Open Access: an overview

Lesley Pitman

Over recent years there has been a quiet revolution in academic publishing; a revolution which has the potential to transform the way that the public can read and use the results of the research undertaken in UK universities. More and more academic content is being made available on so-called “open access”, open to anyone with an Internet connection to read at no charge. The term “open access” started by describing an international movement, with its advocates and opponents, but now it has become established national policy in the UK, with financial penalties for what is termed non-compliance by universities. As a consequence most academic staff are obliged by their universities to make sure that the journal articles they publish are available on open access, and it is possible for anyone with an Internet connection to access a high and increasing percentage of the journal articles published by UK academics over the last few years. That does not mean that it is easy. We are currently in a transitional period where discovery solutions are still being developed and the environment is changing all the time. There is now a proliferation of platforms and tools and no single service where open access content can be searched for and accessed. There is also very little advice available for the public wanting to venture into this world, creating a gap just waiting for librarians to step up and fill it.

The move to open access is not limited to the UK but the impact here has been particularly great because of the link to government funding. It is also not limited to journal articles, although they form the major part of UK policy and are leading the way to a wider change. Many theses produced by PhD students, and some book chapters and conference papers have also been made available on open access. As this model of publishing becomes established practice new platforms are being set up to host open access monographs, making some books written by academics also available free of charge. This is not yet a requirement of research funding in the UK but is encouraged by funders.

How did this change happen? Below I will sketch in the background and then introduce some of the most useful tools that are currently available and that allow free access to scholarly journal articles, theses and academic monographs. In some academic disciplines, particularly in the sciences, there has been a tradition of sharing academic writing for many years. For as long as the Internet has existed academics have used it to share their research, and libraries have been advocating for open access for just as long. SPARC, or the Scholarly Publishing and Academic Resources Coalition (https://sparcopen.org/), was set up in 1998 by the Association of Research Libraries in the US to promote open access. An important early statement of principles was created in Budapest in 2002 at a meeting of advocates for open access organised by the Open Society Institute. The Budapest Open Access Initiative (http://www.budapestopenaccessinitiative.org/) begins with these words:
An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds. Removing access barriers to this literature will accelerate research, enrich education, share the learning of the rich with the poor and the poor with the rich, make this literature as useful as it can be, and lay the foundation for uniting humanity in a common intellectual conversation and quest for knowledge.

Over the next few years a number of publications and platforms came into being, but progress was relatively slow and the advantages were not universally embraced by the academic community. That is still true, relating both to matters of principle and to practical concerns. Despite resistance, some initiatives became very successful. One of the largest scientific journals in the world, PLOS One (or the Public Library of Science) ([http://journals.plos.org/plosone/](http://journals.plos.org/plosone/)) dates back to 2006 and claims to be the first multidisciplinary open access journal in the world. Based in the US, it is a non-profit corporation and continues to publish peer-reviewed articles in the sciences with a licence that allows them to be reused, and on payment of a fee called an article processing charge, or APC. This model is one that now operates widely.

More recently the UK has become an acknowledged leader in open access as it has become accepted government policy, and it is this which has opened up so much recent content. It was in 2012, with the publication of the Finch Report ([https://www.acu.ac.uk/research-information-network/finch-report-final](https://www.acu.ac.uk/research-information-network/finch-report-final)) that the groundwork was laid for it to become a requirement across the board. This high level committee with representatives from universities, research funders, publishers and libraries set out a number of key principles for the future of academic publishing. One of these principles reads like this:

“Access: our aim is to increase access to the published findings of research produced in the UK and the rest of the world for the benefit not only of researchers but also for the many people and organisations – in the public, commercial and voluntary sectors, as well as in society at large – who have an interest in those findings.”

One product of the Finch Report which will be familiar to many public library staff is Access to Research ([http://www.acesstoresearch.org.uk/](http://www.acesstoresearch.org.uk/)), a service offering access within public libraries (so not to anyone with an Internet connection) to journal articles published by 21 major academic publishers. This is not open access material, but it can serve as a useful way of accessing articles which are currently embargoed or otherwise unavailable on open access. It is the result of a key action in the Finch Report, to

“Continue to work with representatives of public libraries to implement the proposal to provide walk-in access to the majority of journals in public libraries across the UK, and to ensure that the initiative has the maximum impact.”

This solution is clearly transitional, filling a gap before we reach a fully open access environment (if we do), and indicates how significant a change the Finch Report was
proposing. They said of their recommendations: “what we propose implies cultural change: a fundamental shift in how research is published and disseminated”, and it is taking time to get there.

Different research funders in the UK have imposed open access as a condition of funding to researchers at different times, but by far the most significant step towards creating true open access in the UK was the creation of an Open Access Policy (http://www.hefce.ac.uk/pubs/year/2016/201635/) for the 2021 Research Excellence Framework (REF 2021), a review of the quality of research which happens every few years and controls the amount of government funding that universities are allocated. In operation now, this policy states that

“to be eligible for submission to REF 2021, authors’ outputs must have been deposited in an institutional or subject repository. Deposited material should be discoverable, and free to read and download, for anyone with an internet connection.”

To conform with that policy all UK universities must provide public access to their own institutional repositories, which hold open access versions of published articles, conference papers, book chapters and other documents. Those versions are usually the text as accepted by the publisher, but without the publisher’s formatting or other input. Sometimes they appear before official publication, but often they are delayed by embargo imposed by the publisher until six months or even a year after the publication date. This model is known as green open access. In a different approach, called gold or hybrid open access, some articles are being made free of charge on the publisher’s website, at the point when the journal issue is published. In that model the article publishing charge, or APC, will normally have been paid by the university to the publisher. In hybrid open access, these articles will appear in the same journal issue and on the same platform as more traditional closed articles, available only via subscription. Some entirely open access journals exist, such as PLOS one, described above, and these make all their content available on gold open access to anyone. Alongside these official models, academics are taking matters into their own hands and placing copies of their work in services such as Academia.edu and Researchgate, often without explicit permission from their publisher to do so. As demand increases, a number of pirate services have also sprung into being, using institutional logins illicitly acquired to bypass paywalls.

As a result of this multiplicity of platforms it has become very complex to find open access material. Academic publications can be accessed in institutional repositories run by universities, in national and international subject and discipline repositories, on publishers’ websites, in aggregation services such as JSTOR and Access to Research, on academics’ own websites, in semi-legitimate services such as Academic.edu and Researchgate, via illegal services, and probably elsewhere as well. Each service (even the illegal ones) will have its own search facility and its own distinct set of results. What are the most effective tools to use?

The following brief survey of tools can only touch the surface. More come along all the time, with different criteria for content and different ways of working. Until all academic publications are open access by default it is never going to be possible to find it all using one simple facility, but here are some that provide useful ways right now to find the full text of academic articles, monographs and theses.
Google Scholar (https://scholar.google.co.uk/)
This is the tool that most people are likely to be familiar with and is an excellent place to start, if only because it allows you to search for content and access the full text in one service. It also works on all computer platforms, needing nothing more sophisticated than access to the web. Its reach is massive, and it will almost certainly find more content than any other service currently available. Direct links to open access versions in repositories and on publishers’ websites are on the right hand side of the screen, although if there is no obvious link to the full text there it is worth following the link to other versions, and clicking on them all. Occasionally they will be open but not indicated as such.

Google Scholar does have some downsides. It is, of course, a commercial service which operates under commercial principles – the very opposite of openness. It is not clear how search results are ranked, and it has been said that the so-called “Matthew Effect” applies, in that success breeds success. The more frequently cited an article, the higher it will appear in the search results and the more likely it is to be cited as a consequence. On occasion it will link to texts deposited by authors in Academia.edu or Researchgate, and it is worth bearing in mind that these are vulnerable to being taken down by the publisher if they are have been deposited without permission.

Unpaywall (http://unpaywall.org/)
This relatively new service is proving very popular among academic staff who want to access articles in journals that their university libraries don’t subscribe to. It works by displaying an icon of a padlock on the website of a publisher or an aggregator like Web of Science, which will indicate whether the article is locked or open and available to download as green or gold open access. Simply clicking on an open padlock downloads the article. Unpaywall works closely with academic publishers and is careful only to provide access to content where the licence allows it. Where there are several versions it will link to the one it considers the best, rather than to them all. Its reach is more limited than Google Scholar but is growing fast. Currently it does not feature a search facility, but it has recently been awarded funding in partnership with the British Library to produce one; this has the potential to be extremely useful. Apart from the current lack of a search facility the main disadvantage of Unpaywall is that it requires you to download and install a browser extension from its website at Unpaywall.org. This extension works only in Google Chrome and Firefox, and means that all searching has to be done on a desktop PC.

The Directory of Open Access Journals, or DOAJ (https://doaj.org/) , is an online directory of journals that operate entirely according to the principles of open access. It therefore does not include hybrid titles. Currently listing over 12,000 titles from 128 countries, it classifies journals by Library of Congress, and allows searching and browsing by subject. First established in Sweden and now based in the UK, its scope is global and multilingual. It provides a search facility for articles as well as journals. Its content is curated by a team of a hundred volunteers and its mission is to promote open access. Publishers have to apply to be part of the service and can be removed if they are considered to be in contravention of its principles.

CORE (https://core.ac.uk/)
This is a service aimed primarily at libraries that host repositories, but it does offer a public search engine and it is possible to download open access articles from this site. Its stated mission is “to aggregate all open access research outputs from repositories and journals worldwide and make them available to the public.” Unlike Google Scholar, which indexes content held elsewhere, CORE harvests and caches open access content, periodically updating itself by aggregating the content of repositories. CORE repositories operate behind a number of new services aimed at giving researchers similar facilities as they currently find on Academia.edu or Researchgate, but without some of the legal and ethical problems. One such site is Humanities Commons (https://hcommons.org/), which serves as a social network for humanities scholars, allows collaboration on research, and provides a CORE repository. Although a membership service, the open access content is accessible without logging in, and it provides a platform for independent scholars not affiliated to a university.

There are several other services which are not in any sense open access, but which do provide additional access to journal articles if certain conditions are followed. Access to Research, described above, is excellent at providing the full text of articles that are still under embargo or are otherwise inaccessible, from a number of big name commercial publishers. Its major disadvantage is that although it is searchable from anywhere by logging in with a public library ID from a subscribing library service, the full text can only be accessed from within a public library, and licence conditions prevent it being downloaded. For anyone who is a graduate of a university, it is worth checking whether that university offers its alumni access to any subscription e-journals. Many university alumni services do, and the content can include access to big aggregators such as JSTOR and Project Muse. Once the proxy for the service is registered in the browser it is only necessary to login once a day, making access transparent.

Looking beyond journal articles the open access movement encompasses many PhD theses produced in UK universities. These are held in university repositories and searchable via library catalogues, but are also harvested by a service called Ethos (https://ethos.bl.uk/), based at the British Library, which now holds information, including abstracts, on about 300,000 theses and provides access to the full text of 50,000.

Finally, the last few years has seen the beginnings of open access monograph publishing. A number of university presses, the first of which was UCL Press (http://www.ucl.ac.uk/ucl-press), have developed a model whereby they publish monographs that are available on open access to download, but can also be bought commercially at a reasonable price in print. A different model is provided by Knowledge Unlatched (http://www.knowledgeunlatched.org/), which selects book titles to support, and then asks subscribing libraries to pay towards the cost of publication rather than to pay the purchase price of the book. Titles supported in this way then become available on open access. Search facilities for open access books work in similar ways to the services for journal articles, except that Google Books, unlike Google Scholar, does not currently provide easy access to open access books. There is a searchable Directory of Open Access Books (DOAB) (https://doabooks.org/), which provides a single search interface to these titles, and a service called OAPEN Library (www.oapen.org/), which is a publication platform.
as well as a search service for the humanities and social sciences. Some open access books are available through JSTOR without a subscription.

**Conclusion**

By taking all these services together it should be possible to access a substantial proportion of the academic publications produced in the UK, and some produced elsewhere as well. In a small experiment with a sample of 150 articles, I managed to access 115 that way, and wrote up my method here (https://lesleypitmanblog.wordpress.com/2018/08/16/in-search-of-publicly-accessible-journal-articles-an-experiment-with-russian-politics/). Coverage is still far from comprehensive, so it is worth remembering that most university libraries offer some form of membership for the public, although it may require payment of a fee. Once in the library on campus more material opens up, as most academic publishers allow access to their publications within the Library to all its members. Finally, for individual articles that prove elusive it is always worth checking the personal website of the author, and it is perfectly acceptable to contact the author and ask for a copy if all other methods have failed.