# To what are we opening science? Reform of the publishing system is only a step in a much broader re-evaluation.

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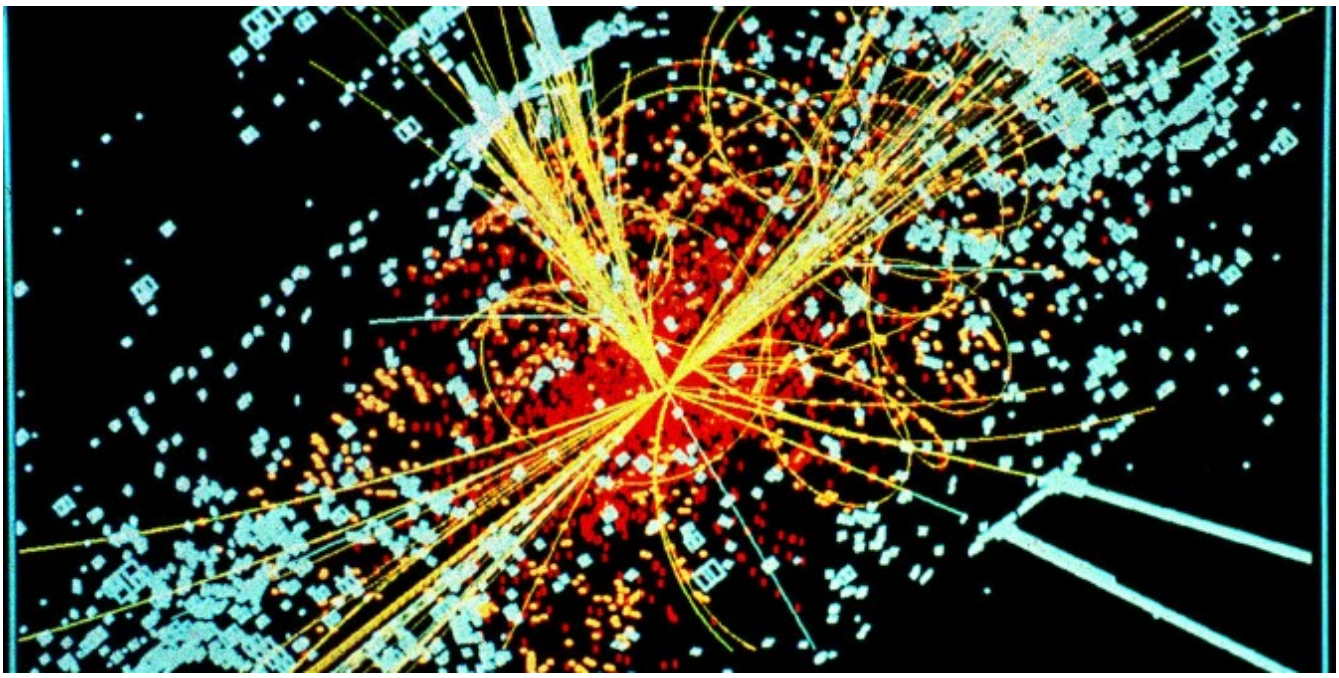
*Openness is being invoked as a silver bullet to increase the productivity and cost-effectiveness of academic research.* **Sabina Leonelli** *and* **Barbara Prainsack** *argue that openness is more than just a blanket strategy to reduce costs. The failure to recognise neoliberal commodificaton and the false premise that open science will necessarily save money are two major misconceptions. Openness in science is not an end in itself, but it should always be in the service of something good.*

Open Science is rightly being celebrated as an opportunity to critically debate the ways in which knowledge is produced and disseminated, to reform the credit system used to reward scientific activities, and to address the challenges involved in making research activities and outputs more visible, accessible and intelligible within and outside academia. As investigated by the Data Studies group in Exeter, these issues play out very differently in specific research fields and geographical locations. Discussions of how to sustainably support Open Science initiatives across different research contexts should therefore be at the heart of policy deliberations by national governments, funding agencies, publishers and scientific institutions around the globe.

In particular, it is crucial to avoid portraying "openness" as a blanket strategy to deal with all knowledge production activities. All too often, Open Science is cast as a tool to enhance the transparency and accountability of research, with little critical reflection on the potential confusion and obscurity created by releasing large quantities of information without accompanying analysis and meta-data. Open Science can certainly be used to increase the fruitfulness and public understanding of research processes. This, however, requires support for expertise and infrastructures to make information intelligible and useable, as argued for instance by the Royal Society and the Open Knowledge Foundation.



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Even more worryingly, openness is being invoked as a silver bullet to increase the productivity and cost-effectiveness of academic research in ways that hinder its integrity and reliability, and do not take account of its diverse goals and the variety of conditions under which it is performed. As the KLC-based network on "Citizen Participation in Science and Medicine" argues here, budget cuts and austerity politics are tempting policy-makers to use Open Science as a cost saving strategy, which enhances the quality of research while also reducing the costs involved in disseminating its results and translating them into socially useful innovations.

**Two misconceptions about Open Science as a cost-saver**

To treat Open Science as a solution for the cost problem in this way buys into two misconceptions. The first is that there is a cost problem in the first place. By contrast, it can be argued that the cost problem is an artifact of current neoliberal policies. That less public money is spent on university-based research, that higher education has become a commodity, and that universities need to be run like enterprises, are not "natural" developments but political decisions. A reform of the publishing system and Gold model of open access is only a step in a much broader re-evaluation of how research should be evaluated and supported. Within such re-evaluation, we need to stop treating "the market" as a natural force. The market is not something that exists independent of human action and that can be influenced and steered at most, but not overcome or abolished.

The total commodification of research can and should end: the reason that some goods should not be exposed to market mechanisms is not that markets aren't effective enough, but that universal commodification is flawed. Instead of providing a fail-proof solution to the financing of universities, it fosters an academic culture where management takes precedence over research itself, as poignantly outlined by Hans Radder and Willem Halffman. It also cannot, as Margaret Jane Radin argued in her book on *Contested Commodities*, capture the ways people value things important to personhood and is thus blind to a key aspect of what makes us human.

The second misconception underpinning the view that Open Science could or should be a means to save costs is that it will save costs. This idea rests on the false premise that the work of those making science open – by cleaning, annotating, and publishing data, or by creating the infrastructures necessary for openness – is less valuable, and thus less "costly", than the status quo. It is true that Open Science has the potential to do very good things, such as reducing the duplication of research, enabling people in less privileged institutions and world regions to access results that they could otherwise not access, or making sure that patients can engage with similar ranges and types of information as medical professionals. All this, however, involves its own costs, particularly for researchers and administrators who need to put time into keeping on top of Open Access mandates. As we argued in other places, researchers are often the best judges of how to and when to make their research open. Imposing rigid guidelines may hamper rather than facilitate the work of scientists who are already overstretched and underfunded, particularly if these guidelines come in the absence of adequate support, rewards and guarantees that their intellectual labour will be safeguarded against theft or abuse.

The costs and benefits involved in supporting researchers towards achieving openness are ones that we, as a society, should be willing to afford. They should be explicitly discussed in the context of the economic systems and the political stakes that Open Science is embedded in. The opposite of Open Science is not necessarily Closed Science. It can be "proprietary", "hidden", "inaccessible" (to certain groups, or to anyone but certain groups), but also "protected" from being used for the profit-maximisation of Big Brother and Company Man, or from being used against individuals. Openness in science, such as transparency in general, is not an end in itself, but it should always be in the service of something good, which is hard to measure in the absence of empirically informed discussions pertaining to specific political, social and scientific contexts.

*Together with Daniel Spichtinger, Policy Officer at DG Research at the European Commission, Sabina Leonelli and Barbara Prainsack recently published an article in GEO: "Sticks and carrots: encouraging open science at its source" (2015). Institutional repository pre-print can be found here.*

*Note: This article gives the views of the author, and not the position of the Impact of Social Science blog, nor of the London School of Economics. Please review our Comments Policy if you have any concerns on posting a comment below.*

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