The Open Agenda: why openness and transparency are needed

Open Access is what makes journal articles and other publications available for anyone to download, read, and share. But the Open Agenda covers much more than this and includes not only published articles, but also educational and teaching materials, data, and aspects of the quality control system. Published research is often built on data that has been collected, often over time and with much effort and expense. What happens to all that data when the project is finished? How might it be shared for reuse in ways in which the original researchers had not thought of? How might it be made available for checking the results of that research or for possible new topics? This is the next move, making the underlying research data also freely available for anyone to download, use, and share. Making published research openly and freely available is excellent but without the data on which it is based it is not possible to verify the results. Think about contentious issues around climate change and covid test results.

How is this move towards openness and transparency encouraged and supported? As with all things, it starts with the money. In the UK and Europe there are many initiatives promoting openness and transparency. The major UK funding bodies now require the published outputs of research that they support to be published openly. Some also need the data to be published openly too. UK universities have what is known as the Research Excellent Framework (REF) where they are judged, ranked, and awarded government funds according to the impact of their research output. Only research that is published openly is included in this exercise and hence a significant incentive for openness. These initiatives are, of course, not limited to the UK. The European Commission has several initiatives to make published research and the underlaying data freely available too. For example, the League of European Research Universities (LERU) and the European Open Science Cloud (EOSC).

This raises several interesting questions about how this research material should be managed. The long-term preservation of digital material has been of concern to libraries ever since the introduction of electronic material. How do we ensure accessibility, usability, and discovery over time? Also, who should be responsible for looking after the data sets? UK universities already have repositories for staff publications and perhaps having another repository to store the data sets, linking back to the published articles, would be the way forward. Whatever is decided, these initiatives need the willingness to be funded which means making a solid business case to those that make the budget decisions. The UNESCO guidelines on Open Access (OA) and Open Educational Resources (OERs) make preservation over time a key issue. Interestingly, UNESCO includes

research materials with OERs as it does not differentiate between research and teaching in this context.

There are also questions and concerns over the UK's involvement in both LERU and EOSC following Brexit and the decision to leave the European Union. At the time of writing there are five UK universities participating in LERU, several UK-based organisations are members of the EOSC General Assembly, and the UK Research and Innovation (UKRI) and Jisc (major funders of research in the UK) work with established European partners. Nevertheless, the various agreements over trade and cooperation between the UK and the European Commission still need to be clarified and worked through. Although there is a clear willingness in the UK to participate with the EU in various academic and research affiliations, the future of these relationships is uncertain.

What about transparency? We now have published research that is available freely, but how do we assess the quality of that research? The tried and tested method is the scholarly peer review which is required to have papers accepted by high quality journals or prestigious conferences. This may be a rigorous process, but it comes at a cost of time and unrewarded effort on the part of the reviewers. This traditional model has been called more and more into question, particularly over fairness and transparency. Other concerns are over the possibility of bias, as well as possible manipulation by editorial policy to ensure the journal's position in analytics. Alternative methods are starting to appear such as 'open peer review' and the 'megajournal' where all reviewers' comments are available along with the published article. Regardless, it seems that researchers appear to value high-quality peer review to refine and improve their work.

Making research articles and data freely available is excellent but it only works if it can be found. Open Access articles are not behind a paywall and so can be indexed by search engines for simple retrieval and download. One of the basic principles of the open agenda is that the material can be found and should be in a format that can be used. Research has little value if it cannot be found, and similarly for the data if it is not able to be reused. One of the basic concepts of the open movement is that material should conform to the FAIR principles. It needs to be Findable, with unique identifiers and indexed together with appropriate metadata; Accessible, findable by that identifier and with an open licence; Interoperable, in a format that allows for sharing; Re-usable, with a clear and accessible data use license.

As with all new initiatives, there will always be objections, particularly regarding open data and open peer review. Nevertheless, the overall movement is towards making everything open. As a result, we are now seeing changes in the working practice of researchers and academics, as

well as policy makers. More and more practitioners now consider making their research and data open to be simply 'good research practice'. With all these advances in the open agenda, we may not yet be aware of all the benefits and the possibilities as they are constantly evolving. It will be interesting to see how things develop. Watch this space.

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