

**Plan S: The perspective of an early career researcher**  
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Plan S is the ambitious plan of eleven national funding agencies together with the European Commission (cOalition S) to make all research funded by these organisations publicly accessible from 2020 onward. Since its announcement on September 4<sup>th</sup> 2018 the plan's contents and consequences have been widely debated. When the guidelines for the implementation of the plan were presented at the end of November some aspects were clarified, but it also became apparent that a lot of details are still unclear. Here, I will give my thoughts on four main themes surrounding Plan S: academic freedom, early career researchers, less affluent researchers, and scholarly societies.

**The consequences of Plan S for academic freedom**

One common concern is that Plan S restricts the freedom of researchers to determine what and how they do research, and how they disseminate their research results. This academic freedom is guaranteed by governments and academic institutions with the aim of insulating researchers from censorship and other negative consequences of their work. In this way, researchers can focus on their research without having to worry about any outside influence. When Plan S is implemented, researchers can no longer publish in journals that do not meet the conditions set out in the plan. This would hamper researcher's freedom to disseminate their research in the way they see fit.

However, one can raise questions about the extent to which researchers currently do have the freedom to choose where and how to publish their work given that researchers' hands are generally tied by demands from scientific journals. They must abide by strict word limits and specific layout standards, and usually have to hand over their copyright to the commercial publisher. Moreover, to move up in academia, they are almost forced to publish in prestigious journals. Therefore, appealing to academic freedom to criticize Plan S is unconvincing, especially given that Plan S does not place any restrictions on the contents and the methods researchers employ.

A more ideological point is that academic freedom is part of [an unofficial reciprocal arrangement](#) between researchers and society. Researchers receive funding and freedom from society, but in return they should incorporate the interests of society into their decision-making. Publishing in a prestigious but closed journal does not fit with this reciprocal arrangement. Currently, many researchers have access to closed journals because university libraries pay a subscription fee to the publishers of those journals. However, not all researchers can take advantage of these subscriptions because their organisation [cannot afford them](#) or because the [negotiations about subscription fees were unsuccessful](#).

Because of the limited access to research results scientific progress slows down. This is problematic in itself, but can have major consequences for research about climate change or contagious diseases. In addition, the subscription fees demanded by publishers is disproportionately high. In 2018, [The Netherlands paid more than 14 million dollars](#) to one of the main scientific publishers, Elsevier. A big chunk of that money ended up as profit for Elsevier and would not be reinvested into science. Obviously, this practice does not fit with the reciprocal arrangement between researchers and society either.

### **The consequences of Plan S for early career researchers**

Plan S currently involves 13 national funding agencies and draws support from big private funds like the Wellcome Trust and the Bill & Melinda Gates Foundation. Combined, these funds represent about 10% of the available research money in the world. This relatively small market share could hurt researchers dependent on Plan S funders as they will not be allowed to publish in some well-known journals. When researchers from other areas can put these publications on their CV they would have an unfair advantage on the academic labour market. Especially early career researchers could be disadvantaged because of the low job security in the early stages of academic careers.

A crucial assumption underlying this argument is the continuation of the prestige model of scientific journals. However, Plan S specifically expresses the ambition to change the way researchers are being evaluated. Instead of looking at the number of publications in prestigious journals researchers should be evaluated on the quality of their work. This point has been emphasized in the [San Francisco Declaration on Research Assessment](#) (DORA). DORA has been signed by more than 1,000 research organizations and more than 13,500 individuals worldwide, indicating that the scientific community wants to get rid of classical quality indicators like the impact factor and the H-index in favour of a new system of research assessment. One way to evaluate researchers is to look at the extent to which their work is open and reproducible. Plan S strongly supports open science and could therefore even be beneficial to early career researchers. However, it should be noted that cOalition S should play a proactive role in the transition of research evaluation. The fact that so many people signed DORA does not mean that people will act on its principles.

### **The consequences of Plan S for less affluent researchers**

It is expected that Plan S will cause many journals that currently have a closed subscription model to transition to an author-pays model where the author pays so-called article processing charges (APCs) to get their work published open access. Many researchers have raised concerns that Plan S would lead publishers to increase their profits by increasing their APCs. As researchers are forced to publish open access they are forced to pay these higher APCs. For less affluent researchers (for example from smaller institutions or developing countries) the increased APCs may be unaffordable, which would crowd them out of science. However, there are several counterpoints to this scenario.

First, Plan S involves a condition that journals make their APCs reasonable and transparent. If this condition is met, it is expected that journal APCs go down instead of up. There are [many examples](#) of open access journals that have no or very low APCs. This was underlined by a [white paper of the Max Planck Society](#) that shows that an open access system with APCs comes with significantly lower cost than the current system. To attain this scenario, it is important that cOalition S monitors that journal APCs are indeed reasonable and transparent. Commercial publishers have a lot of power and will undoubtedly try to artificially increase their APCs. Only if they face sanctions can we expect APCs to be affordable to the whole scientific community.

Second, representatives of cOalition S have already clarified that they will instate a fund that can help researchers pay due APCs. This fund will be available for funded researchers as well as non-funded researchers that are not able to pay due APCs. The way this APC fund will be financed is as of yet

unclear, but it is clear that individual researchers do not need to come up with the costs of open access themselves.

### **The consequences of Plan S for scholarly societies**

Like regular journals, journals from scholarly societies will have to move from a subscription model to an author-pays model. Representatives of scholarly societies fear that this will be [the end of them](#). Societies would face high investments to make the open access transition, which may not be feasible in the short run. This argument definitely makes sense when looking at the, mostly technical, demands listed in Plan S. To be compliant with Plan S, journals should make their articles fully machine-readable, for example by transforming them into a JATS XML format. Developing a digital infrastructure like this is costly. Therefore, it is essential that cOalition S plays a prosocial role and tries to facilitate the open access transition for society journals on a case-by-case basis. A starting point for cOalition S could be the results of a study by [Wellcome Trust](#) that will investigate how scholarly societies can transition to a Plan S compliant model as efficiently as possible.

### **Conclusion**

I, an early career researcher, support Plan S as I think the objections to the plan are either misguided or possible to overcome. However, it is crucial that cOalition S properly looks at the legitimate objections and tries to overcome these objections using practical and efficient solutions. With a big, ambitious plan like Plan S also comes a big responsibility. In my view, cOalition S should prioritize these points:

- cOalition S should clearly disseminate DORA and take concrete steps to convince the scientific community to behave according to its principles, also in areas that are not directly affected by Plan S.
- cOalition S should ensure that the condition of reasonable and transparent APCs will be met, if necessary through sanctions.
- cOalition S should create a workable system to guarantee less affluent researchers to publish open access.
- cOalition S should develop an effective transition system for (society) journals that want to be Plan S compliant. Possibly, this would mean that cOalition S subsidizes (part of) the transition costs of journals and helps them shape the required digital infrastructure.
- cOalition S should properly inform researchers, students, librarians, and other groups affected by Plan S about the plan's details and consequences. This can be done through informative meetings at universities when the details of the plan are crystallized.