We need to stop punishing scientists for talking to the public

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Current research metrics only reward publishing in academic journals and effectively punish publishing in the popular press. Credit: Tobias von der Haar/Flickr, CC BY

As scientists, my colleagues and I are often told we need to engage the general public and decision makers, to use our expertise to inform public discourse and debates and to reach a far wider audience than just our professional colleagues.

I very much believe in the importance of doing this. This is, for instance, my 25th article for The Conversation. I've also written scores of articles for other popular venues such as New Scientist, Natural History, Yale Environment 360, Australian Geographic, the Chronicle of Higher Education and the New York Times, among others.

I also blog two to three times a week for a science and environmental website I founded, which now reaches around 50,000 people worldwide each week. And I write the occasional popular book too.

So, how much formal academic credit do my university or I get for all of these public-outreach efforts?

Zip. Zero. Nada. Nothing.

How did we get here?

The Australian Research Council gauges scientific research activity by universities via their Excellence for Research in Australia (ERA) ratings.

ERA scores range from 1 (bad) to 5 (excellent) and reflect the quality of publications a university produces in a particular field, such as Environmental Science and Management, Medical Microbiology or Geochemistry.

In sciences, engineering, medical and health research, ratings are largely determined by how frequently journal articles are cited relative to world benchmarks. In the arts, humanities and social sciences, on the other hand, publications are evaluated by a comprehensive peer-review process.

The ERA has two main impacts on a university. Firstly, it is a key indicator of academic prestige. At James Cook University, for instance, we are very proud of our five-star rating in Environmental Science and Management. Secondly, the ERA has a modest impact on research funding: universities with higher ERA scores get a slightly bigger slice of government research monies.

Beyond the ERA, the federal Education Department also collects

information on research productivity via its Higher Education Research Data Collection (HERDC). The HERDC is very significant as it is the basis for allocating large government research-block grants to universities (these totalled A$1.77 billion in 2015).

But here's the catch. Neither the ERA nor HERDC give any weight at all to popular writing or non-traditional scientific projects. Rather, they're based *solely* on publications in refereed journals, as well as technical books, refereed book chapters and refereed conference proceedings.

For the current rounds of the ERA, for example, the ARC lists over 24,000 eligible journals, but virtually every single one of them is aimed at a specialised academic audience, not at the general public.

By doing things this way, the government is actually creating a *disincentive* for researchers to do popular writing. The reason, of course, is that it takes time to do popular writing, and that's time a researcher could spend producing research for a refereed journal.

And, of course, the same thing can be said for publication metrics for individual researchers, such as the h-index or one's total number of citations. The main sources for estimating h-indices and citations are Thompson-Reuters and Scopus, based on extensive lists of refereed journals.

Google Scholar takes a slightly broader approach and includes technical books and refereed book chapters as well as peer-reviewed papers. But none give even a feather's weight to popular writing.

Why engage the public?

So, why bother with popular writing at all? Well, the good news is that a sizeable number of researchers understand it's important to engage not

just with the 12 people who read the Lithuanian Journal of Ichthyology, but also with the big wide world out there.

Moreover, popular writing is an effective way to sharpen your writing skills and to highlight your research to a far broader and more diverse audience than just our professional colleagues. For such reasons I strongly encourage my postgraduate students to do popular writing in addition to their technical works.

So what's the answer? How can we encourage more researchers to share their hard-won knowledge and perspectives with the vast majority of the population that doesn't read the technical literature?

I discussed this question at some length with my colleague Bradley Smith, who handles the ERA metrics and reporting at my university. Bradley doesn't support including non-refereed works in the ERA, as he's concerned that would just muddy the waters by making the ERA harder to interpret. But he does agree that researchers should get credit for engaging in the public sphere. Indeed, he argues they have a responsibility to do so in their areas of expertise.

He believes we should embrace multiple types of indices for academic accomplishment. This could include the ERA and HERDC, but also instruments like Altmetrics, which captures a much broader range of works, including media interviews and blogs, not just popular writing and technical reports.

Perhaps Bradley is right, and we just need to be more pluralistic in how we assess academic achievements. It's not as though the government doesn't recognise the importance of public outreach. For instance, if one applies for a Fellowship or research grant from the Australian Research Council, one is often asked to explain how one's work is going to have broader societal impacts. Indeed, under CEO Aiden Byrne, the ARC is

showing growing interest in tracking community engagement by researchers.

Whatever we end up doing, it's clear to me that ERA scores, the HERDC and h-indices alone aren't sufficient to measure all the things we want academics to do. It's time to start thinking outside of the box.

My favourite example is from McGill University in Montreal, Canada, where I formerly held an adjunct professorship. One of my colleagues there spent a huge amount of time and energy establishing an NGO to help conserve marine biodiversity. When it came time to apply for tenure, the university gave her formal academic credit for all of that hard work. That's not a bad start.

Source: The Conversation