

SEB

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Stevan Harnad's "[Subversive Proposal](#)" came of age last year. I'm now teaching students younger than Stevan's proposal, and yet, very little has actually changed in these 21 years. On the contrary, one may even [make](#) the [case](#) that while efforts like institutional repositories (green OA), open access journals (gold OA) or preprint archives have helped to make some of the world's scholarly literature more accessible ([estimated](#) to now be at more than 40% of newly published papers), we are now facing problems much more pernicious than lacking access: most of our data and essentially all of our scientific source code is not being archived nor shared, our incentive structure still rewards sloppy or fraudulent scientists over meticulous, honest ones, and the ratchet of competing for grants just to keep the lights in the lab on is driving the smartest young minds out of academia, while GlamHumping marketeers accumulate.

While one may not immediately acknowledge the connection between access to the literature and the more pernicious problems I've alluded to, I'd [argue](#) that by ceding our control over our literature to commercial publishers, we have locked ourselves into an anachronistic system which is the underlying cause for most if not all our current woes. If that were indeed the case, then freeing us from this system is the key to solving all the associated problems.

Some data to support this perspective: we are currently spending about US\$ 10b annually on legacy publishers, when we could publish fully open access for about US\$200m per year if we only were to switch publishing to, e.g. SciELO, or any other such system. In fact, I'd [argue](#) that the tax payer has the right to demand that we use their tax funds only for the least expensive publishing option. This means it is our duty to the citizens to reduce our publishing expenses to no more than currently ~US\$200m per year (and we would even increase the value of the literature by making it open to boot!). If we were to do that, we'd have US\$9.8b every single year to buy all the different infrastructure solutions that already exist to support all our intellectual outputs, be that [text, data or code](#). Without journals (why would one keep those?), we'd also be switching to different metrics to assist us in minimizing the inherent biases peer-review necessarily brings about. We would hence be able not only to provide science with a modern scholarly infrastructure, we could even use the scientific method to assist us in identifying the most promising new scientists and which of them deserve which kind of support.

While many of the consequences of wasting these infrastructure funds on publishers have become apparent only more recently, the indefensibility of ever-increasing subscription pricing in a time of record-low publishing costs, was already apparent 20 years ago. Hence, already in 1994, it became obvious that one way of freeing ourselves from the subscription-shackles was to make the entire scholarly literature available online, free to read. Collectively, these two decade-long concerted efforts of the global OA community, to wrestle the knowledge of the world from the hands of the publishers, one article at a time, has [resulted](#) in about 27 million (24%) of about 114 million English-language articles becoming publicly accessible by 2014. Since then, one single woman has managed to make a whopping 48 million paywalled articles publicly accessible. In terms of making the knowledge of the world available to the people who are the rightful owners, this woman, [Alexandra Elbakyan](#), has single-handedly been more successful than all OA advocates and activists over the last 20

years combined.

Let that accomplishment sink in for a minute.

Of course it isn't all global cheering and party everywhere. Obviously, the publishers complain that she used her site, [Sci-Hub](#), to 'steal their content' – with their content being of course the knowledge of the world that they have been holding hostage for a gigantic ransom. For 20 years this industry has thrived at the public teat, parasitizing an ever-increasing stream of tax-funded subsidies to climb from record profits to record profits, financial crises be damned. Of course, they are very happy to seize on this opportunity to [distract from the real problems](#) we're facing, by staging a lawsuit to keep their doomed business practices running for yet a little longer. Perhaps more amusingly, one suggestion from the publishers of how to respond to Sci-Hub is to make access [even more restrictive](#) and expensive. I've only been around the OA movement for 10 years, but the ignorance, the gall and the sheer greed of publishers has astounded me time and time again. Essentially, in my experience, the only reply we ever got from publishers to our different approaches to reform our infrastructure, has been one big raised middle finger. Clearly, two decades of negotiations, talks and diplomacy have led us nowhere. In my opinion, the time to be inclusive has come and passed. Publishers have opted to remain outside of the scholarly community and work against it, rather than with it. Actions of civil disobedience like those of Aaron Swartz and Alexandra Elbakyan are a logical consequence of two decades of stalled negotiations and failed reform efforts.

In the face of multinational, highly profitable corporations citing mere copyright when [human rights](#) ("Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.") are at stake, civil disobedience of the kind Sci-Hub is a great example of, becomes a societal imperative.

But even from within the OA community Alexandra Elbakyan is receiving some flak for a whole host of – compared to 48 million freed articles – tangential reasons, such as [licensing](#), [diluting the OA efforts](#), or [scholarly societies](#). Of course, she reacted [defensively](#), which is understandable for a host of reasons. However, one shouldn't necessarily see these comments as criticism. They're part of the analysis of the situation and this is what must happen continuously to monitor how we are doing. Just because Sci-Hub isn't a panacea and solves all our problems for us so we can all go back and do actual science, doesn't mean that the overall effort is any less heroic or impressive.

Part of this assessment has to be the clear realization that of course Sci-Hub is not the cure to our self-inflicted [disease](#). However, given that 20 years of careful, fully legal, step-wise, evolutionary approaches have yielded next to nothing in return, more spectacular actions may be worth considering, even if they don't entail the immediate realization of the ideal utopia. After all, two decades is not what I consider a timeframe evincing a lack of patience. I can't believe anybody in the OA community will seriously complain that the single largest victory in a 20-year struggle doesn't also solve all our other, associated problems in one fell swoop. Or let me frame that a little differently: once you can boast a track record of having freed 48 million articles, then you get to complain or criticize.

Part of our ongoing assessment also has to be the discussion of whether the investment in the baby-steps of the last two decades was worth the minuscule returns. Sci-Hub has the potential to encourage and inspire other academics to stand up to the *status quo* and demand effective reforms, maybe even taking action themselves. Sci-Hub clearly is not how one would design

a scholarly infrastructure, but it has been more effective at accomplishing access than anything in the last 20 years.

Besides saving lives by making 48 million research papers accessible to patients and doctors, Sci-Hub to me signifies that the scientific community (well, admittedly, a tiny proportion of it), is starting to lose its patience and becomes ready for more revolutionary reform options. A signal that the community starts to feel that it is running out of options for evolutionary change. To me, Sci-Hub signals that publisher behavior, collectively, over the last two decades has been such a gigantic affront to scholars that civil disobedience is a justifiable escalation. Personally, I would tend to hope that Sci-Hub (and potentially following, increasingly [radical](#) measures) would signal that time has run out and that the scientific community is now ready to shift gears and embark on a more effective strategy for infrastructure reform.

Although I realize that it's probably wishful thinking.

The freed articles, Alexandra Elbakyan's David-like chutzpah against publishing Goliath Elsevier *et al.*, as well as the deeply satisfying feeling of the public good not being completely helpless in the face of private monetary interests are the main factors why I am in awe of Alexandra Elbakyan's accomplishment. If only the OA movement consisted of a few more individuals cut from that same wood, we might have never arrived at a point where Sci-Hub was necessary. I openly admit that I'm not even close to playing in that league and the realization hurts.

Finally, there still remains the question as to how Sci-Hub was able to obtain the credentials it uses to free the articles. As of this writing, not a whole lot is [known](#), so for now we will have to assume that nobody was put in harm's way. The size and probability of such potential harm may hypothetically influence the overall assessment of Sci-Hub, but at this point I would tentatively consider such potential negative consequences as minor, compared to the benefits.