

Defunding the dreamers: The perils of cutting science research

By Andres De Los Reyes

When I was a Ph.D. student at Yale, I dreamed of working as a university professor, directing a research laboratory, and training students of my own. I have been a professor for a little over four years now. Of the lessons I have learned in this time, the one I have taken most to heart is that scientists at American universities spend far more time dreaming of research than actually carrying it out.

By “dreaming,” I mean that university scientists design studies and submit many applications to federal agencies for grants to conduct these studies. This dreaming takes time – a few months for each dream, or each grant application submitted. Most university scientists I know spend far more time writing, revising, and submitting applications than publishing articles, writing books or actually collecting data for research studies.

It was not always this way. The last three decades have seen a sobering, gradual decline in research funding in America. Molecular biologist Carol W. Greider of the Johns Hopkins University, a 2009 Nobel laureate, recently highlighted this change in an interview with the Chronicle of Higher Education. Ms. Greider noted that success rates for federal funding were roughly 33 percent in 1985; the current rate is 17 percent; and now as sequestration begins, it may drop to 15 percent. To illustrate the effects of sequestration, an article published last week in the news and information site of Boston University notes that in preparation for future budget cuts, one of its psychology professors, Howard Eichenbaum, will not hire undergraduates as research assistants nor accept new graduate students or post-doctoral fellows into his laboratory.

It gets worse. Unless their application receives approval for funding, the months a university scientist spends preparing and submitting that grant application often go down the drain – completely wasted human capital. Further,

for many university scientists, writing applications and conducting pilot research studies to further bolster the chances for success takes the form of free labor. That is, unless a funding agency pays them for the work, they are not compensated for it. This is because university scientists draw much of their salary from teaching and training undergraduate and graduate students. Even if some of these scientists do receive compensation for research, they work on this research far longer than their job description entails.

The consequence of this is that the fewer university scientists America funds, the more scientists who work for free to advance America’s positioning in the research world. Importantly, many countries are bolstering their support of their scientists even as America weakens support for science.

And it gets even worse. For each scientist trained at an American university, federal and state governments invested in their training. Our country invests tens of thousands, sometimes hundreds of thousands, of dollars into the education of scientists in the form of tuition remission and stipend support. Most scientists at American universities could not have received their training without government support. What if our country does not then support the research these scientists conduct, once they graduate and seek to establish laboratories of their own? The answer is this: We invested tax dollars on these scientists, only to see the money go to waste because we did not continue to invest in their vital work.

Scientists across the nation are hard at work, dreaming to find a cure for your father’s Parkinson’s disease. They dream to find a way to protect you from the ravages of HIV and AIDS. They dream of securing the resources necessary to develop programs designed to prevent your child from developing an anxiety or mood disorder, or protect them from exposure to community crime and violence.

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How long do you think scientists will continue to dream in America? What if they find a way to wake up in a country that supports them? As our nation spends fewer resources on its scientists, we push them further toward thinking about carrying out their work somewhere else. The end result is America's investment in its future scientists winds up benefiting another country – one that comes through with the resources to fund science.

ABOUT THE WRITER

Andres De Los Reyes, an assistant professor of psychology at the University of Maryland at College Park, is associate editor at the Journal of Clinical Child and Adolescent Psychology, Journal of Child and Family Studies, and Journal of Psychopathology and Behavioral Assessment. His email is adlr@umd.edu. He wrote this for the Baltimore Sun.

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