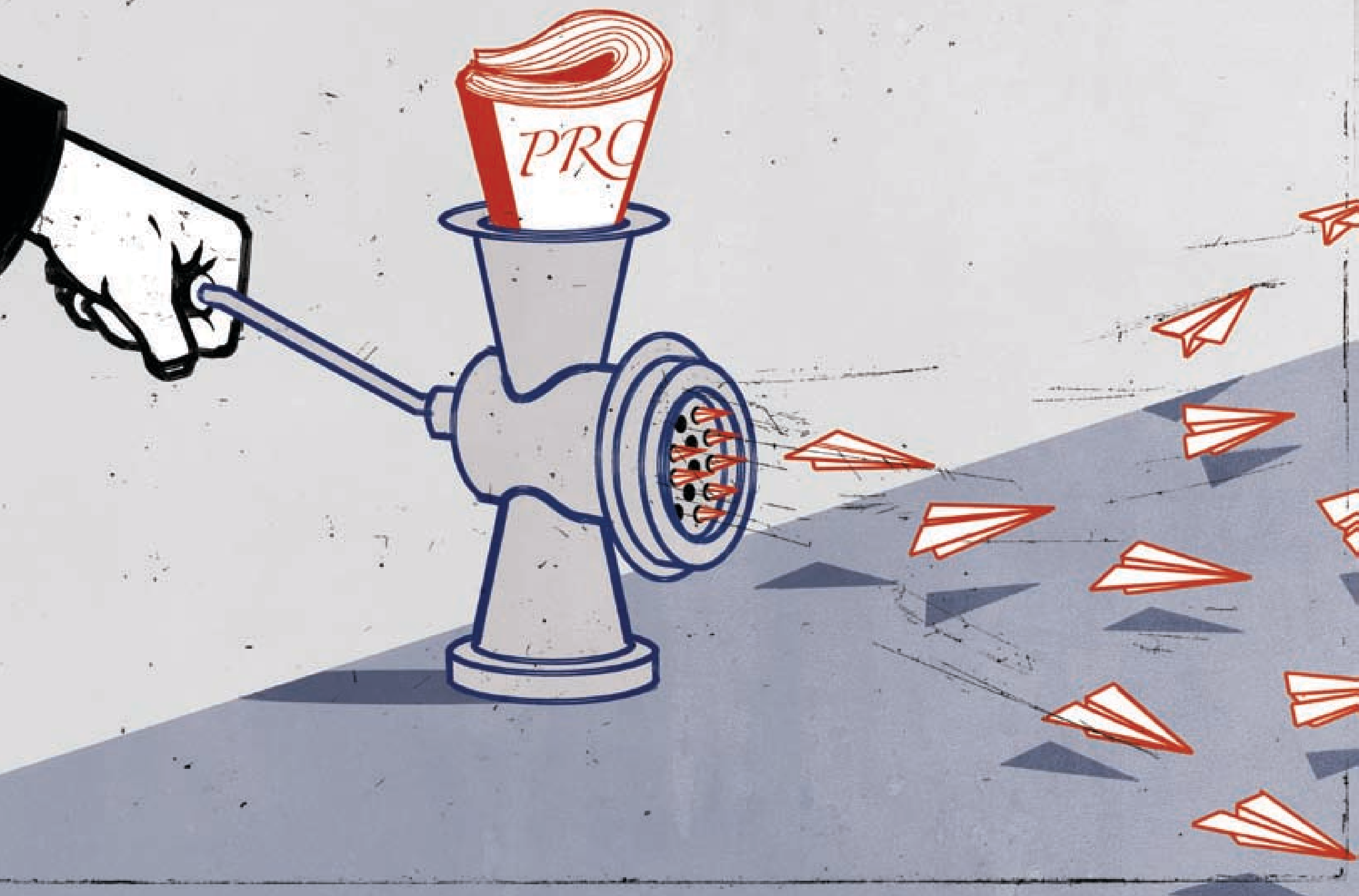

Research Wants to Be Free

BU IS BIG ON A NEW WAY TO PUBLISH SCHOLARLY WORK
BY CHRIS BERDIK

In 2007, a public health department in New Jersey discovered that while bird flu might spread quickly, cutting-edge research on the virus lagged. In the midst of creating a flu-preparedness plan, officials found that the most relevant and up-to-date information on bird flu was quarantined behind copyrights, fees, and expensive journal subscriptions. A few months later, scientists at the Massachusetts Institute of Technology announced that they'd found a key to the virus's transmission from birds to humans. Ironically, they did so using public archives of National Institutes of Health–sponsored research data.

The success of the MIT researchers bolsters the case made by a growing open-access movement in academic and research circles: the idea that scholarship and discovery have been hindered by the traditional model of academic publishing. While most published scholarly work is copyrighted and distributed by subscription-based journals, an open-access system allows an article or data to be shared as widely and easily as possible with both the public and potential collaborators who might build on one another's work. The movement began a few years ago among university librarians unsettled by ever-rising subscription costs and emboldened by the promise of the Internet. It quickly spread to university faculty and has since spawned a burgeoning library of open-access journals and institutional repositories. In February, Boston University moved to the

ILLUSTRATION BY SHOUT

forefront of the movement when the faculty unanimously voted to establish the nation's first university-wide open-access archive.

The archive will be a free, searchable Web catalogue of BU scholarship ranging from neuroscience research to folk dance videos. Faculty who opt to use the archive can submit a journal article, a dissertation, or any other piece of scholarship, and material that is submitted will be made available to anyone for noncommercial use.

Open-access activists contend that bypassing traditional publishing extends the reach of discovery. But others worry about maintaining adequate vetting and peer review in an open-access world, and fear for the survival of small journals, particularly in the humanities, that rely on subscription income.

Like many revolutions, this one started over money. By the late 1990s, subscriptions to journals — the lifeblood of academic careers and scholarly advances — had been increasing much faster than inflation for decades. The Internet, which dramatically lowered the cost of reproducing and distributing content, slowed the increases, but it didn't break the dependence of university libraries on a system dominated by a handful of for-profit publishers, such as Elsevier and Springer, and by large, nonprofit professional groups that also publish journals, such as the American Chemical Society.

Robert Hudson, the director of BU's Mugar Memorial Library, says that annual subscription rates can reach $20,000 for a single journal and tend to increase 6 to 10 percent a year. BU currently spends about $5 million a year on tens of thousands of journals, and only $500,000 on books.

Faculty were also frustrated by the traditional journal network. To secure a spot in the best journals, they routinely gave up rights to reproduce and distribute their own work after publication. Even if they wanted to use their own research to teach a class, authors sometimes had to seek permission from publishers. "That happens all the time," says Barbara Millen, a School of Medicine professor of medicine. "It's cumbersome, awkward, and time-consuming."

"Ask any researcher about what they do when they run a literature search on a topic and there's only a subset of articles that their university has access to," says Heather Joseph, executive director of the Scholarly Publishing and Academic Resources Coalition, a five-year-old spin-off of the Association of Research Libraries. "A lot of researchers just say, I'll do my research based on what I have access to, rather than on what I might need to know."

Open access got its first big boost in October 2000, when a group of scientists established the Public Library of Science (PLoS), which later launched several open-access peer-reviewed journals that are now among the most cited research publications in the world. Around the same time, several other open-access publishers started up — notably a suite of online journals from BioMed Central, including *Environmental Health*, which is coedited by David Ozonoff, a School of Public Health professor of environmental health. The momentum picked up in 2005 when the National Institutes of Health (NIH) mandated that publication of any research it funded would have to be made open access within a year after appearing in a journal. The rule was made permanent in March 2009.

AS OPEN-ACCESS JOURNALS PROLIFERATE, READERS MAY HAVE TO WORK HARDER TO DETERMINE THE CREDIBILITY OF SCHOLARSHIP.

Joseph says the NIH mandate is fairer to the public, who shouldn't have to pay to see the results of research funded by their tax dollars. But others say open-access mandates ignore the value added by journals.

"There are real costs involved in running a journal, and real value in having articles vetted, edited, and prepared for publication," says John Tagler, executive director of the professional and scholarly publishing division of the Association of American Publishers. He notes that PLoS was created with a $9 million start-up grant from the Gordon and Betty Moore Foundation. "It wasn't just scraped together in somebody's basement."

Tagler argues that "open access is just shifting the balance of costs from the subscriber to the author," with many journals requiring authors to pay a fee of $1,000 or $2,000 for open access. He says publishers don't object to open access in principle, but they think it should be one model among many, rather than a mandate.

Indeed, the author payments often required by open-access journals are part of the reason many humanities scholars are wary of abandoning subscription-based publishing. Grants for health and science research are typically much larger than those for projects in the humanities, and it's normal to include a line item for open-access fees in scientific funding applications.

There are more than thirty academic journals edited or supported by Boston University faculty, including many small humanities journals, such as *Studies in Romanticism*, with a circulation of about 1,400. It's edited by David Wagenknecht, a College of Arts & Sciences professor of English, who says his journal couldn't survive without the income from subscriptions ($23 for individuals and $60 for institutions) and reprint royalties.

Likewise, Frances Whistler, director of publications for BU's Editorial Institute, worries that as the pressure to publish open access mounts, it may drive to extinction the sort of "lonely scholar" humanities work that can only survive with copyright income from a highly invested niche of colleagues. "The risk is that certain areas of scholarship will no longer be possible to do at all," she says.

Another note of caution over open access involves quality. One of the most valuable things any journal provides,

according to BU Provost David Campbell, is a reliable peer review of all its articles. Campbell, who is an editor for two subscription-based journals — *Physics Reports* (published by Elsevier) and *Chaos* (published by the American Institute of Physics) — acknowledges that most well-known open-access journals ensure high-quality peer review and also that subscription journals are not immune to mistakes and shaky science. But, he says, as open-access journals proliferate, readers will have to do a little more research to ensure that the scholarship comes from a credible source.

According to online directories, there are currently more than 4,000 open-access journals and more than 1,300 open-access repositories, up from about 800 repositories in early 2007. A 2007 editorial in *Environmental Health*, coauthored by Ozonoff, estimated that only about 10 percent of published scientific articles are published without restrictions. But Ozonoff now predicts that open access will be the norm in scholarly publishing within five years. "Even the for-profit publishers see the handwriting on the wall," he says, noting that Springer purchased BioMed Central in early 2009.

Many publishers are also experimenting with offering both subscription and open-access content. Some, such as Springer, give authors the option to pay extra for open access. Other publishers allow open access after an embargo period.

Of course, open-access repositories, such as the one at BU, will contain peer-reviewed articles as well as things such as data sets, dissertations, curricula, lectures, and creative works, both text and multimedia. The University will likely hire a manager for the repository, and vetting will be done by library staff who input electronic submissions from faculty and students.

Hudson admits that no strict guidelines have yet been established about what will be admitted to the archive and what won't. But, he says, "It's not our intent to have people self-publish on this repository. If somebody says, 'Here's my very loosely written piece on X,' we're not going to be doing that."

As Millen puts it, "We want this to represent the best of BU." She believes the open-access archive will bring "greater recognition to the ongoing work of our faculty and will stimulate a lot more cross-disciplinary, cross-campus, and even cross-border collaborations." In addition, she says, "we want to create as much access as possible to the great work of this university and a more dynamic interchange, which is really what this is all about."

Raising Cain at the Supreme Court

LAW'S JAY WEXLER TOURED CHURCH-STATE BATTLEGROUNDS

BY JESSICA ULLIAN

In 2006, a lawyer walked into a bar and came out with a Santería priest, an Amish farmer, a Hasidic school superintendent, and a man who sued the state of Texas over the Ten Commandments.

The lawyer was Jay Wexler, a School of Law professor, the bar was Grendel's Den in Cambridge, Massachusetts — and technically speaking, the religious motley crew didn't actually follow him out the door. But a barroom conversation about a 1982 U.S. Supreme Court case that pitted Grendel's against a local church seeking to revoke its liquor license prompted Wexler to think about the people and places that have figured in Supreme Court cases about separation of church and state.

The Amish farmer, for example, Adin Yutzy, is the last living plaintiff in *Wisconsin v. Yoder*, a 1972 case about whether Amish children could claim exemption from compulsory education laws. (They can.) Ernesto Pichardo, the Santería priest, figured prominently in *Church of the Lukumi Babalu Aye, Inc. v. City of Hialeah*, a 1993 dispute over whether to allow South Florida's Santería practitioners to kill animals for ritual purposes. (The court ruled that the city's effort to create an ordinance banning only ritual killings was unconstitutional.)

That chat in Grendel's Den ultimately resulted in *Holy Hullabaloos: A Road Trip to the Battlegrounds of the Church/State Wars*, published in June by Beacon Press. Part travelogue, part legal analysis, the book is Wexler's account of a 2007 road trip to eight sites around the country where religion and law have collided and the Supreme Court has intervened. Wexler, who has a master's in religious studies from the University of Chicago Divinity School and clerked for Supreme Court Justice Ruth Bader Ginsburg, says he hoped to get a firsthand look at the disputes he's taught in the classroom, all of which have emerged from the religion clause of the First Amendment: "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof." As he points out in *Holy Hullabaloos*, it's a short sentence that has probably caused more controversy than any other in American history.

"The main issues are, first, when can a minority religious group with a unique practice or belief get out of a general law?" Wexler explains. "The other issue is how much can the state support religions? Can the state put up a monument of the Ten Commandments or a crèche at Christmas? Can it teach religious ideas in a classroom, like creation science? Can there be government-sponsored religious exercise, like prayer at high school football games?"

Six months and thousands of miles later, Wexler's views about keeping church and state separate — and whether the Supreme Court has ruled correctly — had changed only a little.