Access to Scientific Research: The Return on the Taxpayer's Investment

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FOR CENTURIES, academia maintained a vice-like grip on information, mostly with its specialized language, but recently more with its exclusivity. (They do not call it the ivory tower for nothing.) Aside from what is read in newspapers, the general populace generally cannot access scientific research in its original publication form, despite those articles being the main currency by which academics and researchers define themselves. But if scientific progress is made, in part because of tax-dollar contributions, then I believe society deserves access to the products of our investment.

George Washington is credited with saying,

“There is nothing which can better deserve our patronage than the promotion of science and literature. Knowledge is in every country the surest basis of public happiness.”

Now, more than ever, a well-informed citizenry is paramount to the future well-being of our society. Thus, I am advocating that researchers be given more opportunities to share the impacts of their research that are far reaching and offer a low barrier to participation.

Currently, there are several publishing options that allow researchers to make their work available to the public. Open-access journals are an excellent addition to the resources available to researchers, but these typically require additional submission fees, a small but significant deterrent to many. Publishers provide a great deal of investment in time, skills, and resources into making scientific publication possible, and it is unreasonable to ask for the entirety of that effort to not be monetarily compensated.

But even if the public could access all scientific articles for free, these articles are written with very specific audiences in mind: those who are already very familiar with the basic concepts of the studies. Thus, the results, and more importantly, the societal value, are not discernible by most of us.

Granted, this is not inherently a design flaw; experts communicating about their expertise to other experts will often need to be highly technical to discuss the novel advances of their latest work. Scientific research is inherently incremental, and sometimes many years of effort go into the work in these publications, so it is important that journal articles convey this information in a succinct manner that simply cannot include the entire history of the field and all of the surrounding context. But if it is financially supported with tax dollars, the general public deserves a chance to learn from it.

I propose that there is something that can be done now that would provide society with a suitable deliverable for our investment that would serve to reach the goal of a more well-informed citizenry: a journal-curated mechanism that would encourage an author to simultaneously submit what I am calling a “general public summary.”

This one-page document would be free to the public, housed on the publisher's website, and would inform readers of the gist and societal impact of the scientific article, in regular English, and relay the pertinent contribution to our collective human knowledge. Just like the formal article, this relatable summary could also be peer reviewed to ensure its accuracy, but also to ensure its accessibility. Software exists now that can quickly assess the reading level of any digital document. A limit on the reading level that can be used on these public reports could be imposed. And worth pointing out is that the need for a reading level limit is not because society is illiterate, but because our high school education generally does not teach us words like “subdermatoglyphic.”

From my experience, researchers are eager to make their work more well known and more relevant to the general public, but often lack an approachable avenue to do so. This general public summary allows researchers to share their work more broadly and simultaneously contribute to an informed citizenry by giving taxpayers their return on their investment in the scientific enterprise.

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