevier. “We are getting enough alignment and actual action on the part of providers of research and readers of research to change the intermediary — the publishing industry.”

It won’t be easy in a landscape still dominated by subscription publishing. One major challenge will be incorporating open-access principles into the existing work culture of faculty members and researchers, who have a huge incentive to publish in known subscription journals because of their prestige. Some worry about other unintended consequences.

The European plan “changed the conversation quite substantially.”

Despite her qualms, Jones supported Florida State’s desire to reduce costs through negotiations. Her mother was a public-school librarian, and Jones knew budgets were tight. She even publishes many of her own articles under an open-access model.

After doing some research, she learned that other universities were also renegotiating big packages. If that’s the trend, she thought, maybe we are just stupid to keep paying at this rate.

Florida State decided to halve the cost of its Elsevier contract, paying about \$1 million to subscribe to the 150 most-used journals, as identified by faculty members, instead of the more than 1,800 journals they could read as part of the bundle. Budgetary strain was the prime cause, but in announcing the decision, the library also noted its broader support for the open-access movement. The Faculty Senate [supported the libraries unanimously](#).

So Jones searched for keywords — including "bacterial exopolysaccharide" and "rhizobium" — in the journals that didn't make the cut, and then downloaded those issues before access ran out. The files gobble up space on an external drive, but she says easier access for the near-term future is worth the burden.

The ideal solution, Jones realized, didn't exist. "We were just trying to throw as many journals as we could into the lifeboat."

Complicating any discussion about open access is that many groups that agree in principle that research should be free to read disagree with the particulars of how that should happen. Those tensions emerged in the fall when a group of major European funding agencies took on the mantle of change through a new initiative: Plan S.

There are two predominant ways to publish under an open-access model. "Gold" open access imposes a processing charge on a researcher, university, or funding agency before an article is released — but after that, anyone can read that article free of charge, immediately after publication, and there are looser restrictions on republication.

Many federal agencies under the Obama administration started requiring "green" open access for the articles they funded — in which a version of an article is published in a free repository in addition to in any subscription journal. That free version may be subject to a delayed release.

Some open-access supporters say research is truly open only when all content is freely accessible, with no copyright restrictions for re-use. Other proponents say certain restrictions are OK, including limiting commercial use. Article-processing fees covering formatting, coordinating peer review, and digital housing can be a few thousand dollars.

Some fear that those charges could soar, making publishing less accessible. (Processing fees are high in more-selective journals, some publishers say, because it takes effort and time to weed through articles.)

Under Plan S the research financed by members of the coalition must be published in compliant open-access journals by 2020, made accessible without any embargo. The funding agencies include national research foundations in about a dozen European countries, in addition to the Bill & Melinda Gates Foundation in the United States and the Wellcome Trust in Britain.

Collectively, the original signatories financed more than 20 percent of the scholarly articles published in their countries in 2017, and 3.3 percent of scholarly articles published that year worldwide, according to the consulting and advisory firm Delta Think. More funding agencies have since expressed support, including in China, according to Robert-Jan Smits, open-access envoy for the European Commission.

The announcement of Plan S raised cheers — and questions. To boosters of open-access publishing, it showed that major foundations had soured on expensive subscription journals and that large-scale change was on the way.

“It is only through a concerted and coordinated approach across national funders that the necessary progress can be made,” says Carlos Moedas, the European commissioner for research, science, and innovation, [in a statement](#) strongly encouraging other funding bodies to follow suit.

But resistance to the announcement was swift. Lynn Kamerlin, a professor of structural biology at Sweden’s Uppsala University, coordinated an open letter against Plan S that more than 1,600 people signed. She says the top-down mandate made researchers bristle.

It “threatens to shatter researchers’ trust,” she says. “It’s a worrying moment — the grass roots is where you need it. The research community should take the lead.”

One concern outlined in the petition was the risk that individual researchers would see

lower international rankings and standings if they could not publish in top journals.



Charles T. Watkinson, associate university librarian for publishing at the University of Michigan and director of the university’s press, thinks about equity when he considers publication driven by article-processing fees. Academics at small colleges and in the humanities are less likely to have money from their institution or their funding agency to cover article-processing charges, he says. Watkinson serves on the oversight committee of Lever Press, an open-access book publisher backed by a group of liberal-arts college libraries.

“How can we support scholars who don’t have funding coming with them?” he asks. “Plan S is driven by very well-funded fields.”

Haakon Gjerløw, a Ph.D. fellow in political science at the University of Oslo, fears that the plan will isolate him from researchers in the United States and other countries whose central funding agencies do not support it. It depends on how the plan is implemented, guidance for which was collected through early February.

Gjerløw has worked with a social-science project called [Varieties of Democracy](#) for more than three years and has valued collaborating with American academics. Data collection was paid for by agencies that support Plan S. He says he would understand if American researchers no longer wanted to work on a project that had to adhere to strict open-access rules, potentially limiting any ability to publish in a top journal.

“They do not have any great incentive to cooperate across the Atlantic,” he says. “It could end up being a waste of time if you couldn’t get any academic credit out of it.”

Plan S aspires to increase global science collaboration by making results “widely available without paywall and delays,” wrote Smits in an email.

“I always thought that scientists were collaborating at [the] international level to extend in partnership the frontiers of knowledge, address the grand societal challenges, transfer knowledge to industry and train the next generation of researchers,” he said. “If scientists now tell you that they will no longer collaborate globally if they will not be allowed to publish behind expensive paywalls, the time might have come for a more fundamental debate of the role of science in our society.”

“Libraries are under great pressure ... to cut back on the number of materials they collect.”

Smits said that Plan S organizers have heard from certain fields that not enough open-access outlets exist. The coalition, he said, is analyzing this gap and has pledged to offer incentives for the development of new open-access platforms.

It makes sense for the foundations to force change, he wrote, because “not much progress has been made” in expanding open access in more than two decades. “Funders are now taking their responsibility through ‘the power of the purse.’ ”

In 2015, Johan Rooryck felt prepared to resign as editor of the Elsevier-owned linguistics publication *Lingua*. For a while, he could convince himself that he worked for the good of his field, for academe. But looking into Elsevier’s profits made him think differently about his work. After a high-profile boycott of Elsevier in 2012, academics he respected told him they didn’t want to perform peer review for *Lingua* anymore.

He started, very slowly, to feel like a bad guy. They’re holding all the strings, he thought to himself.

He and his editorial colleagues decided to resign. Their goal was to orchestrate a so-called “flip” of the journal — a transfer of the leadership team that edited *Lingua* to a new open-access publication.

Because the publication had the same editorial team, he expected it would not confront questions of quality that plagued other open-access journals.

Rooryck reeled in half a million euros from the Association of Dutch Universities and other groups and devised a longer-term solution, in which the nonprofit Open Library for the Humanities would pay processing fees of individual articles — and try to spread the practice of “flipping” to others.

TAKEAWAYS:

- Bottom-up efforts and top-down decrees make this a major turning point for open-access publishing.
- Some large library systems are pursuing new types of subscription packages with publishers. Negotiators want one package that would cover subscription charges and open-access publishing fees.
- National research foundations in about a dozen European countries have joined a coalition that would force the academics they fund to publish their research under an open-access model. Comments on implementation were due in February.
- One challenge: Departments largely do not consider open-access publication in their promotion-and-tenure decisions.

The editors sent a letter to Elsevier that announced their resignation and started a new open-access publication called *Glossa*. They had the support of writers and reviewers, some of whom withdrew their articles from *Lingua* and submitted them to *Glossa* for publication. And he heard from readers as far away as Indonesia and South Africa who were thrilled to be able to read the articles without paying. It was satisfying, feeling like he had changed something for the better.

Since then, Rooryck has heard from editors at other publications who ask for advice in flipping their own journals.

He is frank in his responses: You have to be careful, he counsels. A publisher, he says, “has much more money than you do and has much better lawyers than you do.”

Rooryck also had the advantage of name recognition and experience — he started editing *Lingua* in 1999.

Gemma Hersh, Elsevier’s vice president for global policy, says that when editors leave to start an open-access journal, “We wish them the very best of luck.” *Lingua*’s impact factor, measuring citations of published articles over several years, dropped from 2015 to 2016 but rose again in 2017. *Glossa* has not yet received one because it has not existed long

enough, Rooryck says.

Rooryck leads two groups that aim to transition subscriptions to open-access journals, one centered on the field of linguistics called LingOA that flipped several journals but doesn't have the money to do more. The Fair Open Access Alliance also works with editors and advisory boards who want to flip their journals to open access. They issued a statement in support of Plan S in 2018.

Rooryck agrees with those who say that the open-access movement had reached a turning point. Plan S "changed the conversation quite substantially," he says. The next step, he says, is for more university libraries to stop paying for subscriptions, freeing up money to support open-access publication of their faculty members' work.

"What we do is bottom up," he says. "But for once, the bottom-up effort and the top-down effort meet — in the principles we share."

It was only a matter of time before Emily L. Dennis got another request to review a pending academic paper. They pop into her inbox a few times a month, and she says yes regularly. But an email in December from the University of California at Los Angeles, where she completed her Ph.D. in neuroscience, changed that consideration.

One of America's top research universities was calling for a boycott. As the UC system negotiated its contract with Elsevier, UCLA urged affiliated academics to consider declining to peer-review articles for that publisher's journals. The letter also asked faculty members to consider publishing research in other journals, particularly prestigious open-access publications.

Dennis, now a postdoctoral scholar at Harvard University, hadn't been following the UC negotiations closely, nor was she particularly attuned to the open-access debate. But, reading the email, she started to think differently about the time she spent reviewing articles for for-profit companies without compensation.

Dennis respects many Elsevier journals, and she's not sure how she'll handle the decision of where to publish her future work if negotiations don't improve before then. "I don't

want to be the stick in the mud who says, 'No, we can't submit here.' ”

Still, she [decided to join the boycott](#). The very next day, when asked, she declined to review a submission for an Elsevier-owned journal. “I don't feel it's worth my time right now.”

Negotiations in good faith continued through January, a month after the contract was set to expire, and at the end of the month the university said access was expected to continue amid the discussions. But in many respects, Ivy Anderson and MacKie-Mason, the lead UC negotiators on the Elsevier contract, are relying on people like Dennis to carry forward their vision for the system's library contracts even after negotiations have concluded.

Their ultimate goal? Having [one package that would cover subscription charges and open-access publishing fees](#), meaning that articles published by UC faculty members would be available freely around the globe. The vision is to transfer the financial burden of reading research from readers to the researchers, their universities, or funding agencies. UC's prior five-year contract with Elsevier cost about \$50 million.

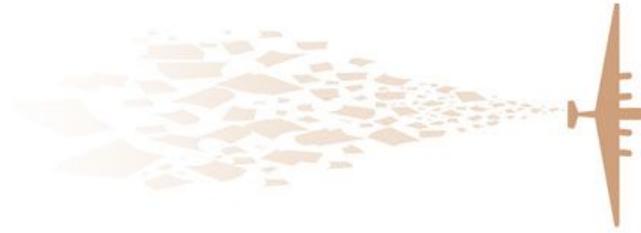
Darrell W. Gunter worked at Elsevier for more than a decade starting in the 1990s. The constant refrain he heard from universities in the early 2000s, he says, was that they needed an "orderly retreat" from the Big Deal — journal packages sold in bulk by major publishers — because library budgets couldn't absorb the rising costs of the bundles. (Publishers argue that they offer more value as more pieces are published annually.)

"Libraries are under great pressure from their administration to cut back on the number of materials they collect," Gunter says. "You have this natural friction. You can't subscribe to everything, so you have to pick and choose."

Publishers are aware that something is broken, Gunter says, and he expects disruption to come. Years ago, major publishers wouldn't want to talk about open access at all, he says.

Hersh, Elsevier's vice president for global policy, says the company responds to what customers ask for and evolves its business in line with those needs. It's not the company's

job, she says, to move researchers to publish in one way or another; it's to reflect what researchers want.



The company publishes more than 170 open-access journals and more than 1,850 hybrid journals, and every journal allows authors to publish a version of the paper open-access, often with an embargo period.

"Yes, open access is important. It's important to our customers," says Hersh. "We're also seeing that subscription is really, really important."

The California system isn't the first to advocate for aspects of this model, and Elsevier certainly isn't the only company that sells big bundles to libraries. Six universities, including two in the United States, canceled Big Deal bundles for 2018 with Springer Nature, Elsevier, and Wiley, according to the Scholarly Publishing and Academic Resources Coalition, which tracks cancellations and promotes changing the structure and culture of publishing to promote open access.

In June, the Massachusetts Institute of Technology announced an agreement with the Royal Society of Chemistry, a professional association that publishes dozens of journals. Through the agreement, MIT subscribed to the society's articles with the guarantee that any MIT-authored article published in those journals could be read freely, anywhere in the world.

University of California negotiators expect others to follow that model soon. "There is a recognition beginning to develop in the U.S.," Anderson says, "that maybe this direction is a reasonable one to pursue."

"The open-access conversation is going mainstream in a way it hasn't before.

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