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Senate Education and Employment Committees
PO Box 6100
Parliament House
CANBERRA ACT 2600

SUBMISSION TO SENATE INQUIRY INTO AUSTRALIAN RESEARCH COUNCIL AMENDMENT (ENSURING RESEARCH INDEPENDENCE) BILL 2018

Dear Committee Secretary.

This amendment strips away all powers of the Minister to veto funding grants recommended by the Australia Research Council (ARC). If adopted, there would effectively be no oversight of the ARC by a representative of the taxpayer who ultimately funds the ARC.

In this submission, it will be argued that rather than reducing the Minister's power to influence funding, the Minister should use his power more vigorously to influence what topics are to be researched, and the level of funding. The Minister has a duty to do this based on the government's democratic mandate to set national priorities and its responsibility to the taxpayer. Among these priorities is the ongoing "replication crisis", which the ARC has failed to address.

At present the Minister can appoint the ARC CEO, and members of the ARC committees, as well as give instructions to those committees (part 4 and 5 of the ARC Act[1]).

The issue of ministerial involvement in science research funding has received considerable interest recently due to the then acting Education Minister, Stuart Robert, vetoing six ARC funding proposals. There is a view in parts of the academy that funding decisions should be completely independent of government input – except the government should keep supplying the funding. This spurious argument is conflated with the genuine fundamental principle that governments have absolutely no right to interfere with the execution of funded research. For example, the government has no right to tell a scientist what conclusions it wants, or to veto the publication of the results.

[1] https://www.legislation.gov.au/Details/C2020C00097

"The ARC's purpose is to grow knowledge and innovation for the benefit of the Australian community."[2] It's *raison d'etre* is to benefit Australia, but determining what is of benefit to Australia is not entirely a scientific matter. Determining what is of benefit to Australia is a decision of the Australian people, as determined in the elected parliament. As such political concerns are of fundamental importance to determine the direction of research. For example, the present government has flagged that it wants "greater collaboration with industry to stimulate more research and development (R&D) activity across our economy."[3] This is a political decision that would be a legitimate focus of debate. An elected government has a right to set such priorities and have the means to enforce them on the ARC. This would be reduced with the proposed amendment.

The amendment implicitly assumes that the ARC, its panellists, and reviewers are more in tune with the public's notion of the most pressing national research funding priorities than an elected government. But the ARC committee members, and its "panel of experts", are almost entirely academics – a section of society completely unrepresentative of the Australian people and notoriously out of touch with reality. Their advice is welcome, their research work is appreciated and valued – but that does not mean that the public, through their elected representatives in parliament, must fund exactly what this group wants without any questions.

Far from reducing the Minister's power to influence research directions, it should quite possibly be increased, and the Minister should use what powers they have effectively. The Minister can give instructions on funding priorities and how the funded research is selected. For example, the Minister could give more explicit instructions on how the college of experts, and grant reviewers make decisions about which grants to approve.

It is obvious from the list of funding proposals rejected last year by acting Minister Roberts, that the ARC has a major problem determining research priorities and could benefit from assistance, and clearer instructions from the Minister. Consider the list of vetoed proposals below, and ask if the public would think that there may be a better use of research funds?

- Playing conditions: how climate shaped the Elizabethan theatre
- National forgetting and local remembering: memory politics in modern China
- China stories under Xi Jinping: popular narratives
- Finding friendship in early English literature
- Cultural production of religion by science fiction and fantasy novels
- New possibilities: student climate action and democratic renewal

Is it possible that the public may think that funds would be better directed to medical research, or controlling major environmental problems such as invasive species, or even contributing to pure but fascinating research of great public interest, but likely little practical value, such as astronomy? The fact that these vetoed projects were deemed worthy of funding is evidence enough that the ARC needs better direction from the Minister.

It is also very notable that these vetoed projects are not from the hard sciences or engineering. They are from the humanities and social sciences where the priorities of academia are largely out of step with mainstream Australia.

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2 https://www.arc.gov.au/about-arc#:~:text=The%20ARC's%20purpose%20is%20to,providing%20advice%20on%20research%20matters.

3 https://www.arc.gov.au/letter-expectations-minister-arc

Rather than prioritising and insulating the autonomy of the "soft" sciences to conduct research into the niche obsessions of unrepresentative and cloistered academics, government reform in this area should be to direct the ARC to address the "replication crisis."

The "Replication Crisis" is the well-accepted fact that a large fraction, perhaps half, of peer-reviewed scientific papers and reports are wrong.[4] When an attempt is made to reproduce or replicate the original work, an equivalent result or conclusion cannot be found roughly 50% of the time.

This problem is now discussed in all the major science journals, and in the national institutions of science. The UK House of Commons is presently holding an inquiry into the problem.[5] Despite being well accepted in the scientific fraternity, the problem is almost unknown to the general public. This may be partly due to science institutions being reticent to publicize an unreliability rate approaching 50%. This is a subject of ongoing interest to me and the IPA's Project for Real Science, which I lead.

ARC funded research is certainly not immune from problems of replication. For example, numerous ARC funded research papers on the effect of climate change on coral reef fish have been demonstrated to be entirely wrong by a replication test conducted by a group of international scientists led by Deakin University's Dr Timothy Clark.[6] Ironically Clark was funded by the ARC to extend and build on the erroneous previous work, but it became rapidly apparent that the original work was flawed. Thus, as is common, replication checks were accidental rather than routine. Considering replication is fundamental to the scientific process, the ARC should become involved in funding major routine replication studies, especially those important to the development of government policies.

One solution would be for the minister to direct the ARC to set aside funds, perhaps 5% of the ARC budget, to replication studies that are designed to check important scientific evidence – especially if that evidence is being used to inform government policy.

Conclusion

In the final analysis, this is a question of whether public funds should be allocated entirely by an unelected, unrepresentative academic "elite" or whether there should be some involvement by the representative of the people who ultimately pay for the research. The latter is obviously important and this amendment must be rejected.

I wish to thank the Committee for the opportunity to provide this submission. Please do not hesitate to contact me for further consultation or discussion.

Kind regards

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4 https://www.nature.com/articles/533452a

5 https://committees.parliament.uk/work/1433/reproducibility-and-research-integrity/

6 https://www.science.org/content/article/does-ocean-acidification-alter-fish-behavior-fraud-allegations-create-sea-doubt