

Universal Open Science policies risk alienating researchers

*Open Science policies are becoming increasingly institutionalised at the national level. However, as **Erika Lilja** shows, the inherent contradictions of implementing Open Science policies in a uniform manner across all disciplines risks alienating researchers from these policies.*

Grand challenges, such as inequality and climate change, and sudden global challenges, such as COVID-19, require mission-based and solution-centered approaches that are not only interdisciplinary, but also break from traditional ways of doing research. Through the free exchange of research ideas, results and data, Open Science promises to be a solution.

However, in implementing Open Science what is not always clear as [Mirowski](#) puts it is, “what sort of thing [it is] that Open Science proposes to fix about older science”. This critical reading sees Open Science as being allied to the ethos of ‘radically collaborative science’ and to the emergent structures of ‘platform capitalism’, rather than to an actual structural break in the nature and practice of modern science. As such, even though the League of European Research Universities might confidently state “[Open Science will be part of the ‘new normal’](#)”, Open Science cannot yet be understood as an epochal break tangible at the micro level of research practices.

The findings also pointed to a significant goal conflict between researchers and policy, created largely by the mismatch between utilitarian and economic valuation of Open Science promoted by policymakers

Starting at this micro level, [in a recent study](#) I set out to analyse the perceptions and experiences of researchers towards Open Science policy. This study was restricted to the governance of Open Science in Finland, as it has invested early in Open Science in a [highly co-ordinated manner](#). What was apparent was that despite enthusiasm for Open Science, significant gaps between policy aims and research practice exist and that researchers have many difficulties in coping with Open Science policy implementation. The findings also pointed to a significant goal conflict between researchers and policy, created largely by the mismatch between utilitarian and economic valuation of Open Science promoted by policymakers (eg. [the main policy goals set by Commissioner Carlos Moedas for EU research and innovation](#)) and prevailing forms of academic management and capitalism.

The threat of policy alienation

Tummers et al. describe policy alienation as “[a general cognitive state of psychological disconnection from the policy programme being implemented](#)”. To explore these tensions in Open Science policy implementation I extended this scheme and identified four factors contributing to feelings of Open Science policy alienation (Fig.1). Notably, policy alienation develops as policies become detached from the specific context they are designed to influence. For Open Science policies this seems to occur as openness is governed less by the localised principles of trust and gifting, and instead through [generalised principles](#) of economic value.

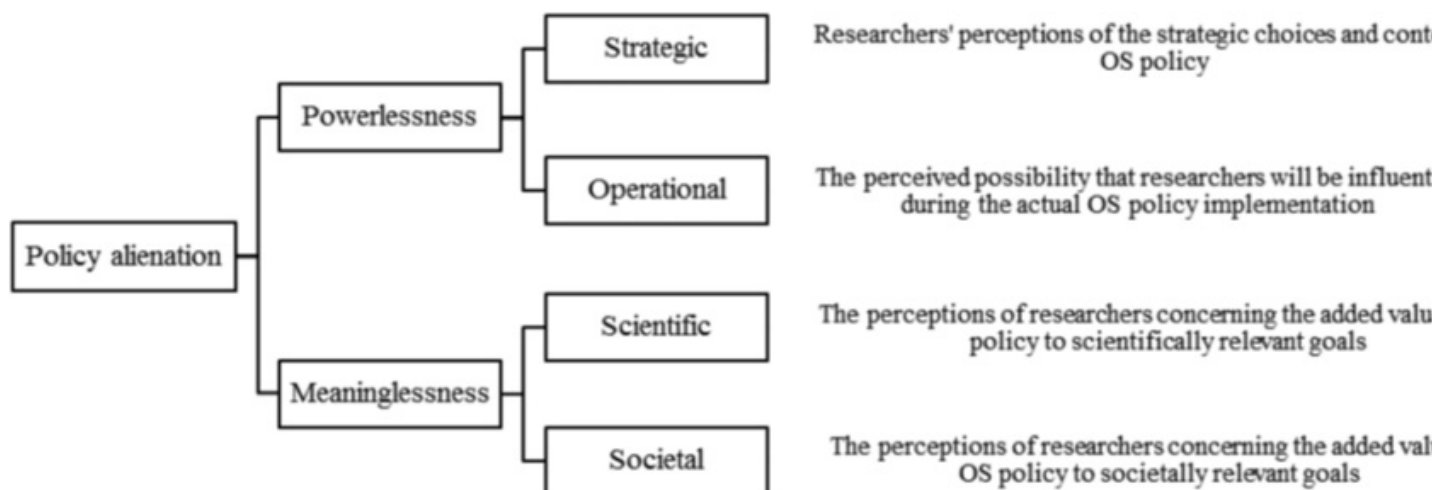


Fig.1: Policy alienation concept and dimensions drawn and modified from Tummers (2012).

Take for example the categories of operational powerlessness and scientific meaningfulness. For many researchers, the plethora of Open Science initiatives has created fragmentation, confusion and complexity in day-to-day research practices. This has led to experiences of policy alienation in the form of operational powerlessness – the perceived impossibility of the researcher to influence policy implementation. This operational powerlessness was manifest by respondents to the survey (n=680), who expressed feelings and perceptions of ambivalence, pointlessness, and disengagement when dealing with Open Science policy implementation:

“Open Science is a progressive illusion.” (Respondent 570)

Researchers' perceptions of the benefit of Open Science policies to scientifically relevant goals and their own scholarly practice reflect varying degrees of 'scientific meaningfulness'. Responses reveal that, for example, the lack of good-quality OA publishing channels and understanding about the contextual and relational character of research data are not recognised in Open Science policies from the perspective of micro-level research practices. They also show that researchers are unable to grasp the task given to them in policies, making it particularly difficult construct 'doable' problems, such as publicly open data sharing. Ultimately, making it difficult for them to comply or even cope with Open Science policies.



Researchers also experience scientific policy meaninglessness. Their perceptions unveil a worry and care over research participants, as well as for scholarly communities and other researchers, and that researchers are especially concerned about the effects of these policies on the quality of research and trust in science.

“It is difficult to find context-specific information about how one could promote openness in the first place. ... The discussions and sharing of information take place in their own bubble of Open Science.” (Respondent 305)

Widening the horizons for open sciences

Gaps between Open Science policies and research practices are an unintended consequence. However, they reflect the lack of researchers' influence on policy decisions that affect them. Research evaluation systems still fail to recognise and value open research practices, Open Science policies promote openness in the abstract, as a way of improving economic growth. The result is a heightened sense of operational powerlessness for researchers. This threat of policy alienation needs to be considered, otherwise open policymakers risk losing the support of researchers tasked with actually carrying out open science.

To achieve this, requires dialogue with researchers from different disciplines and to shed the idea that there is a singular science, open, or otherwise. We should ponder what kind of openness is desirable and why from the perspectives of the various scholarly communities, who contrary to the international nature of research are often seen as national research communities. It is most important that discussions on openness in science include those disciplinary and beyond perspectives that will eventually enable researchers' commitment to policies.

could the state earn back a direct return from its risky investments in (open) science and research

Such discussions would likely reveal multiple perspectives and imaginaries that could question the self-evident ways of understanding, directing and leading (open) science. However, to be able to enter into wider horizons of understanding about openness in science, will require more time than is allowed by some initiatives, such as [Plan S](#) or the Finnish [Declaration of Open Science and Research](#). Urgency is an understandable response to challenge the dominance of exploitative academic publishers and to the demands of the COVID-19 pandemic. In the long run, however, more time invested in dialogue and imagination could prove to be extremely important in developing practices that enhance research excellence, ensure researchers' accessibility to knowledge resources, promote collaboration, and improve the quality of research—motivations and goals shared by both, policymakers and researchers.

From my perspective, [Mariana Mazzucato's](#) efforts to renew the innovation narrative and challenge orthodox thinking about the role of the state and the private sector in driving innovation offers an interesting pathway to thinking outside the original Open Science horizon. If we would like to create prospects for Open Science futures, where grand challenges are tackled for the public good, as opposed to a limited definition of national economic growth, we should perhaps ask, could the state earn back a direct return from its risky investments in (open) science and research and receive for example through royalties or require stakes from state-funded technological innovations?

*This post draws on the author's article, [Threat of policy alienation: Exploring the implementation of Open Science policy in research practice](#), published in *Science and Public Policy**

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