

Open Access

The issue

Although it is technically now possible for everyone to have equal access to scientific medical and other academic information, we don't have equal access because of an out dated publishing system that puts artificial barriers in the way of sharing.

The most important way that people who work in science, medicine and other jobs where it is important that they have up to date knowledge get information is through reading work published in academic journals. Traditionally – that is before the internet came along – these journals were printed and sent out to people or institutions who paid subscriptions for that information. This way of sharing information started 350 years ago with the publication of the world's first scientific journal and continued in pretty much the same way for the next 330 years. During these 330 years some very successful businesses were established to run these journals, and after the Second World War, when the amount of scholarly information, especially in science, increased dramatically, these businesses came to dominate publishing. In exchange for academics signing over copyright of their work to the publishers, the publishers would manage the peer review of the work, then, after publication, sell access to it through subscriptions – mostly to academic libraries who then shared it with their academics.

The solution

However, 20 years ago the Internet came along and it very quickly became apparent that it was a very efficient way to share information. Not only was it very quick compared with sending out paper copies of journals in the mail, but it was also potentially much cheaper, and, excitingly, it opened up new ways of sharing information. Since then there have been many new developments in sharing of scientific information. These include new companies starting as publishers who have experimented with new ways of peer review and new types of article and journals – the most innovative of which fund publishing by charging an upfront fee for publication after peer review instead of a subscription. Other innovations include university libraries who have developed their own collections of their researchers' work. Even more innovation has come from many small groups of academics who have tried out their own ideas for sharing information. Alongside these developments came new ways in thinking about how to manage the copyright and distribution of academic work – and this has happened by a set of legal rules (licenses) called Creative Commons licenses that are now available globally and which are used on everything from music, to photographs, to, as here, academic research. If you put all these ideas together you come up with an model – Open Access – that not only means you can have immediate free access to research, but that you can share it in a way that ensures it can be used and reused very efficiently by anyone who needs it, and you can do it through sustainable, fair business models.

So what is stopping open access?

With any big change there are always winners and losers. The losers in the new model are potentially the big publishers who built very profitable businesses over 330 years based on charging subscriptions to paper copies of academic journals. Actually, these publishers still charge subscriptions to online content, and it seems that this too is very profitable. Hence, these publishers have largely been resistant to changing their model, even though it would mean that many more people would be able to read and reuse academic work. There are many financial benefits to society of making such a change. Not only does reuse of academic work benefit people outside of universities – for example businesses need access to information to be efficient and innovative and patients can read about illnesses they have – but also changing to open access publication would be cheaper for universities than the subscription publishing model – and since the money for publishing comes out of university budgets and hence everyone's taxes that would be good for everyone.

Who does this matter to?

Everyone. Information to academic research is what is known as a "global public good" According to the World Health Organisation definition this means that no one can be excluded from their benefits, and their use by one person does not mean that another person can't use it. However, right now many people are excluded from using academic information because they can't afford subscriptions to journals to read the information. This is true even in Australian universities since even the most well funded university can't afford every journal. It matters even more to people not in universities, who typically would have to pay around \$30 for an individual article – much more for a whole journal. If such a cost seems high in Australia, imagine how expensive that seems to someone living in a country where people have to live on just a few dollars a day.