Political science
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Elsevier are corrupting open science in Europe

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▲ Carlos Moedas, European Commissioner for Research, Innovation and Science, is a fan of open science. Can the big science publishers be trusted to help him? Photograph: Emmanuel Dunand/AFP/Getty Images

Open Science is all about making science work better so that it can address the world's challenges. It has been at the top of the EU's agenda for some time. The European Commission has the ambitious target of achieving Open Access to all scientific publications by 2020. The development of the European Open Science Cloud and Open Science Policy Platform indicate that Open Science has entered the mainstream, shifting the process and governance of scholarly communication.

Now, the European Commission have launched an Open Science Monitor to help provide data on the development of Open Science in Europe. To their credit, the Commission have been relatively transparent about the methods and data sources used for this and who is involved. They are also inviting comments to improve the indicators.

However, a cursory glance at the methodological note reveals something rather odd. The subcontractor for the monitor is Elsevier, the publisher and data analytics provider. Within scholarly communications,

Elsevier has perhaps the single worst reputation. With profit margins around 37%, larger than Apple and big oil companies, Elsevier dominate the publishing landscape by selling research back to the same institutes that carried out the work.

It gets worse too. Throughout the methods, you can see that there is an overwhelming bias towards Elsevier products and services, such as Scopus, Mendeley, and Plum Analytics. These services provide metrics for researchers such as citation counts and social media shares, as well as data-sharing and networking platforms. There are now dozens of comments in the note pointing out the clear bias towards Elsevier and the overlooking of alternatives.

It is worth highlighting some of the key issues here that the Commission seems to have ignored in subcontracting to Elsevier.

First, Elsevier has a notorious history of campaigning against openness in order to protect its paywall-based business. In 2004, they submitted evidence to the UK House of Commons Science and Technology Select Committee on what they saw as the risks associated with Open Access such as threats to

scientific integrity and research quality. In 2007, they were part of a PR campaign that connected Open Access to government censorship while lobbying the US Congress. In the USA, Elsevier supported a range of anti-open bills, including the Research Works Act (RWA), for which they made numerous financial contributions to members of the House of Representatives . All of this has stifled the growth of public access to knowledge and slowed the advance of Open Science, benefiting nobody except Elsevier.

Second, many EU member states are currently turning against Elsevier due to its anti-open business practices, high and ever-increasing prices, and dangerously powerful size as a commercial publisher. Research institutes are typically prevented from disclosing details of their 'big deal' subscriptions with Elsevier, as this would place downward pressure on journal prices. This profoundly anti-competitive practice has created a dysfunctional scholarly publishing market, and a budget crisis for university libraries. We are seeing national boycotts of Elsevier and rejection of Elsevier journal bundles. Just recently, Swedish and German research institutes announced that they

were cancelling all Elsevier subscriptions due to concerns about sustainability, unfair pricing arrangements and a general lack of value.

If this wasn't bad enough, the conflict of interest of having an organisation that stands to benefit from the monitor by using its own services is so blindingly apparent that you have to wonder why Elsevier were subcontracted in the first place. How is it reasonable for a multi-billion dollar publishing corporation to not only produce metrics that evaluate publishing impact, but also to use them to monitor Open Science and help to define its future direction? Elsevier will be providing data through the monitor that will be used to help facilitate future policy making in the EU that it inevitably will benefit from. That's like having McDonald's monitor the eating habits of a nation and then using that to guide policy decisions.

Consider Elsevier's CiteScore metric, a measure of the apparent impact of journals that competes with the impact factor based on citation data from Scopus. An independent analysis showed that titles owned by Springer Nature, perhaps Elsevier's biggest competitor,

scored 40% lower and Elsevier titles 25% higher when using CiteScore rather than previous journal impact factors.

Bianca Kramer, a librarian at Utrecht University, commented that the monitor should "only include indicators that are themselves open, so data can be reused and results can be reproduced." This is a fundamental part of responsible metrics and begs the question of why closed databases like Scopus feature so prominently.

With so many glaring issues, we should ask why the European Commission allowed this. It seems like a profoundly undemocratic practice to have a company with such an anti-open history now with such a powerful position in the future of Open Science in Europe. The risk here is that by using Elsevier services for such a crucial task, it creates a perverse incentive for researchers to use those services, and thus become dependent on them. This very real issue became apparent last week when Mendeley encrypted its databases, making it more difficult for users to access even their own data. Researchers could become trapped in a relationship with Elsevier in which they are the service and

content providers, the product and the consumer.

It is a cruel irony that Elsevier are to be paid to monitor the very system that they have historically fought against. The European Commission should remove Elsevier as sub-contractor and look into better options such as an independent group with no conflicts of interest. It is time to stand up to these ruthless mega-corporations before they corrupt Open Science.

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