Open-source, commercial, non-profit, for-profit: what power have you got?

A previous Impact Blog post expressed the view that scholarly communications shouldn't just be open but non-profit too. **Mark Hahnel** *responds to that contention, highlighting the technical and financial considerations that render many of the academic-led, grant-funded initiatives unsustainable. Moreover, the non-profit vs. for-profit dichotomy itself may be too simplistic; non-profit is not synonymous with good, and for-profit is not synonymous with exploitation. Provided it is on the right terms, universities should be encouraged to seek help from outside of academia, especially in areas not in their direct area of expertise. With a healthy blend of open-source, commercial, non-profit and for-profit, a democratic marketplace can drive innovation in the academic space.*

Following Elsevier's recent buyout of bepress, a number of voices raised concerns about the most appropriate way for universities to interact with the technology sector, with particular focus on how to ensure the sustainability of services. At Figshare, we are familiar with these concerns and the issues they raise. Some believe academic-led, grant-funded projects should provide the backbone of institutional infrastructure and the only way to protect universities is the use of non-profit organisations providing open-source software.

When Figshare was still in its infancy, on more than one occasion there was the opportunity of moving forward as a grant-funded, open-source project to be taken on after completing my PhD. However, we became a company and took on an investor, and I honestly believe we would not exist today had we not done this. The early focus on sustainable services and business models forced us to build a service that the academic community saw value in. In providing enterprise-level services for publishers, institutions, and funders, we can reliably and sustainably provide a high-quality, free service to researchers. This doesn't, however, mean all academic infrastructure should be commercially run. Eduroam, a federated global wifi network that allows researchers to connect to the web at any academic institution in the world, is a fantastic example of one possible solution to technology and infrastructure issues. The service, operated by the research institutions themselves, is one of the most impressive pieces of online infrastructure across any industry or discipline.

While the debate of whether academic institutions should be run like a business is a nuanced one, the idea of academic-led, grant-funded projects providing the backbone of institutional infrastructure – from email to storage – seems less sustainable. The ultimate goal for the university should be to remove administrative burden to help researchers do more of what they want to do; namely research, in as efficient a manner as possible, both cost and time-wise.

With regards to open-source software, we use and contribute to lots of great open-source software at Figshare and would love to have people contributing ideas directly to our codebase. But the idea that open-source fixes a lot of problems around sustainability and feasibility is still open to debate. For their book, *Internet Success: A Study of Open-Source Software Commons*, Charles Schweik and Robert English studied more than 174,000 open-source projects. Of that total, only one in six – 17% – were successful. Almost half were abandoned at the initiation stage, and more than a third were abandoned after initial release.

There are a few reasons why we are not open-source today. Firstly, there are few institutions that could or would handle a codebase the size of ours. In the economy-of-scale model we support, institutions can get their own white-labelled version of Figshare for a fraction of our operating costs. For an academic institution to spend hundreds of thousands of dollars every year on their institutional/data repository is wasteful. Secondly, we consider our value-add to be core services, ticking funder boxes with compliance certification. In order to achieve this, key parts of our offering must be centrally maintained. Our infrastructure is built on an open API (application programming interface), with many building on top of our core infrastructure and SaaS (Software as a Service) model; for example, the University of Sheffield has built a custom interface on top of our Figshare for Institutions platform, and the Oxford Live Data Project provides data visualisation services using our free figshare.com offering.

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The non-profit idea is an interesting one but may also be something of a red herring. For me, non-profit is not synonymous with good, and for-profit is not synonymous with exploitation. Mozilla is a non-profit, led primarily by its open-source browser, Firefox. Mozilla receives the lion's share of its income from Microsoft's Bing (and, formerly, Google), a search engine driven by advertising revenues. I have nothing but respect for Mozilla and the good they do. The fact they obtain their money from a for-profit company does not bother me. I am writing this piece using Microsoft Word, a product I am happy to pay for from a for-profit company.

An alternative example is the non-profit, *PLOS ONE.* While the biggest academic journal in the world in terms of volume, *PLOS ONE* undertook some [top-level trolling](#) when *Scientific Reports* was launched by Springer Nature, its for-profit publisher. Since then, however, *Scientific Reports* has exploded in growth and *PLOS ONE'*s market share has started to falter. The debate of who cares more for academic publishing is subjective – what may be more important is who is providing a better service and why academics are choosing one over the other. If it is to do with the prestige of *Nature* brands, then this is driven by academics, as Jason Hoyt, founder of open-access publisher *PeerJ*, expressed recently in a [beautiful rant](#) on Twitter.

Figshare itself is an independent company. We have one investor, [Digital Science,](#) which has a non-controlling stake. Digital Science is fully owned by the Holtzbrinck Publishing Group, which is privately owned. We are also often criticised for being owned by a publisher, but this is a common misconception. Holtzbrinck Publishing Group is the majority shareholder in Springer Nature (53%), but even if you follow the money trail there is only a tenuous link between Figshare and Springer Nature and the reality is we operate as independent companies. In fact, they are actually a paying customer of Figshare, like many other publishers. There is no special arrangement, no backroom deal.

Making money is not the driver of our decisions but a by-product of providing a valued service to the academic community. Around 90% of new features built on Figshare are driven by the community; we rely on institutions, funders, and researchers to tell us our biggest priorities. The remaining 10% are our own ideas, things we think would be cool or will move the space forward. We are sustainable through the willingness of our customers to continue to pay an annual subscription for our services, which I see as a direct service to the academic community. I can proudly say that, to date, after six years, we have never lost a client.

Finally, and to address another misconception, I believe it is too simplistic and unfair to characterise those people who work at for-profit companies as only caring about making money. There are a lot of good people working in for-profit companies in the academic space, not because they want to exploit the system, but because they care about it, have come from academia themselves, and want to help fix a broken system.

Today, every presentation I give starts with a slide listing some of our core beliefs:

- Academic research outputs should be as open as possible, and as closed as necessary.
- Academic research outputs should never be behind a paywall.
- Academic research outputs should be human and machine readable/query-able.
- Academic infrastructure should be interchangeable.
- Academic researchers should never have to put the same information into multiple systems at the same institution.
- Identifiers for everything.
- The impact of research is independent of where it is published and what type of output it is.

To summarise, universities should not forget the lessons of recent history but they should be encouraged to get help – on the right terms – from outside of academia, especially in areas that aren't their direct area of expertise. Never again should universities have to pay for access to knowledge, especially the knowledge they themselves created (for instance, I don't have access to the papers I published during my career as a stem cell biologist). Universities should not be expected to sign NDAs relating to how much they're paying for services; there should be easy-to-get-out clauses and universities should not be locked into using one suite of products. All academic infrastructure should interoperate through open APIs to allow integrations *without* vendor permission. All systems should be easy to implement and easy to replace.

With a healthy blend of open-source, commercial, non-profit and for-profit, we can let a democratic marketplace drive innovation in the academic space. At the recent Open Science Fair in Athens, Dr Jon Tennant reminded me of a quote from the late, great Tony Benn, and it should be applied to every player in the academic market:

> *"*What power have you got? Where did you get it from? In whose interests do you exercise it? To whom are you accountable? And how can we get rid of you? If you cannot get rid of the people who govern you, you do not live in a democratic system.*"*

Note: This article gives the views of the author, and not the position of the LSE Impact Blog, nor of the London School of Economics. Please review our comments policy if you have any concerns on posting a comment below.

About the author

Mark Hahnel *is founder and CEO of Figshare. He is passionate about open science and the potential it has to revolutionise the research community.*