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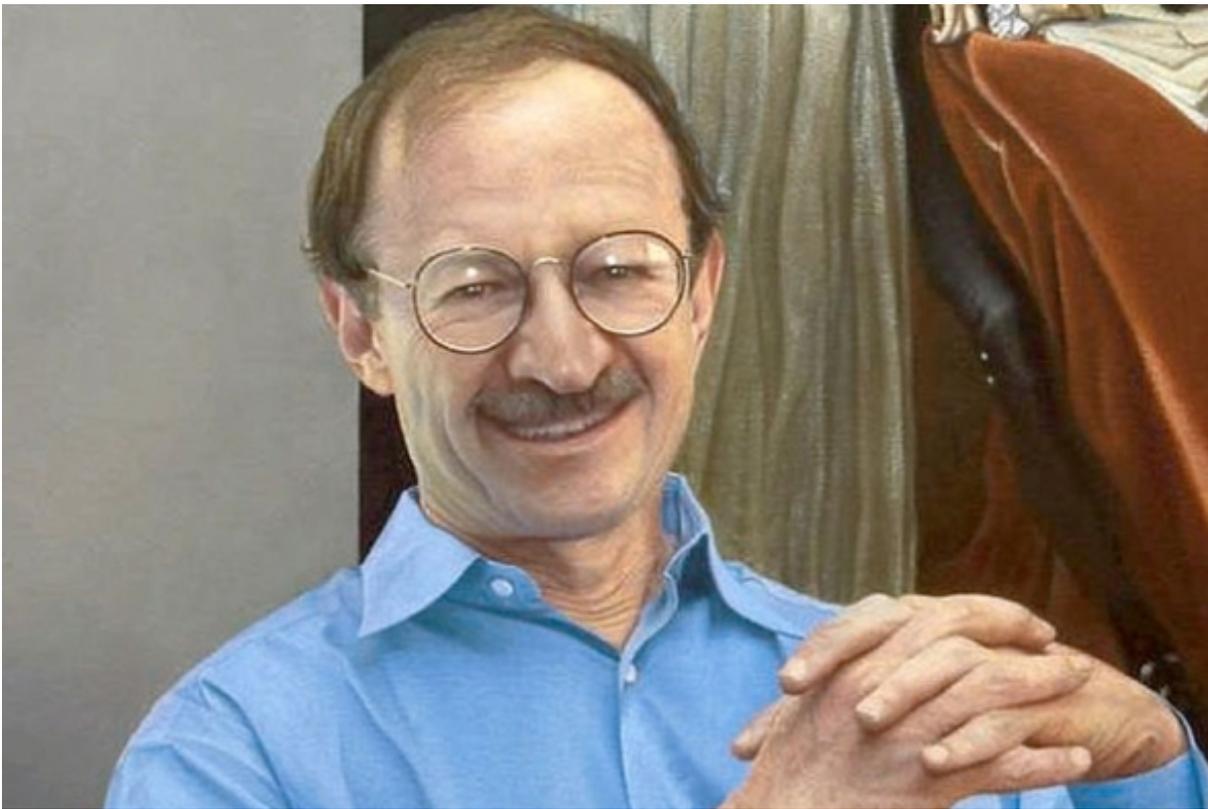


Guest Blog

Make America Scientific Again!

A blue-ribbon town hall held in New York comes up with some answers to how that crucial goal might come about

By Natalie Jacewicz on October 17, 2016



Harold Varmus, former director of the National Institutes of Health, was a panelist in New York.
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We've had leaked emails and conspiracy theories and misogynistic videotapes, but science has remained largely absent from this presidential race. But that's not because Americans don't care about science, according to polls. As of 2015, 87 percent of Americans said the President and Congress should have a basic knowledge of science. That view crossed party lines. Ninety-two percent of Democrats and 90 percent of Republicans agreed with it.

So why has science evaporated from the presidential race like liquid nitrogen at -320 °F? Advocates and journalists debated the question at "A More Scientific Union," a televised event hosted by TYT Network, ScienceDebate.org (a partner of *Scientific*

American), the Union of Concerned Scientists and the Science Education Policy Association at YouTube Space New York. A full list of panelists can be found [here](#).

The speakers discussed a number of ways to move science to the forefront of American politics: for example, the role a president can play in championing science, and the importance of teaching average Americans to demand evidence to back up political claims. Though crucial scientific issues like climate change [won't be](#) discussed in the third presidential debate on Oct. 19, Rush Holt, a physicist, former US representative (D-NJ-12) and current CEO of the American Association for the Advancement of Science, suggested a follow-up question that could still make it into any debate discussion: "What's your evidence?"

After the talk, *Scientific American* asked three questions each of Holt and Harold Varmus, Nobel laureate and former director of the National Institutes of Health, about what the president and the public can do to advance science. These conversations have been edited for clarity and concision.

***Scientific American* (SA): Has there been any moment during this presidential campaign that's left you particularly encouraged regarding the state of science?**

Rush Holt (RH): Oh no! It's been one disappointment after another. Science aside—well, no, science is very much embedded in this—as a person who's spent the last two decades and almost every waking hour in office trying to increase respect for governing [in science and other areas], I've found this campaign to be a tremendous disappointment.

SA: What would you hold up to the candidates as an example of championing science? Over the past eight years with President Obama, was there anything you were particularly excited about?

RH: It has to be climate change. The [Paris Agreement](#) [a 2015 treaty which invited all nations to pledge to take their own steps to slow climate change] was pretty remarkable. The agreement has come under criticism because it's aspirational, and it doesn't have teeth. But nothing with teeth was going to happen. In fact, much more

will happen with this. The agreement got all of these countries of the world to publicly say they'll do something.

Harold Varmus (HV): I've thought a lot about this, and I do see a number of things the president can do. President Obama has done a very good job. You can be a cheerleader for science, as he's done through his science fairs. He's really championed treaty-making on climate change. He can say things about medical research and energy research, which he did.

President Obama also did a good job in a tricky area where the executive branch can have a lot of influence: the science agencies. He has authority over his appointees at these agencies, but letting the scientists run those agencies and play a pivotal role in how money is spent is very important. And I think Obama did a very good job letting scientists follow their instincts.

[For example, Varmus says, the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative, for which the President recommended \$434 million in federal funding in fiscal year 2017, was conceived as a search for a cure to Alzheimer's disease. Based on scientists' feedback of what was most doable and pressing, the initiative changed to focus on the brain's structure at the cellular level.]

SA: What's the biggest thing that comes to mind that President Obama has left on the table?

HV: Well, he wasn't able to get the budgets he wanted. He knows that we're underfunding science. One of the first things he did even before he was inaugurated was to establish his President's Council of Advisors on Science and Technology. [Varmus co-chaired this council.]

Then he went to the National Academy and said something that people know but don't like to talk about: We're underfunding science generally. The mission has always been 3 percent of the gross domestic product (GDP) invested in science. Obama didn't achieve it, but it's hard to get there. (As of 2013, 2.73 percent of GDP was invested in science, according to the World Bank Group.)

SA: One of the important things that came up during this panel was the idea thinking like a scientist. If you're a lay American, where do you go to find evidence?

HV: That's a tough question. You start with scientific literature, and then you go to reliable sources digested for a motivated lay person [here he made a plug for *Nature*, *Science*, and *Scientific American*). Cruising the web is obviously a hazardous business [because you might find misinformation].

And I think you don't have to read it for yourself. You can say to your representative, "Why are you making that decision? Where is your evidence?"

SA: If young scientists want to help educate the public, how should they talk about science?

RH: It comes down to belief. Climate change shouldn't be an ideological question. But it's still very much a partisan debate. People come into the discussion with prebaked opinions and—no surprise—they leave the discussion with the exact same prebaked opinions. You don't make progress that way.

And again, we need to communicate a reverence for evidence. That's something I always say. Boy, I can't think of anything better.

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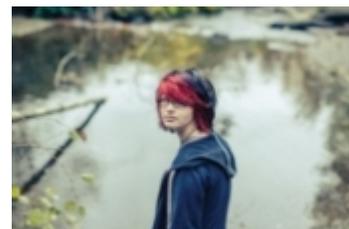
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