

Written Evidence Submitted by Dr Elizabeth Moylan

(RRE0100)

I am writing to clarify a point in the evidence I gave the Science and Technology Committee. Publishers with a range of journals publish both selective high-interest journals focused on novel results and, increasingly, journals publishing confirmatory and null results. This provides an opportunity for authors to publish confirmatory research in a broad-based or 'sound science' journal. We see this as part of a solution focused on addressing the problem of publication bias against null and confirmatory results. We are providing an outlet, an incentive and a forum for these results.

This in itself cannot address the extent of the bias in the scholarly record or mitigate against the pressure on researchers to report only their positive results (no matter how incremental). If their career depends on publishing in a highly selective journal with a high impact factor, they have little incentive to report the research that has not worked out. This reinforces a scenario where highly selective journals control the market for the most striking career-making results.

The 'research ecosystem', including funders, institutions and researchers, has to see the value in publishing null/negative and inconclusive results (the "file drawer problem"). There needs to be training, awareness raising and resources to ensure that such work can *and is* published. There is an opportunity here for all stakeholders to work together to help change the type of research that is deemed worthy of publication and recognition. Fundamentally, researchers must be rewarded for the contributions they are making to the integrity and trustworthiness of research, that is the process and practice of research, as well as for striking individual outputs or outcomes.

We look forward to working with researcher, funders, institutions and policy makers to address the challenges around research integrity and reproducibility.

(March 2022)