



Here's Why Scientists Say Gov't Funding Is Wrecking Science

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Government funding of scientific research has a corrupting influence that could cause more unethical behavior among researchers, according to a new study by scientists at Virginia Tech.

Researchers found federal funding is encouraging scientists to falsify data and publish bad research. The study found that universities are making the problem worse by mostly hiring young scientists as adjuncts, not tenure-track positions, which increases the financial pressures causing them to distort science.

“Over the last 50 years, we argue that incentives for academic scientists have become increasingly perverse in terms of competition for research funding, development of quantitative metrics to measure performance, and a changing business model for higher education itself,” Marc Edwards and Siddhartha Roy, researchers at Virginia Tech, wrote in their study.

Edwards was the scientist who helped expose that the Environmental Protection Agency's (EPA) top Midwest official knew about the Flint, Michigan drinking water crisis months before telling the public.

“Furthermore, decreased discretionary funding at the federal and state level is creating a hypercompetitive environment between government agencies (e.g., EPA, NIH, CDC), for scientists in these agencies, and for academics seeking funding from all sources—the combination of perverse incentives and decreased funding increases pressures that can lead to unethical behavior,” they wrote.

Government funding of research produces enormous financial incentives for scientists to engage in dubious laboratory research. Academics are under serious financial pressure to rapidly and continually publish research to sustain or further their careers, even if the research is essentially useless or misleading. Even major scientific journals like Nature are asking “Is Science Broken?”

“The first problem are that the government provides monopoly funding for fields which are related to regulatory efforts, and much of that funding is spent with a foregone conclusion in mind,” Dr. Pat Michaels, the Director of the Center for the Study of Science at the Cato Institute

who was not involved in the study, told The Daily Caller News Foundation. “We don’t fund billions and billions of dollars of climate research each year to find that global warming isn’t a problem. Politics has intruded into the scientific process.”

Due to this monopoly, scientists also have a huge incentive to tweak, or outright fake, statistical analyses to make results seem significant or to align with government priorities. A growing number of scientists have noticed the wave of retractions, especially among social scientists. Polling indicates that such consequences are causing science itself to become less trusted.

“It also raises legitimate and disturbing questions as to whether accepting research funding from federal agencies is inherently unethical or not—modern agencies clearly have conflicts similar to those that are accepted and well understood for industry research sponsors,” Edwards and Roy continue in the study. “Given the mistaken presumption of research neutrality by federal funding agencies, the dangers of institutional research misconduct to society may outweigh those of industry-sponsored research.”

A study found that 34 percent of researchers self-report that they have engaged in “questionable research practices,” including “dropping data points on a gut feeling” and “changing the design, methodology, and results of a study in response to pressures from a funding source,” whereas 72 percent of those surveyed knew of colleagues who had done so. Virginia Tech researchers note that the National Science Foundation estimates that research misconduct creates over \$110 million in annual costs.

“The second problem is that universities are biased towards federal funding, and will thus always be cheer-leading towards a dire view and treat people who don’t share that view very badly,” Michaels continued. “We’ve seen that repeatedly in climate science. There are enormous selective pressures to publish research that is dire and not publish research that is not. We’re creating biased canons of research because nobody will get a federal grant to study if global warming will have beneficial effects. The peer reviewers have a vested interest in making sure that the gravy train keeps rolling down the track.”

In addition to outright fraud, these incentives lead to researchers not even bothering to write up negative results, as scientific journals tend to only publish the flashiest and most popular research. This biases the scientific canon and leads to duplication of research. Only seemingly groundbreaking research can lead to government grant money, scientific prizes, and potential tenure track jobs.

“The entire American model of getting published, getting funded, then getting promoted means that people aren’t publishing negative results,” Michaels told TheDCNF. “They’re only publishing flashy research. Getting published in Science, Nature or Cell is a ticket to future funding, promotion and tenure. This is giving young scientists an incentive to go into flashy fields that might get them on television, not important ones. This has created systematic problems in science.”

As a result of these problems, researchers have a documented tendency to find evidence of phenomena they happen to believe in and to reject observations that are unpopular with federal

fundes. In a survey of two thousand research psychologists conducted in 2011, over half admitted they selectively reported experiments, which gave the result they were after.