
Open science, open access and Latin America: a short conversation with Jon Tennant

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207

On open science

If science is a human right, according to the United Nations' (UN) Declaration on Human Rights, then open science (OS) is also one and, by thinking in such a way, we can start enabling society in general to know about, share and harness the possibilities of scientific developments while educational institutions finally fulfill their social mission. OS is sort of global phenomenon right now; it has really taken off, but it is still very complex, fragmented and has an unusual landscape that involves lots of bottom-up initiatives and, at the same time, a lot of top-down policies and mandates.

OS groups various processes that include, but are not limited to: (a) open notebooks; (b) open data; (c) open peer review and open evaluation; (d) open access (OA); (e) open source; (f) scientific social networks; (g) citizen science; and (h) open educational resources. Moreover, it is a set of principles, practices and values that gravitate around making all scientific processes open, from the origin of a research project, including its data, analysis and results.

We have several issues or crises in science, which may be classified in five types:

- (1) access, which is restricted as much research is behind paywalls;
- (2) reproducibility, although a scientific principle, much research fails to pass reproducibility tests;
- (3) serials, with the continuously increasing and dramatic pricing increases of journals;
- (4) evaluation, as bibliometrics have become the one and only sheriff in town, the sole guidelines, although alternatives exist, institutions and countries have been too slow to evolve evaluation processes and models, and researchers are caught in the middle of models that rely on certain behaviors for providing them with a good evaluation; and
- (5) copyright, because it no longer seems to serve the interests of researchers or creators.

We have the enormous challenge of overcoming these crises, as governments and the general public expect a lot from science, and we hope that science provides us with solutions to global development, e.g. to fulfill UN's sustainable development goals (SDGs). For instance, with the current scholarly publication model, the issue of limited access alone is seriously limiting us from meeting the SDGs. Conversely, by solving these crises, OS will just become science. Fortunately, trends indicate that, although slowly, but steadily, OA is growing – the number of scholarly documents in OA is growing and the total number of OA journal titles that are present in the most popular bibliometric indexes.

Plan S and Latin America

Perhaps one of the main issues of the Plan S is to see it as a one fits all solution. This is problematic, and it evidently more problematic if we consider its application in Latin



America. Plan S has the right intentions: it is based in strong principles, but its implementations around Europe are going to require gathering more tools and protecting many elements that the scholarly publishing industry have taken and that are working under a sort of dysfunctionality when they are owned by companies.

However, the status quo is difficult to break because things have been this way since a very long time ago, when a particular scholarly communication product and a certain mindset emerged around the 17th century. There have been innovations, but they mainly come from a business perspective, with research ecosystems being implemented and evolving while still tied to a few corporations (or parts of them are even acquired by them). This has allowed publishers to keep some of the largest profit margins in any industry. This is why the OS movement started; it took a while, but we hope it is still not too late.

Trying to impose Plan S on Latin America, or in any other place in the world, is not the right approach to take. To impose it outside of Europe is even neocolonialist and, more seriously, it would ignore the successful Latin American OA initiatives. But some Europeans might come with the attitude of wanting to be the saviors and pretend that Europe has as all the answers to the problems that we face around the globe. The idea would be to explore the differences between the USA, Latin America and Europe and see where we have been going wrong, which things we have done right and how we can better work together to solve our problems (e.g. what to do with the commercialization of knowledge, how to establish sustainable OA companies).

We need to be more introspective about where are we coming from, from an absolute Plan S or a European-centric focus on that perspective. In any case, OS and OA movements worldwide must turn to Latin America and see projects such as the Scientific Electronic Library Online (SciELO [1]) and the Latin America, the Caribbean and Spain and Portugal Scientific Journals Network (REDALyC [2]), which are great OA platforms and have been doing a fantastic job for many years. SciELO was even launched in 1997, before the birth of the OA movement, and REDALyC started in 2003, just after the Budapest OA Declaration. These initiatives seem to be part of a more thought-out society-driven sets of principles and practices and implementations that are much more aligned with the values of OA and the principles of good scholarly communication. So, perhaps to apply Plan S in Latin America would not make much sense, when such successful cases are in place.

It feels like Latin America right now is in the position where Plan S would want to be in 15 years. However, Plan S is indeed a step in the right direction, but instead of trying to impose a set of practices and values on something or someone, it needs to be much more progressive. Instead of saying that it must be implemented in Latin America, Plan S stakeholders should look at Latin America and think about what can be learned from its OA experiences, co-operate with them and apply the lessons learned to Europe and the rest of the world; in this way, we can work on proposing more progressive stances.

SciELO might be the hero the world needs, as it provides access to around 750,000 papers published in 1,200 active journals, all of them OA titles from Latin America, the Iberian Peninsula and South Africa (13 countries). These journals offer free or very low-cost publishing for researchers, and their production costs are much lower than “Western” publishing houses. REDALyC is also a very successful Latin American case of OA, and the global north has much to learn from them.

Sci-Hub as a disruptive force to the scholarly publication industry

Sci-Hub tends to be a very polarizing topic, even within the OA and OS community, but your take might depend on your own views, beliefs and opinions about OA and scholarly publishing. One of the best things we can do is to stop and really ask ourselves “why does Sci-Hub exist?” Among other reasons, it exists because the publishing industry has failed to make research public. Moreover, it is important that we understand that Sci-Hub is not a cure; it is a symptom of the issues with scholarly publishing.

Sci-Hub is a consequence of a system that has lived for too long and that has maintained certain practices for a very long period of time. Sci-Hub exists because the people behind it believe that providing free access to scientific knowledge is generally good for the world, and in a way, it is; they have provided an alternative to fill a gap that was not being covered. But, at the same time, we cannot rely on it. Sci-Hub is not sustainable. It could shut off any minute and despite the number of mirrors around the world, if it disappears, all of the sudden, we will be going to be left with a huge gap again. Sci-Hub is also a little bit dangerous because what it does: providing a cheap and easy shortcut to “OA,” but not a sustainable one. By doing that, it actually detracts researchers from engaging in real OA practices, such as self-archiving their work, supporting OA journals or at least trying to publish under green OA journals. Some researchers may say: “why bother posting an OA version of your article if Sci-Hub is going to have it already?” That might set a pretty dangerous precedent for OA. Hence, reflecting upon the reasons why Sci-Hub exists is a very important exercise.

More fundamentally, the fact that Sci-Hub was sued for copyright infringement also raises some interesting questions because; if the principles of Sci-Hub are to provide access to knowledge and that is illegal, then we have to question why the copyright system would prevent access to knowledge because that is supposed to be the fundamental reason why it exists. Then, although it might seem an artificially complex exercise, it might be worthwhile to further distinguish the concepts; as with copyright, the way companies see it, it is their right to copy and distribute. Meanwhile, something very different are the rights of the authors, their intellectual property. Although this latter concept is usually also confused with the former, and many conversations leave the authors’ rights outside of the discussion. Topics such as OS, OA, the impacts of copyright, licensing and the real meaning and values of OA and OS should be part of any researcher’s training. After we make the right questions and have the right conversations and reflections, then, that might allow us to change and advance.

In memoriam of Jon Tennant (1988-2020)

I had the pleasure of meeting and talking with Jon on September 2019 in Lima, Peru, as we were both invited as experts to provide keynotes about our specialties at the “Hatun Tinkuy” Seminar (in Quechuan language it means large gathering), the first large event of its kind about research and scientific publishing in the country. Jon defined himself in Twitter with the tagline “Rogue scientist. Member of the Institute for Globally Distributed Open Research and Education (IGDORE) and the Global Young Academy” and launched a Patreon campaign for “creating better science for a better society.” Apart from being delighted to share a couple of conversations over the breaks, lunches and dinners, I was so pleasantly impressed by his human qualities, intelligence and scientific output. Also, for his no-reservations and no-nonsense stances in the OS and OA ideals that he defended so critically, apart from his other interests in meditation, green tea and velociraptors (he got his PhD in paleontology in 2017!). He founded Paleorxiv and the OS MOOC, and he also delivered conferences on OS all over the world. I was extremely saddened when I heard the

news of his passing on April 9, 2020 in Bali, Indonesia. We lost a very vocal defender of OS, perhaps the most vocal advocate for all things open in science. This is why I thought it was appropriate to share with you these pieces of the conversations we had in Lima, as an homage to his memory and work and, as Jon would put it, this short text is published on OA, duh!.

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Notes

1. <https://scielo.org>
2. www.redalyc.org