

Poll shows giant gap between what public, scientists think

29 January 2015, by Seth Borenstein

The American public and U.S. scientists are light-years apart on science issues. And 98 percent of surveyed scientists say it's a problem that we don't know what they're talking about.

Scientists are far less worried about genetically modified food, pesticide use, and nuclear power than is the general public, according to matching polls of both the general public and the country's largest general [science](#) organization. Scientists were more certain that [global warming](#) is caused by man, evolution is real, overpopulation is a danger and mandatory vaccination against childhood diseases is needed.

In eight of 13 science-oriented issues, there was a 20 percentage point or higher gap separating the opinions of the public and members of the American Association for the Advancement of *Science*, according to survey work by the Pew Research Center. The gaps didn't correlate to any liberal-conservative split; the scientists at times take more traditionally conservative views and at times more liberal.

"These are big and notable gaps," said Lee Rainie, director of Pew's internet, science and technology research. He said they are "pretty powerful indicators of the public and the scientific community seeing the world differently."

In the most dramatic split, 88 percent of the scientists surveyed said it is safe to eat [genetically modified foods](#), while only 37 percent of the public say it is safe and 57 percent say it is unsafe. And 68 percent of scientists said it is safe to eat foods grown with pesticides, compared with only 28 percent of the general public.

Ninety-eight percent of scientists say humans evolved over time, compared with 65 percent of the public. The gap wasn't quite as large for vaccines, with 86 percent of the scientists favoring mandatory childhood shots while 68 percent of the

public did.

Eighty-seven percent of scientists said global warming is mostly due to human activity, while only half of the public did. The figures for scientists are slightly different than past academic studies because of wording of the question and the fact that AAAS members include many specialties, but they tell the same essential story, said Pew associate director Cary Funk.

What to do about climate change is another issue. Nearly two-thirds of scientists favored building more [nuclear power](#) plants, but only 45 percent of the public did. But more of the public favored offshore drilling for oil and fracking than scientists did.

More than four out of five scientists thought the growing world population will be a major problem, but just less than three out of five members of the public did.

Pew polled 2,002 adults in August and did an online survey of 3,748 AAAS members in the fall. The margin of error is plus or minus 3.1 percentage points for the public and 1.7 percentage points for the scientists.

In 2009, Pew has asked only a handful of questions like these to both scientists and the public and the gap hasn't changed much since, Funk said.

"On the whole, as compared to most members of the public, scientists are likely drawing from a larger scientific knowledge base—and thinking more scientifically—about each of these issues," George Mason University communications professor Edward Maibach said in an email. "Therefore, their views appear to be more in line with a completely dispassionate reading of the risks versus the benefits."

Alan Leshner, chief executive officer of AAAS, said the gap between the way the public and scientists

look at issue is a cause for concern.

"Science is about facts; science is not about values," Leshner said. "Policies are made on facts and values and we want to make sure that the accurate, non-distorted facts are brought in to any kind of discussion."

The trouble is that scientists don't think the public knows the facts. The survey said that 84 percent of the scientists said it is a major problem that "the [public](#) does not know very much about science" and another 14 percent said it is a minor problem.

And 97 percent of the scientists criticized the educational system. Three-quarters of the [scientists](#) said not enough science and math education is a major problem and another 22 percent said it was a minor one.

"It's not about being smart or dumb," Leshner said. "It's about whether, in fact, you understand the source of the fact and what the facts are."

More information: Bridging the opinion gap, www.sciencemag.org/content/347/6221/459

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