

**When allegory replaces rational thought, science had better watch out****Richard T. Kaser****Former Executive Director, National Federation of Abstracting & Information Services**  
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But what have you seen? said Christian.

Seen! [they answered] Why, the Valley itself, which is as dark as pitch;

we also saw there the hobgoblins, satyrs, and dragons of the pit;

we heard also in that Valley a continual howling and yelling, as of

a people under unutterable misery, who there sat bound in affliction and

irons; and over that Valley hangs the discouraging clouds of

confusion. Death also doth always spread his wings over it.

In a word, it is every whit dreadful ♦

John Bunyan, [The Pilgrim ♦s Progress](#)

There are two reasons to hearken back to a 17th century writer to make a point about the future of scholarly publishing. Firstly, although the *Nature* debate has been notably rational (as far as these things go), there is still the moralistic undercurrent here that exists in this discussion at large, giving the debate the melodramatic aspect of a passion play. To hear some speak, the Powers of Darkness surround us. We tremble on the edge of Bunyan's Valley of the Shadow, poor pilgrims who must bravely fight the all-powerful phantoms lurking there and serving no other purpose than to impede our noble progress. How shall science possibly get by the writhing spectres of ghastly commercial publishers? How shall we get around our own professional societies who unbeknownst to us long ago signed pacts with the Devil presumably in blood to offset the real price of our dues with subscription fees, locking up the literature in the process? I question whether using simplistic sound bites as the basis for deciding something as important as the fate of scholarly communication sets the stage for establishing sound policy. As Ann Okerson notes in her excellent contribution to this debate ["What price free?"](#), "Melodramatic visions make for exciting politics, but it is far from clear that contemporary science needs the excitement."



Secondly, the old allegory of Pilgrim's journey to the city of light at the end of the valley is a good metaphor for the situation that scholarly publishing finds itself occupying. In the story, Pilgrim enters the valley in the dead of night. The path he treads upon is exceedingly narrow. On the one hand is a ditch into which the blind have led the blind in all ages. And on the other hand, there is a quagmire, into which, if even a good man falls, he can find no bottom for his foot to stand on. It concerns me that some are talking rather casually here and elsewhere about chucking a system that has served science well for over a century and extremely well over the last several decades of automation, in order to achieve a dream that sounds so easily accomplished but, upon attempts to implement, could just as easily turn into a nightmare of unanticipated results. I have worked with the publishers of scientific databases for 25 years and I know painfully well that nothing about publishing or digital information is as simple as it first appears. There are pitfalls and quagmires everywhere you step. Some technologist is always telling you the quick and easy answer is nigh. But the road behind us is littered with grand ideas that failed. Still, thanks to those who capitalized them including in many cases commercial publishers some great services have also emerged.

I'm not saying that a miracle isn't going to happen that will change everything. But I am suggesting that it would be foolhardy for the scientific community to trade a system that works reasonably well for a system that might or might not work. The discussion here in *Nature* has its fair share of comments from people with an inside knowledge of journal publishing. Several contributors, such as [Frank Gannon](#), have warned that making the literature free after even six months may have its biggest impact on smaller publishers and professional societies, not the big houses that appear to be the targets of the boycott. Bottom line: the idea of a wide, open literature may be appealing, until one comes to appreciate that the sole specialty journal in your own research area may, as a result, slip into the ditch out of which no one climbs.

Don't get me wrong. I'm just as enchanted and bewitched as the next person with the Utopian notion of a paradise where all human knowledge is instantly retrievable for free at the click of a mouse. The advent of this one-click access has been hailed many, many times in the last 30 years. No living human being has yet seen it.

[Derk Haank](#), in his contribution to these postings, makes several good points from a central question, namely, what is it that would really serve users of scientific information best? Is it even true, he asks, that scientists are being disserved by the current system? Have the possible consequences of radical approaches been fully considered? Will the proposed systems actually serve scientists better than the current systems?

As most producers of information services know, answering such questions is key to developing systems that actually serve their users. The effort to answer such difficult questions is both a science in itself and an art. My organization is [sponsoring a symposium](#) which will review what researchers in the field quantifiably know about the use of the literature, data collections, and other information of value to researchers, and consider systematically identifying and measuring user needs for building advanced systems that actually meet current and emerging requirements. The proceedings of our earlier symposium on the same subject highlight the complexity of the challenges involved.

I would add one more question: will the alternatives actually be any cheaper for the community of science to maintain than current systems? While the attention of the community seems to remain focused on the bottom line of commercial publishing, to do so overlooks the fact that even before profit, the effort to publish the huge volume of literature, and make it accessible and reliably usable in electronic form, currently requires billions of dollars of investment annually by all sectors of the economy combined and that's not even considering peer review.

What concerns me most is the apparent disregard for the role that economics plays in the system that exists and the role that economics will continue to play in any new system. [Martin Blume](#) suggests in lieu of subscription fees for the literature, institutions where the information is used should pay sponsorship fees. Another alternative might be to tax all research grants 10% to come up with the money that would be required to get rid of the publishers and repatriate the literature. The point is that somehow, someone has to pay for the literature system, even if it is set up to look and feel free at the point where scientists use it (see ["If information wants to be free, then who's going to pay for it?"](#)).

The current scholarly publishing mechanism is not a single thing, but rather a complete and interwoven network, involving all sectors of the economy, all types of organizations and many talented individuals. It might be thought of as a fragile ecosystem: changing even one small thing in a complex system can easily (and disastrously) affect the entire equilibrium. The fact that scholarly publishing is composed of related, similar, but not necessarily identical, parts means that any solution that proposes one fix for the entire network is probably inherently flawed. All I can say to those who would persist in proceeding on a wing and a prayer is, tread carefully, pilgrims. The road is narrow, lined on either side with chasms, and strewn with pitfalls.