

Culture-shifting new initiative to make 'open science' a reality

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Renowned microbiologist Louis Pasteur famously declared that "knowledge belongs to humanity, and is the torch that illuminates the world". It is perhaps ironic, then, that the fruits of scientific research often remain in the dark. While science should be an open and transparent process, particularly in the information age where sharing processes are simple and efficient, this is often not the case.

A new paper featuring authors from numerous international universities including Monash University's Mr Daniel Newman, Monash Institute of

Cognitive and Clinical Neurosciences, has proposed an initiative to encourage scientists to share their data, analysis scripts and materials freely with their peers. The Peer Reviewers' Openness Initiative (PRO) aims to incentivise the sharing of data through the [collective action of peer reviewers](#). Under the PRO, peer reviewers who have signed the declaration will only review authors who have shared their content, or provided an acceptable reason for restricting access to their work.

Sharing in science has always been plagued by commercial and time-related concerns, from the secret, coded notebooks of Leonardo da Vinci, to Sir Isaac Newton's accusations of "stolen" calculus research. However, Mr Newman said the concerns around [open science](#) are far outweighed by the benefits. Some researchers are deterred by the perceived time burden of sharing and its impact on publishing potential.

"It can feel like a burden at first, but there are many online tools to help with open science. Once I became familiar with these practices, these skills are simple to implement as a usual part of my analysis pipeline," Mr Newman said.

"I'm excited to get on board with this open science movement as much as possible early in my career. My most recently submitted paper will be fully accessible, including all related raw data, analysis scripts and paradigm code open source, so my results are reproducible." he added.

Lead researcher Dr Richard D Morey of Cardiff University said the key to enacting genuine change in current sharing practices is the collective action of reviewers.

"Although many researchers are excited about creating a more open scientific culture, evaluation of openness has not traditionally been part of the peer-review process," Dr Morey said. "The Initiative is all about telling reviewers 'Yes, we can do this.'" Reviewers who agree are

encouraged to add their names to the PRO website. "The signatures are an important part of the Initiative, so that reviewers know they aren't acting alone."

Dr Morey and Mr Newman are pleased with scientific community's enthusiastic response to the PRO initiative, which has already received over 200 peer reviewer signatures.

The PRO paper has been published in the *Royal Society Open Science* journal.

More information: — openessinitiative.org/

— The Peer Reviewers' Openness Initiative: Incentivising Open Research Practices through Peer Review, *Royal Society Open Science*, [rsos.royalsocietypublishing.org ... /10.1098/rsos.150547](https://rsos.royalsocietypublishing.org/.../10.1098/rsos.150547)

Provided by Monash University

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