

Reading Their Reactions: Where the Scientific Community Stands on Changing Policies



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Historically, April 22nd has been celebrated as Earth Day. This year, Earth Day coincided with the first ever March for Science. The March for Science was a gathering of scientists and advocates of scientific research, from the middle school biology teachers to the humble bug enthusiast, to support the importance research has on our everyday lives. With the recent threats of budget cuts to a lengthy list of government-funded programs along with attempted travel bans, the scientific community hopes this rallying cry will have a positive effect on lawmakers to reverse these proposed policies. We, too, are members of this community, and it is important for us to be aware of what is at risk of being lost and how our editors, authors, and reviewers are reacting to this news.

The Environmental Protection Agency, the National Aeronautics and Space Administration (NASA), the National Oceanic and Atmospheric Administration, the National Institutes of Health (NIH), the Centers for Disease Control and Prevention, the Department of Health and Human Services, the Department of Agriculture, and the Department of Energy are just a few of the agencies on the chopping block.¹⁻³ Entire state and federal programs would be eliminated, such as the Clean Power Plan and the Global Climate Change Initiative.¹ Out of the agencies listed above, the drastic cut to the NIH's budget could be the most dramatic and the most detrimental to researchers, the United States' position at a pioneering forefront in medical and biological breakthroughs, and to American families. The Administration has planned to cut 20% of the NIH's budget, resulting in a loss

of \$5.8 billion, which funds over 2,600 institutions and supports over 313,000 full-time and part-time jobs.² Medical research is not cheap and researchers depend on grant money to not only support their work but their lives and their families. A loss on that grand of a scale is bound to cause rippling effects that could be felt for years to come.

We've all seen at least one funding statement that includes grants from the NIH. So, what would happen if the money disappeared? The budget cut could mean that the NIH would not be able to provide a single grant in 2018.⁴ That would put a hold on current work and prohibit any future studies from leaving the notebook of any researcher. The American Society for Microbiology published a statement on the proposed budget cut, declaring that "the magnitude of this reduction in funding is unprecedented and will slow scientific discovery against chronic and infectious diseases."⁵ Christine McEntee, the Executive Director and CEO of the American Geophysical Union, believes the budget cuts "would be a step backward for scientific progress, jeopardize the U.S.'s role as a leader in innovation, and harm the American public."⁵ Within the publishing community, we could see a decline in submissions or a cut in issue publication. There would most likely be a serious drop in open access (OA) manuscripts as those fees are paid by grants. If researchers are struggling to fund their studies, it would be understandable if they chose to submit to a journal that did not charge any kind of publication fee. Eigenfactor.org has a current listing of all OA journals and their publishing fees to assist authors in choosing the right journal for their budget. The index includes journals that charge nothing, while the most expensive is a \$4,366 fee to publish in the *International Heart Journal*.⁶ PLOS and BioMed Central, two giants in OA publishing, could feel a huge loss in profit as a result of the Administration's budget cuts to state and federal programs that support the sciences.

However, we should not forget what is really at stake here, and that is the critical information shared through scholarly publishing: life-saving vaccines and procedures, preventative medicines, alternative energy models, and plant and crop management. Whether on the editorial or

production side of publishing, we have an equally important contribution to the distribution of this knowledge. And although we may not fully comprehend the information within each manuscript, we fully understand the reason a manuscript was published—it has something of value to say that must be shared among the community.

Budget cuts are not the only thing threatening the scientific community. The attempts at banning travel from several predominantly Muslim countries has a direct effect on researchers here and abroad. The policy would prevent critical collaboration between universities and institutions, essentially cutting off America from countries that have brought us award-winning mathematicians, NASA engineers, and microbiologists. The travel ban has the potential to dissolve research labs and prevent the hiring of university faculty.⁷ Universities will begin to lack the diversity that provides the creative environments for ideas to flourish if current and prospective students are prohibited from entering the country. If the travel ban is approved, there will be a drop in attendance at conferences, further inhibiting collaboration between American and foreign researchers.

While the March for Science has the best of intentions, some scientists feel as though it is simply not enough to change the minds of lawmakers. Some fear that the march will turn the scientific community into a “biased interest group” in the eyes of the policymakers and only cause the partisan divide to widen at a most critical time.⁸ What really brings scientists together? According to one biologist, it’s “hypothesis-driven experiments, replication of results, and peer review.”⁸ Where the march needs to take place is in schools and town hall meetings, places where scientists can educate and advocate the importance of their results.⁹ Those who believe the march will have little impact to reverse any decisions on budget cuts and environmental policies know that Washington needs to be shown evidence-based facts. Strong scientific research is not supposed to have any kind of bias or predispositions, and what worries scientists most about the march is that many will begin to think that research and its results be presented only to support the legislation of one side of the aisle and not the other. This is not to say all scientists believe that the march is not deserving of support, but there is more to be done beyond April 22nd.

We have an important role as managing editors to support the researchers and their publications. Perhaps one of those reports sent through peer review will end up in the hands of policymakers. Perhaps one is all it will take to educate someone on evidence-based truths. While we may not directly feel the brunt of these proposed budget cuts or travel

bans, there is a good chance we have interacted with someone who has. As these policies are debated and potentially turned into law, the definition of “editorial support” may go beyond helping an assistant editor navigate ScholarOne to one that is more engaged in the support of the scientific community as a whole.

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