

Ownership of Scholarly Literature

Historical Background

Intellectual property is a peculiar notion.

The idea of owning something intangible embodied in the idea of copyright was inspired by printers, who were attempting to protect their interests—it had little to do with protecting the interests of writers. When first conceived, ownership of intellectual property was perpetual, which meant that a work was protected forever. The notion changed over time, however, and for many reasons. One key change was in America where the Constitution¹ incorporated the idea of intellectual property and copyright, but a right with limited duration.

It was a typically American idea to balance the need for free exchange of information against the need for incentives to those creating the ideas. It was purely practical. For that reason, copyright (which governs the ownership of intellectual property) was designed to be just enough to provide incentives ... and no more. Copyright was limited to 14 years (with a possible 14 year renewal), placing all works in the public domain after that initial period.

Over the ensuing years the length of copyright increased everywhere, partly because of attempts to create uniform copyright laws throughout the world, which meant that everyone had to agree to the maximum length already in place². Most recently, the length of copyright was extended to author's life plus 70 years.

In spite of attempts to make copyright uniform, the philosophical underpinnings diverged internationally. In much of Europe, intellectual ownership became identified with natural rights of authors, which could not be given away even if the author desired to do so. In the United States, intellectual ownership continued to be justified, as it was 200 years ago, by its practical necessity—just enough to provide incentives to create (or to publish) while not enough to deter access. (In reality, international pressure extends the period beyond what is practically necessary.)

Scholarly Journals

The general discussion is particularly relevant to scholarly journals. People who invest financial resources in producing journals need to recover costs. More than that, many of those people need to have financial incentives (that is, profit) to make publication worthwhile. Financial incentives not only make scholarly publishing possible in the first place but provide stability as well.

¹ Article I, section 8 includes: “To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries...” The copyright act of 1790 provided for 14 years protection, renewable for a further 14 years.

² The Berne convention of 1886 eventually granted copyright for the life of author plus 50 years. The United States finally became a signatory in 1988.

On the other hand, scholarship is best served when information is freely available to all scholars. Limiting ownership of scholarship therefore is just like limiting copyright: It is a matter of finding the right balance between two needs.

While this has always been the case, the system of print journals made it difficult to achieve that balance. Once published, copies of journals resided in multiple libraries throughout the world and access was through those libraries. Publishers could do little to affect access after publication except to offer back volumes of journals for sale. Since back volumes represented a steadily diminishing resource (with steadily increasing value), publishers charged for those back volumes, often steadily increasing prices as those volumes became scarce.

Electronic publishing has changed all this. Back files reside on the web, and are easily made available to all³. Back files no longer represent a diminishing resource with increasing value. Most publishers are not interested in using back files to generate revenue.⁴ It seems possible for publishers to achieve the balance between incentives and free information.

In addition, digitized versions of older journal articles have considerably *more* value than their print versions because they are part of a web of mathematical literature. There already is a large amount of published content on that web, and the amount of content is growing steadily. In addition to the growing body of literature initially published online, there now are expectations that much of the journal literature going back to the 19th century will be digitized in the coming years. Again, this material will be valuable because it is part of a larger web of online literature.

Having access to that web will be essential for research mathematicians, and many groups are proposing ways to provide universal access. There is no shortage of ideas (or movements). For example there have been calls to boycott journals unless they make articles available after six months, and there was an editorial in the Proceedings of the National Academy of Sciences endorsing this idea. While many of these proposals are in the life sciences, groups in every area of science are urging publishers to consider such proposals.

Of course, the challenge is to find proposals that provide access without destroying the system that creates and disseminates the material in the first place, that is, to find the appropriate balance mentioned above.

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³ Easily made available for now. There may be substantial costs in updating back files in the future, which is the essential problem in archiving. No one fully understands those future costs.

⁴ The American Physical Society is an exception here: APS has invested more than a million dollars in making back issues of its important journals available online, and plans to charge for access. Its current files are (often) available with no charge at preprint servers.