

After 24 years, when will academic culture finally shift?

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It's now been 24 years since Stevan Harnad sparked the open access movement by [suggesting](#) in his "[subversive proposal](#)" in 1994 that scholars ought to just publish their scholarly articles on the internet:

If every esoteric author in the world this very day established a globally accessible local ftp archive for every piece of esoteric writing he did from this day forward, the long-heralded transition from paper publication to purely electronic publication (of esoteric research) would follow suit almost immediately.

Since then, we have been waiting on the behavior of scholars to change, such that all our works indeed become accessible. This is what has become known as the "culture shift" in academia, without which no actual change in our practice can happen. However, no such change can be seen, not even after all these years. Instead, open access mandates and other policies have been developed to force scholars to perform certain behaviors they wouldn't otherwise do. Even in fields where such deposition of articles has become common, the authors still adhere to toll-access publishing not for reading or scholarly communication, but for career advancement – an obscenely expensive and perverse outsourcing practice.

Why does such behavioral change take so long? Many of Stevan's colleagues at the time have since retired and a large section of the scholarly workforce has been replaced with a new generation, one would think – if anything – more net-affine than the previous one?

In this post, I will try to make the argument that our mistake was to expect behavior to change when the reasons for the behavior have not changed. As a behavioral neuroscientist, I have learned that, all else being equal and depending on time-scales, among the best predictors of future behavior is past behavior. Thus, if we analyze why scholars behave the way they do with regards to open scholarship, we may be more likely to affect that behavior.

Why isn't everybody using preprint servers? What keeps people from posting their data and code on any of the proliferating repositories? What is the reason, funders feel they need to use mandates to get scholars to comply with open science ideals? Why are the non-activist, regular scholars either lethargic or outright hostile?

In the last decade, it seemed as if the answer to this question was "because of the reward system!" or "because incentives are missing!". As if scholars only ever do anything if they are rewarded or incentivized for it. I think the answer lies elsewhere. It can be articulated as two main reasons:

- 1) They do not care and hence do not know: scholars care about their scholarship and they shouldn't have to care about such questions. These questions are exactly what infrastructure should be taking care of, not scholars.
- 2) They have good reasons to close their scholarship: lack of time, fear of competition, privacy concerns, etc.

I'm simplifying, of course, but would nevertheless tend to argue that together, 1+2 explain most of scholars' behavior wrt to open scholarship. Those who care, know and do not have good reasons to be closed are people like open scholarship activists, e.g., yours truly. The other 99.5% are the ones who resist "culture change" for either reason 1) or reason 2) or both. I'm rather skeptical anything can make either 1) or 2) go away any time soon, let alone both.

Hence, rather than fighting 1+2, as we have been for two decades now, I suggest to use them in our favor.

A recent poll in our biology/medicine department exemplifies how this might work: when polled which software the department members are currently using to prepare images (microscope images, gel pictures and such) for publication, the majority answered "PowerPoint". Now, I assume that most everybody on here would understand that PowerPoint is not the, ahem, *ideal*, most professional software to use for these kinds of work. 😊 On the contrary, submission in PPTX format is explicitly discouraged by most publishers. This means that the majority of people in our department use a tool that is not the most professional for the task at hand and the format of which is discouraged for submission. What funder mandates could be in place to encourage such odd behavior? Which tenure committee rewards compliant over superior tool use? Where is the academic incentive system that pushes scholars to choose PowerPoint over the better-suited alternatives?

Obviously, there are no mandates or tenure committees incentivizing the use of such suboptimal tools. Scholars are doing this entirely on their own accord. Why on earth would educated people do something like that? The answer is straightforward: for the same reasons 1) and 2) above! Most faculty don't care and hence don't know: they use what comes on their computers, pre-installed by the university. Or they have a good reason to use this tool: it's good enough for them and they don't have the money for Photoshop or would rather spend the money for experiments than software. Or they find ImageJ too hard to use as they are already familiar with the ubiquitous PowerPoint and can't be bothered to switch. Or installing new software is just too much of a hassle. *Et cetera*.

With this example in mind, how do you get scholars to choose open publishing alternatives over legacy publishers? How do you get them to use open evaluation procedures over impact factor? How do you get them to save their data to a repository, rather than on their thumb drive? You provide them, automatically, free of charge and ready to use, with the tools you want them to employ, with the default settings (i.e, open) you prefer. The large majority who doesn't care and hence doesn't know will just use what's convenient, quick and free, so they can focus on what matters most to them: their scholarship. Those who have good reasons to make their work closed will balance these against the potential negative consequences (e.g. more time and effort, potential suspicions if everything else is open, etc.) and be able to make their work as closed as it needs to be for them. Of course, ideally, such tools come with their own reasons why one would want to use them, such as increased efficiency over legacy tools or new, more and better functionalities. Conversely, equally obviously, you stop providing scholars with anything you don't want them to use, such as subscription journals. Or typewriters.

Since subscriptions globally run at about US\$10bn every year, and the technology for a scholarly commons can be had off the shelf, the kind of [modern infrastructure](#) that would get scholars to change their behavior only needs to be bought with the funds saved by subscription cancelations. As such an infrastructure would provide scholars with a superior toolset, it would also add 'efficiency' and 'functionality' to reason 2) as to why scholars are using this new, open infrastructure.