

Perceptions of Science in America: Takeaways for Your SciComm

May 8 2018, by Rose Hendricks



Sometimes it feels like much of the world is anti-science. GMO-free labels clutter our grocery stores, sea level rise threatens our coastlines, and some communities choose not to vaccinate their children—to name just a few affronts. Especially if you are a scientist or a proponent of science, anti-science behaviors can be especially glaring.

But a new report by the American Academy of Arts & Sciences on "[Perceptions of Science in America](#)" contains some heartening data. The

world is not spinning into a [science](#)-less abyss; instead, it continues to be embraced by many. What's more, in light of the data presented in the report, there are actionable takeaways that science communicators can incorporate into their work to further improve perceptions of science in America. In this post, we present a few key points from the reports and their implications for science communication.

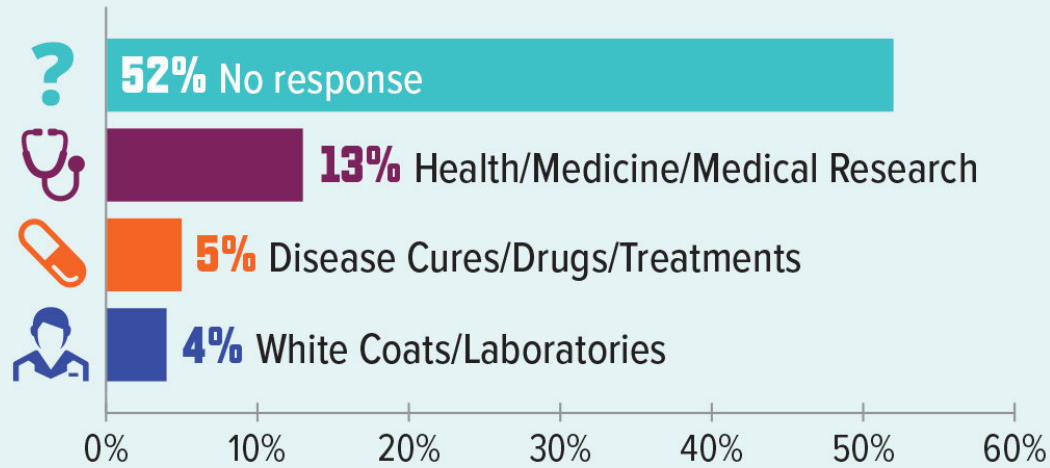
What is Science?

In order to begin to consider Americans' opinions on science, it's crucial to know what they actually think about when they think about science. When asked about the first thing that comes to mind upon hearing the phrase "scientific research" or "scientific discoveries and advances," more than half of people surveyed did not even respond. Of those who did respond, health and medicine were dominant. Small percentages of people thought about new ideas and breakthroughs, space, or white lab coats.

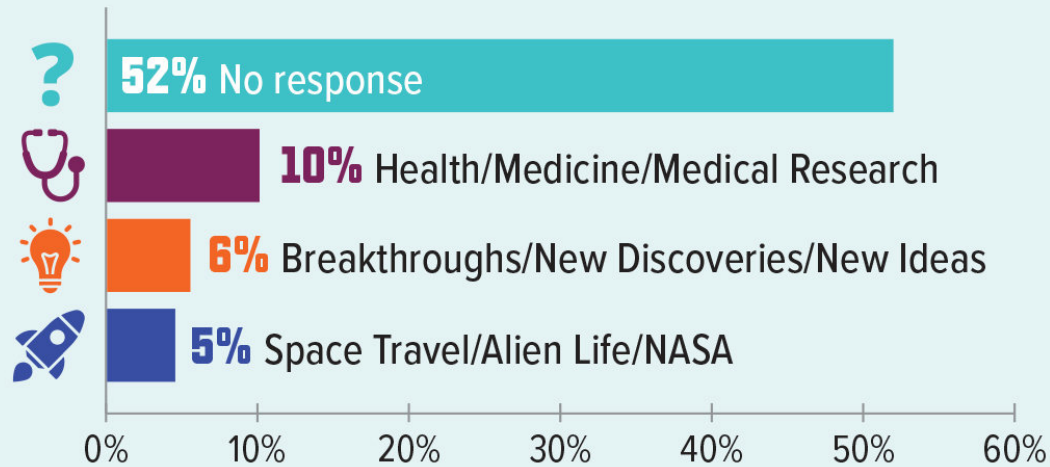
Overall, then, people hold vague and stereotypical ideas about what science is. They struggle to think beyond the topics that are most prevalent in their daily experiences and mainstream media, and tend to conjure images of the prototypical scientist. Of course, medicine, space, and white lab coats are all included under the umbrella of science; but science is so much broader than that, and a true public understanding of science should encompass more.

What is the Very First Thing That Comes to Mind When You Hear the Phrase _____?

“Scientific Research”



“Scientific Discoveries and Advances”



SOURCE: ScienceCounts, unpublished data from “Raising Voices for Science: Exploratory and Benchmarking Survey” (survey conducted October 2015).

From *Perceptions of Science in America*
(American Academy of Arts & Sciences, 2018)

SciComm Takeaway: When communicating about science (especially in broad terms), be explicit about what you mean. Define what it means to do science research and be a scientist explicitly. You cannot assume that audiences will have the large scope that science entails in mind.

Remember, their idea of what science is likely differs from your idea of what science is. One way of portraying the range of fields and activities that constitute science is to avoid stereotypes whenever possible. For example, don't show a scientist in a lab coat when talking about science that doesn't involve people in lab coats, or medical or space stock images when you're not actually communicating about those topics. Efforts like the [#reallifescientist](#) and [#actuallivingscientist](#) trends on Twitter are great ways to show how diverse science is.

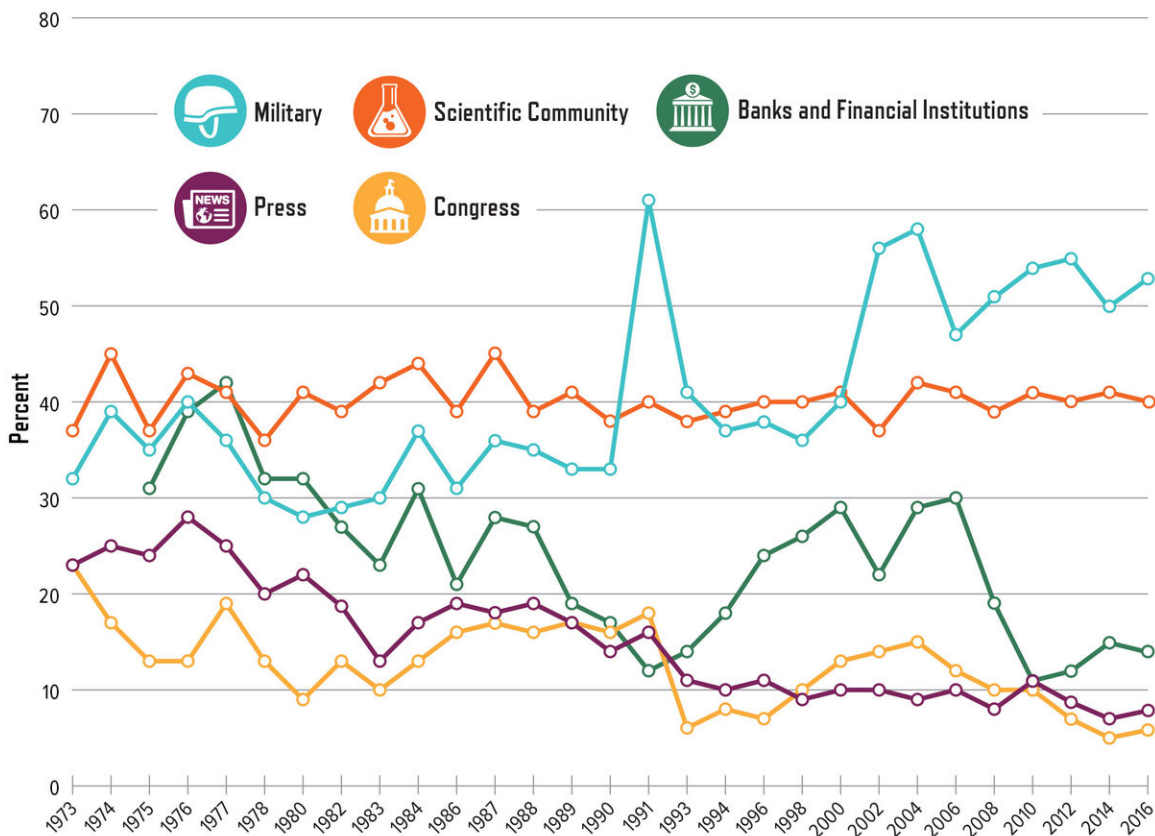
Trust in Science

On the whole, people trust scientists. People's confidence in scientific leaders has remained relatively stable over the last 30 years.

While high overall trust in scientists is certainly encouraging, people do report somewhat diminished trust in scientists' performance for certain responsibilities. Specifically, they are less trusting that scientists will report findings that are not favorable for the sponsor of the research or that scientists will provide impartial evidence on matters of public debate. This trend especially is especially true for topics such as genetically modified foods and climate change.

SciComm Takeaway: Aim to convey trustworthy intentions, rather than persuading. When people sense that a science communicator is trying to persuade, they may be more skeptical of that communicator's underlying agenda.

Percentage of U.S. Adults with a “Great Deal” of Confidence in the Leaders of the Following Institutions:



SOURCE: NORC at the University of Chicago, *General Social Survey* (1973–2016).

From *Perceptions of Science in America* (American Academy of Arts & Sciences, 2018)

Costs & Benefits of Scientific Progress

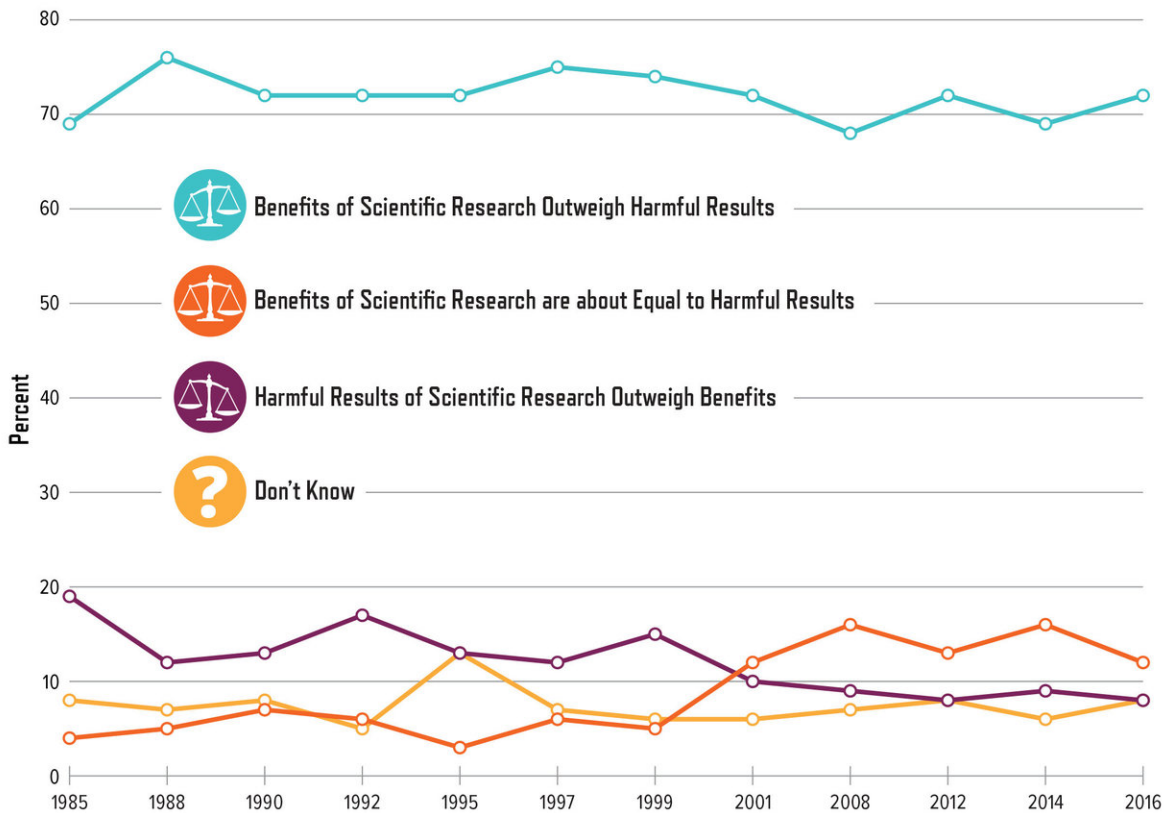
Most people (>70%) believe that the benefits of scientific research outweigh harmful results.

However, about half of people surveyed reported that they are concerned about the pace of change, meaning there's a substantial group of people who are happy with the direction and the pace of scientific progress, but another notable group that's happy with the direction but weary of the pace of progress.

Digging a little more deeply into these data reveals that people with less formal education are much more likely to indicate concern about scientific progress (both the direction and the pace). However, it is unclear from the data what specific concerns or underlying influences inform this trend.

SciComm Takeaway: Emphasize the benefits of scientific progress, particularly when communicating with audiences who are likely to have less formal education. At the same time, avoid sensationalizing scientific progress as absolutely earth-shattering in ways that might suggest progress is out of control.

Percentage of People Who Say That:



SOURCE: National Science Board, *Science & Engineering Indicators* (2018). Data from 1979–2001 collected by the National Center for Science and Engineering Statistics; and from 2006–2016 collected by NORC at the University of Chicago, *General Social Survey*. See Appendix A for information on survey methods.

From *Perceptions of Science in America* (American Academy of Arts & Sciences, 2018)

Support for Scientific Research & Science-Informed Policy

When it comes to public support for scientific research and beliefs about the relationship between science and policy, the data are again encouraging. Only about 10% of respondents indicated that they think

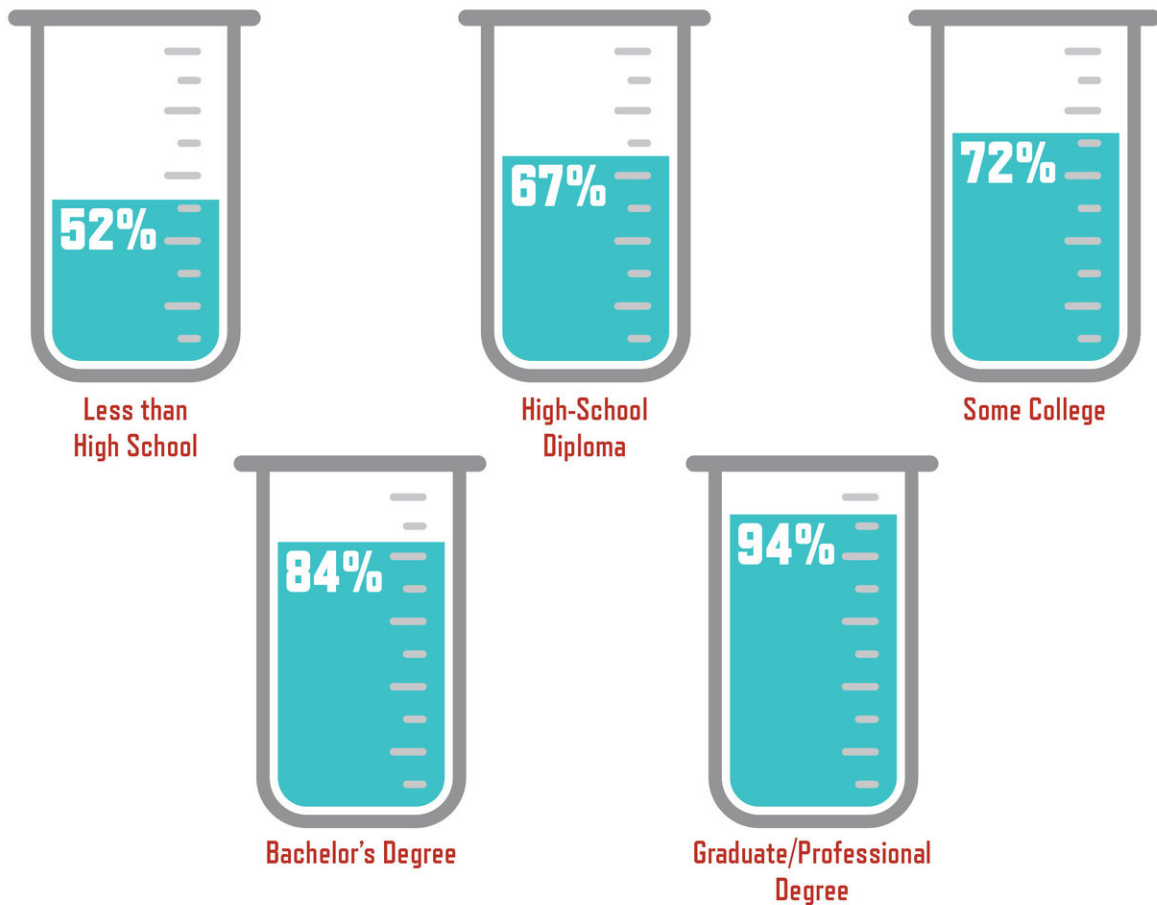
federal spending on scientific research should be decreased; all others reported that it should remain the same or increase.

Meanwhile, about two-thirds of respondents think that public policies should be based on the best available science. Support for research and science-informed policies are especially high for the domains of medicine and health, as well as the environment.

SciComm Takeaway: You don't need to tell the public that funding for scientific research is necessary and that policies should be based in science—they're already on board! Instead, show them the important things that funding for [scientific research](#) goes toward and how it benefits their communities. Show them ways that science can be applied to policy decisions, and that they can play a part (for example, by voting) to make sure scientific funding isn't cut and informs policies as much as possible.

When communicating science relevant to public policy, there's an important distinction to make. Your goal may be to inform people about the science so they can consider it when making decisions, or your goal may be to advocate for specific policy. If your goal is to advocate, you have an agenda—you're no longer impartial. It's fine to have an agenda (and often necessary!), but in that case, it's important to understand how your audience will perceive your message, and prioritize cultivating trust.

Percentage of People Who Say that the Benefits of Scientific Research Outweigh the Harmful Results, by Educational Level:



SOURCE: National Science Board, *Science & Engineering Indicators* (2018).

From *Perceptions of Science in America* (American Academy of Arts & Sciences, 2018)

Curious to learn more?

In this post, we've focused broadly on the report's data about perceptions of science broadly. If you're interested in learning more about the

demographic influences on general views of science and case studies of perceptions on specific scientific topics, be sure to see the [full report](#).

Once you think you're an expert on perceptions in science in America, you can take the associated [quiz](#), and download any of the [figures](#) from the report to use as you see fit.

And of course, the report includes references for all the data presented as well, so numerous rabbit holes are there and waiting for your exploration. And if your question is still not answered, please do the research! We still have much to learn about how Americans think about science and how to best communicate to the wonderfully diverse audiences across the nation.

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