Virtual Sessions on Open and FAIR dissemination of research: background briefing, May 2020.

Why is full and immediate open access to Australia's research important for research, development, innovation and education in Australia?

Recent national and global events, especially the 2019/20 bushfires in Australia and the pandemic of the coronavirus disease (COVID-19), have brought into sharp focus the need for rapid, coordinated sharing of research and data. In response to the pandemic particularly there has been an outpouring of research, virtually all of which is now openly available, at least in the short term. The pandemic has established that there is the will and the technical capability to make research open[1], but whether this leads to long term change will depend on decisions taken now.[2]

Now, more than ever, a strategic Australian national approach to the Open and FAIR dissemination of research is needed. Such an approach would ensure that opportunities provided by new open publishing models are realised in order for global challenges to be efficiently addressed, that costs are constrained and national and international collaboration in advancing OA and FAIR dissemination is maximised.

Making research publications immediately open access and FAIR (Findable, Accessible, Interoperable and Reusable) for dissemination will:

- Maximise the worldwide reach, utility and impact of research produced by Australian researchers
- Advance the UN's Sustainable Development Goals (SDGs) by supporting equitable access and equitable contribution to research
- Enable engagement between universities, government and industry
- Help counter the spread of misinformation and fake news
- Boost public confidence in research by improving transparency of the research process
- Ensure that Australia's publicly-funded research is used to address the huge economic and societal challenges being faced by Australia and the rest of the world

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[1] Kupferschmidt, K. ''A completely new culture of doing research.' Coronavirus outbreak changes how scientists communicate' *Science*, 26/02/2020, Available at: https://www.sciencemag.org/news/2020/02/completely-new-culture-doing-research-coronavirus-outbreak-changes-how-scientists

[2] https://www.science.org.au/curious/policy-features/open-science-after-covid-19-pandemic-there-can-be-no-return-closed-working

At the beginning of 2020 the international research community had reached a pivotal moment in the progression of full and immediate Open Access (OA) to research. While OA has continued to grow year on year[3,4] it is still far from full OA many hoped to achieve by 2020.[5]

In 2018 Australian universities self-reported that an average of 32% of research publications submitted to the 2018 ERA were OA,[6] the CWTS Leiden Ranking 2019 for OA showed that by 2017 only an average of 40.3% of Australia's research was OA.[7] The difference between these two measures is also cause for concern and with the emergence of Plan S and its impending commencement at the beginning of 2021, action in 2020 has become even more important.

The remainder of this document summarises recent international developments and progress being made towards OA in Australia in order to frame current and emerging challenges.

Recent global progress in OA

Plan S

The key international driver of OA currently is Plan S, triggered in 2016 when Jean-Claude Juncker, then President of the European Commission, became aware that despite the set of commitments that European Member States had made to move to OA by 2020 there was little actual change. Robert-Jan Smits, Director-General Research and Innovation at the European Commission, was appointed to pull together a coalition (cOAlition S) and to develop a plan to address this, which became known as Plan S.[8] Plan S is currently supported by more than 20 funders and other organisations including UK Research and Innovation and the World Health Organisation. Its primary principle is that "*from 2021, scientific publications that result from research funded by public grants must be published in compliant Open Access journals or platforms.*"[9] There are a series of supporting principles, including the need to address incentives in publishing. Importantly, there is no intention to require researchers to publish in a prescribed set of journals: the only requirement is that they have to make a version of the work fully OA by either journal-based or repository-based OA.

OA in the USA

Currently there are unconfirmed reports that the White House may be about to deliver an Executive Order on OA in the US and the White House Office of Science and Technology Policy is conducting a consultation.[10] The Scholarly Publishing and Academic Resources Coalition (SPARC) is one of a number of organisations responding to this possible action.[11]

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[3] https://peerj.com/articles/4375/

[4] https://poeticeconomics.blogspot.com/2020/

[5] https://oa2020.org/

[6] https://dataportal.arc.gov.au/ERA/NationalReport/2018/pages/section1/open-access/

[7] https://www.leidenranking.com/

[8] https://www.sciencemag.org/news/2016/05/dramatic-statement-european-leaders-call-immediate-open-access-all-scientific-papers

[9] https://www.coalition-s.org/

[10] https://www.federalregister.gov/documents/2020/02/19/2020-03189/request-for-information-public-access-to-peer-reviewed-scholarly-publications-data-and-code

[11] https://sparcopen.org/our-work/rumored-2020-white-house-open-access-policy/

Other national plans for OA

A number of countries have developed strategic plans for OA. A feature of the most successful ones is high level support by a key individual or group. Examples include the Netherlands (support from Sander Dekker, then Minister for Science[12]), Sweden (Advisory Group for Open Access chaired by the Chair of the Board of The Swedish Rectors' Conference[13]), and, just last month, Canada (support from Canada's Chief Science Advisor[14]).

Institutional responses to OA

Institutions are at the frontline of changes in the scholarly communications landscape, including responding to OA. Currently the burden of journal subscriptions (in excess of $310 million annually for Australian Universities[15]) falls squarely upon them, as, increasingly, does the need to support article processing charges (APCs) in the journals that require them. Increasingly, institutions are challenging the costs of subscriptions and are negotiating with publishers not only to contain price increases for subscriptions but for agreements with publishers to include payment for publishing openly in relevant journals (publish and read agreements). Where deals cannot be made, institutions, or, on occasion, whole of country consortia, are cancelling subscriptions. Notable examples include the University of California which has had no agreement with Elsevier for over a year,[16] and Sweden, which agreed a deal in 2019 after a cancellation in 2018 and an extended period of negotiation.[17] A list of cancelled deals is maintained by SPARC.[18] A list of negotiated deals is kept by Efficiency and Standards for Article Charges (ESAC)[19], initially an initiative of the German Research Foundation (DFG) and which is now the preferred international site for sharing of these deals. It includes two deals negotiated by the Council of Australian University Librarians (CAUL) on behalf of Australian universities. These published lists are important in increasing transparency in the system—one key principle of Plan S.

The situation in Australia

Despite a number of groups advocating for OA nationally, including CAUL[20] and the Australasian Open Access Strategy Group (AOASG),[21] Australia lacks a coordinated approach to open scholarship. However, Australia has a strong history of support for OA within a number of individual institutions including:

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[12] https://vsnu.nl/files/documenten/Domeinen/Onderzoek/Open%20access/Ezine-OpenAccess-ENG-mrch2016.pdf

[13] http://www.kb.se/dokument/open%20access/OpenAccess_National_Library_Sweden_2017_2019.pdf

[14] http://science.gc.ca/eic/site/063.nsf/eng/h_97992.html

[15] Data from CAUL

[16] https://osc.universityofcalifornia.edu/uc-publisher-relationships/uc-and-elsevier/

[17] https://www.kb.se/samverkan-och-utveckling/nytt-fran-kb/nyheter-samverkan-och-utveckling/2019-11-22-%E2%80%8Bnew-transformative-agreement-with-elsevier-enables-unlimited-open-access-to-swedish-research.html

[18] https://sparcopen.org/our-work/big-deal-cancellation-tracking/

[19] https://esac-initiative.org/about/transformative-agreements/

[20] https://www.caul.edu.au/programs-projects/advancing-open-scholarship-fair

[21] https://aoasg.org.au/

- In 2000 ANU established the first institutional repository in Australia.
- In 2003 QUT developed the world's first policy on OA to research outputs in a repository.
- From 2006-8 the Australian Government invested money in open access infrastructure by providing funding for development of university repositories through the National Collaborative Research Infrastructure Strategy for the Australian Research Repositories Online to the World (ARROW) and Rural Universities Building Research Infrastructure Collaboratively (RUBRIC) projects, and the Australian Scheme for Higher Education Repositories (ASHER) project. There is no ongoing central support for these repositories and no national coordination of them.
- Since 2012-13, the two major Australian government research funders, the ARC[22] and the NHMRC[23], have had open access policies (though they currently specify open access after 12 months).
- From 2016 OA was specified in the CSIRO Statement of Expectations.[24]
- In 2016 the F.A.I.R. (Findable, Accessible, Interoperable, Reusable) Policy Statement[25] for access to Australia's research outputs was developed by a Working Group that was convened by the Universities Australia DVCR Committee.
- In 2016 the Productivity Commission recommended the need for a National Open Access policy[26] and in 2017 the Government accepted that recommendation but has not yet acted on it.
- In 2018 The House of Representatives Standing Committee on Employment, Education and Training in 2018 in its inquiry into the Australian Government Funding Arrangements for non-NHMRC Research supported an AOASG proposal and recommended that "*the Australian Government develop a more strategic approach to Australia's open scholarship environment.*"[27]
- In 2019 CAUL and AOASG advocated for a strategic approach ahead of the federal election.[28] The Australian Government is yet to respond to this recommendation.
- Most of Australia's universities have an OA policy or statement but they vary in scope and detail.

[22] https://www.arc.gov.au/policies-strategies/policy/arc-open-access-policy

[23] https://www.nhmrc.gov.au/about-us/resources/open-access-policy

[24] https://www.csiro.au/en/About/Leadership-governance/Minister-and-Board/Statement-of-Expectations

[25] https://www.fair-access.net.au/

[26] https://www.pc.gov.au/inquiries/completed/intellectual-property/report

[27] https://www.aph.gov.au/Parliamentary_Business/Committees/House/Employment_Education_and_Training/FundingResearch/Report/section?id=committees%2freportrep%2f024212%2f26656

[28] https://www.caul.edu.au/news/joint-caul-aoasg-election-statement

Questions for participants to consider ahead of the virtual sessions:
(Please feel free to consult as appropriate ahead of the meeting)

- In the context of open scholarship what do you think are the key principles that need to be established for access to Australia's research?
- What do you see as the major challenges in achieving a national approach to open scholarship?

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