7 Commodity or Public Property?

Nils A. Nilsson

The first scientific journals which started regularly publishing new ideas and results in an organised way were launched in 1665 in France and the United Kingdom. The idea was that by collecting new science in one place, scientists could save much work and effort by not having to distribute their results in the form of written letters. Moreover, as the journals recorded the exact dates of received material, it became easier to give credit appropriately. Previous to this, it was not always clear who had been the first to arrive at a certain result. Since then, the world has grown smaller, and today there are thousands of peer reviewed academic journals available both online and in print. However, a large fraction of these publications are available only through a subscription, which comes at a steep cost, and individuals outside of academia might feel reluctant to put up the money required for access. Whilst there are preprint servers out there, these are not peer reviewed, and articles published there may contain mistakes and inconsistencies. It is therefore imperative to have access to the publication in its final form, which means needing access to a journal, through a paywall.

An engineering student from Germany, a schoolteacher from Sudan, or a decision maker from Japan, these are people who might want access to the latest research publications, but because of paywalls, will almost certainly have trouble finding what they need. If publications were available free of charge, these people, and many more would have instant access to the very forefront of human knowledge. In fact, the benefits of open access publishing vastly outweigh the drawbacks. Studies have shown that research published in an open access journal receives more reads. In fact, open publications are more likely to receive attention from the public, from news outlets, and perhaps more importantly, from researchers in other fields who tend to not pay for access to a journal which is not in their area of expertise. Open access will help erase these borders and encourage interdisciplinary research and collaboration. There is also the issue of data ownership; it is not unheard of for large corporations and even governments to try to influence the outcome of certain studies and research projects. This would become a lot easier to detect and stop if data and results were open access. As it is now, it is not always clear who owns the data, the university or the scientist? A simple open data repository might help to alleviate this problem, so that the data used to obtain certain results is freely available to everyone.

So why is not all research open access? Unfortunately, there is more than one side to this coin. One of the more pragmatic reasons for paywalls and subscriptions is that running and managing a high-quality scientific journal does not come cheap. Although the vast majority of peer reviewers receive no salary for their work, the editing, proof-reading, and managing web services all cost money, even more if the journal is published in physical form. As such, it is logical that journals require a fee from the authors in order to make their paper open access. Moreover, most research grants will include funds for researchers to pay this fee. Despite this, most papers remain behind a paywall.

Whilst this impedes the pursuit of science, it is also to the direct detriment of the general public.In the last decade a culture of "fake news" has grown out of the easy access to the internet, where anyone can claim anything. This is not just contained to the area of current events, there are a plethora of internet sites aimed at promoting antiquated scientific theories, and distrust of scientists is growing. This is a trend that should be addressed and acted against, as it is in every country's interest to have a well-informed and educated population. Here, the question of the paywall arises spontaneously: should the latest scientific findings and results only be available to the rich or to those working in academia? How can voters trust the health or energy policy of their government if they cannot access the data or the scientific work those policies are based on? This is not just a lofty idea: people want access to research findings. In fact, scientific piracy is on the rise, and people are continuously finding ways to circumvent paywalls and gain access to what they need, but doing so places them at risk of steep fines and a criminal record. When the ultimate goal of science can be said to be to further the knowledge of the human race, having to risk arrest to access that knowledge becomes almost laughable.

In the end, the question about scientific publishing transcends economic interests and the ability to get credit for one's research. While these issues are undoubtedly important, they are not the most fundamental. At the heart of all the benefits of open and accessible research lies the question of what kind of society we would like to have, and what we want to leave behind to future generations.A world where anyone, anywhere can access the very latest research findings, review the data, methodology, and results is a more informed world. It is a world where anyone can educate themselves about issues and fields which catch their interest. It is a world where scientists are more trusted and controversial findings are more easily verified or debunked. Lastly, it is a world where science has become less of a business and more of the altruistic pursuit it was meant to be.