

Open Access Still Open-Ended

Brian Vastag

It's official and inevitable: Open electronic access to scientific and medical information is just "too important not to happen". Or at least it is in the view of one scientist, Malcolm Beasley, a professor of applied physics at Stanford University and a member of a National Academies panel addressing the issue.

"That's the view of a practicing scientist", said Beasley, "and that's the view the students are taking. But getting there won't be easy."

Indeed, a tangled web of interests—students, professors, researchers, physicians, academic and public libraries, publishers large and small, Internet service providers, industry, and government—all stuck to varied agendas promises to gum up the works. So said the closing panel at a 2-day National Academies symposium ("Electronic Scientific, Technical, and Medical Journal Publishing and Its Implications") held in May.

Beasley's view appeared to be widely held among attendees from the publishing and academic worlds, but pronouncements of the demise of the academic journal as a form of literature were hardly heard.

"Publishing as an enterprise is obviously not going away", said Beasley. "But the breakdown of the present system is forcing an examination" of traditional academic publishing.

The symptoms are clear: Libraries are slashing subscriptions, smaller journals are closing shop while giant media corporations gobble up many others, prices vary by orders of magnitude, and more and more groups are clamoring for free access.

"Not everyone in libraries believes the subscription model is broken", said Anne Wolpert, director of libraries for the Massachusetts Institute of Technology. "But

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. . . costs and terms of licensing—those are broken."

At the same time, as open-access experiments come online, even strong proponents recognize that the dream of quick, frictionless, universal expansion of knowledge is still, and may always be, just a dream.

"Cheapness [is not] better if the quality of communication is inferior", said James O'Donnell, provost of Georgetown University and also a panel member. Many speakers struck on this theme: Shoveling information online sans gatekeepers is about as useful as if the Library of Congress abolished its catalog.

Wolpert sees a bifurcation of "raw material": tightly controlled, thoroughly reviewed, edited, and pricey vs scholar-managed and open-access. From her viewpoint, both present information-management and dissemination challenges.

For instance, publishers have taken harder stances on intellectual-property rights of late, said Wolpert—a reflection that they feel threatened. At the same time, copyright laws written for the entertainment industry are so complex as to be "high-risk and incomprehensible" to university decision-makers. That leaves publishers viewing universities as "pigeons plucked for profit" or "bandits who are stealing", Wolpert said, depending on how strictly a university adheres to publisher's use restrictions. "It doesn't make for a particularly useful conversation."

But O'Donnell sees the landscape differently. He said that much of the hand-wringing springs from "shapeless anxiety"; he pictures peaceful coexistence between the two formats. As cofounder of *Bryn Mawr Classical Review*, an electronic journal established in 1990, O'Donnell sees each type of publishing filling a different niche. The small reader base made paper and CD-ROM versions of his journal nonviable, said O'Donnell, but less-expensive electronic publishing kept the journal alive.

Subfields may enjoy a wealth of inexpensively produced electronic journals, but Beasley pointed out a key role of the

large, brand-name publications: providing context that is missing from more-obscure titles. He cited the news and reviews sections of *Science* and *Nature* as invaluable, especially to students. Maintaining the staff of writers and editors needed to produce those sections—not to mention the other costs associated with reviewing thousands of annual academic submissions—requires substantial subscription fees.

"Hyperspeed is not the ultimate good", said Beasley, "but rather understanding." He complained that the issue received little attention during the symposium despite an alarming trend. "Over the last 30 or 40 years, I've observed that graduate students can no longer read the literature. . . . It's too hard and too abstract, too much jargon is used, and so on. How are we going to help these kids deal with it?"

Wolpert said that university libraries are dealing with it in a uniquely American way: by opening offshore branches in some of the 130 countries that receive open access via a consortium of medical publishers. Like mailbox corporations in Bermuda, the branches provide benefits to their mainland founders. But instead of tax-free income, they receive royalty-free journal articles.

Wolpert and others take that trend as a sign of the open-access movement's impressive momentum. BioMed Central, a collection of open-access journals, has launched an initiative, Open Access Now, a "campaign for freedom of research information". Services like the Directory of Open Access Journals (www.doaj.org) are appearing, and of course, last year Human Genome Project codirector Francis Collins publicly tasked Celera Genomics for its pay-as-you-go genomics model.

The movement is clearly in its childhood, said Wolpert. The world will know that the movement has matured, she said, when someone receives a Nobel Prize based on an open-access electronic publication.

In the meantime, the National Academies will be publishing a symposium report later this year. 