I am Ray Garant, director of public policy at the American Chemical Society. Ask me anything about environmental, innovation, science education (STEM), and/or energy/climate policy, Ask Me Anything!

AmerChemSocietyAMA [1] and r/Science AMAs[1]

[1]Affiliation not available

April 17, 2023

Abstract

Hi Reddit! I am Ray Garant and am the director of public policy at the American Chemical Society. Ask me anything about environmental and regulatory policy, advancing innovation, science education, and/or energy/climate policy. I manage policy development and messaging for the ACS with a portfolio that spans scientific innovation, jobs, education, and science policy, as well as the international, environmental and regulatory arenas. I also oversee the ACS Science & the Congress Project (www.acs.org/scicon), a well-respected program of congressional staff briefings and that improve decision makers' understandings of the role that science can and should play in public policy. From 1993 - 1994 I was a staffer in the office of (now former) Representative Phil Sharp (D-IN). While on the Hill, I followed environmental, judicial and healthcare issues. I studied chemistry in university, getting a B.S. at U Mass-Dartmouth and an M.S. at Iowa State University; at ISU I managed a project to communicate science to the public. I also did research at the Ames Laboratory of the Department of Energy and at the U.S. Naval Underwater Systems Center. I'll be back at 11 am EST (8 am PST, 4 pm UTC) to answer your questions, ask me anything!

the WINNOWER

REDDIT

American Chemical Society AMA: I am Ray Garant, director of public policy at the American Chemical Society. Ask me anything about environmental, innovation, science education (STEM), and/or energy/clim

AMERCHEMSOCIETYAMA R/SCIENCE

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Hi Ray, The American Chemical Society is one of the largest scientific publishers worldwide. Could you comment on the Open Access movement? Why does a single journal article/subscription cost $35/$300 when the journal content is mostly taxpayer-supported research written up and vetted by people who are not ACS employees? How are the revenues spent?

JohnAlanTucker

This is a complex policy issue and I do not speak for ACS on the matter or about our revenues and budgets more broadly.

ACS has launched ACS Central Science http://pubs.acs.org/centralscience. For more information, go to the recent AMA https://redd.it/42r7xk

That being said, I am personally interested in the rapid change going on in both communications and content sharing. The challenges faced by movies, books, and music have arrived for scientific literature. A change is in progress and the policy question is what the government role should and will be in the future. Given the success we've had in advancing technology over the last century, I personally hope that the scientific community will be allowed to work out the future rules for communications and exchange. -rg

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One of the biggest news events of the past decade for the chemical profession is the merger of Dow and DuPont. The feeling among most scientists, and C&E News' own Alex Tullo is that this is a Wall Street hatchet job that hurts the profession, science, innovation and scientists (I am paraphrasing him, of course).

The American Chemical Society has seemed oddly silent on this matter. In your opinion, how does this merger change the landscape of chemistry? Is the ACS planning any kind of response? Can the ACS articulate to short sighted bankers in a way that individual scientists cannot about the value of R&D?

EagleFalconn

I agree that this is a landmark event in the chemistry enterprise. I can't speak for Alex or ACS on the matter.

I would observe that the merger and eventual breakup are part and parcel of several recent trends in the U.S. chemical industry, including several mega-mergers among global chemistry related companies. Often those mergers have included streamlining several functions, including R&D, in ways that have presented challenges to working scientists and the broader chemistry enterprise. -rg

What are your thoughts on the current state of science education? Some stats that I have seen suggest that about half of people entering a PhD program intend to become professors but the percentage of PhDs who become professors are only in the single digits. Despite that most of the education is focused on that career path. Do you think that the current practice of federal research projects being carried out by a glut of cheap doctoral students is sustainable? Is there any movement towards an institute model with more of the research being carried out by experienced researchers?

lutey

When I came to Washington, D.C., in 1990 as ACS science policy fellow, I began a journey on what was then called an "alternative career track." Twenty five years and hundreds of science and technology fellows from many disciplines later, the track is less alternative. I think that my education in chemistry was excellent preparation for a career in public policy and I have learned over the years that it prepares my peers for many career options. I celebrate that!

About the rest of your question, the innovation ecosystem is going through significant change in the United States and in other regions of the world. The roles of academia, government and the private sector are in flux.

This is having an impact on scientists at all stages of their careers. I won't pretend to understand the specific challenges and opportunities of those starting on their careers now. As I mention in response to the concerns expressed about the Dow-Dupont merger, it is difficult to see anyone who invested in science education not be able to find the work they are interested in.

How do you handle the issue of Chemonoia (the excessive fear of chemicals based on emotion more than information) when communicating to students/media/public and policy makers?

AA_2011

Thanks for the question. I was struck by the number and popularity of science communications related programs at the AAAS (American Association for the Advancement of Science) annual meeting last month. This is a growing concern among scientists in general, but a particular problem for chemists.

There has been a lot of work that you can find in the literature about the importance of reaching people where they are at when engaging with them, even on scientific issues. For instance, we have not been great as a community in communicating about climate science. For me, it is a challenge to move away from the culture of communication among scientists to talk about climate issues from an emotional frame. This challenge applies to many public communications in the chemistry space. -rg

Is there any chance that the government would help ease the burden for/incentivize smaller chemical companies to shift into "greener" technologies? What about any technologies that encourage employment? Equipment costs can be high and investors are hesitant given the current state of the economy (overproduction).

As I am working to build a facility mainly built for R&D work at a smaller chemical company, our fear is impending legislation based on misinformation/public outcry based on lack of understanding (which appears to be growing) and increased regulations which require high costs (like federal law requiring stormwater retention ponds).

BlackManonFIRE

The government has played a critical role in advancing green and sustainable chemistry and engineering. ACS has been proud to work with the U.S. Environmental Protection Agency and other federal and state government organization on research support, meetings, education, recognition and many other activities.

Direct use of policy to drive private sector choices has been a little more problematic. There have been debates about tax incentives to select green technologies, but they are hard to enact and difficult to prove effective.

Personally, I have always been more comfortable when the government is advancing innovations in sustainable chemistry than when it is trying to drive the private sector to choose (or ban) specific chemicals and technologies. -rg

If you discuss climate change policy with Congressional lawmakers, what types of policies do you advocate for mitigation? Also, what is your strategy for discussing scientific issues with members of Congress who are not necessarily intrinsically interested in them and just want to know the upshot for how they affect policymaking?

dark_magnetar

Climate change is an issue that effects people in a lot of different ways and that bring out many different interests. For a lot of people I have talked to, the issue is very personal and it effect their lives and that of their families. They often feel powerless to really impact the discussion, which can make the debate very angry.

Congressional staff get input from lots of different viewpoints on an issue this complex and with such high stakes for families, communities, countries, and the whole world. The challenge for scientists is to help the policymakers (and most importantly their staff), the press, and the public understand the state of climate science in a way that maintains our scientific credibility while demonstrating that we care about the personal, economic, and social aspects that motivate everyone in the discussion (including the scientists).

Honest engagement is the best way to convince all of the players, but that is always difficult when the issue has been politicized. -rg

Over recent years, it seems like legislative attacks on science education in the United States has intensified. Several southern states have attempted to pass laws requiring the teaching of creationism (Christian, of course) alongside evolution in biology classrooms. "Teaching the controversy" has become a popular political phrase when it comes to evolution, climate change, and GMOs.

What is your stance (and the ACS's if you can speak on its behalf) on this undermining of basic science education in the United States? What can and should be done to ensure that all students in this country are receiving a strong science education? Does the ACS lobby Congress and state legislatures to on science education?

shiruken

In the interest of time, I direct your attention to the ACS position on the teaching of evolution at http://www.acs.org/content/acs/en/policy/publicpolicies/invest/evolution.html. I have been very engaged in this issue and in a broad range of other STEM education policy discussion.

Personally, I hope all scientists are supporting our peers who are educating our children, especially when they are faced with controversies. -rg

Is ACS in favor of a revenue-neutral carbon tax ?

Does ACS favor a carbon tax over a carbon cap-and-trade system ?

billdietrich1

First, ACS believes that the United States should develop a portfolio of subsidies, tax, regulatory, and other incentives to reduce greenhouse gas emissions and allow advanced energy technologies, as they mature, to operate on an even playing field with current energy sources. This carbon-pricing strategy should take into consideration the full life-cycle costs and sustainability implications of the carbon effects from various energy options.

Personally, I think this issue is a difficult policy challenge where the ideal solution and possible outcomes are two very different paths. There is a convincing body of economics literature that supports a carbon tax as the most effective policy option. Unfortunately, that has not convinced our leaders to adopt that policy. Cap and trade was advanced as a compromise between the ideal and the practical, but so far, it has not become the law of the land. -rg