

Kelly v Graham: Should scientists ‘stay out’ of politics?

Politics is infecting scientists.

In the wake of Donald Trump’s election, a debate exploded in social media about whether, and to what degree, politics and ideology may be polluting scientific research and the public discussion about important policy issues, such as climate change and biotechnology.

The issue turned even more heated, and ugly, when a well known plant scientist, Dan Chitwood, posted an incendiary post on Twitter, that seemed to attack farmers who supported Trump. The next shot across the bow was fired by Julie Kelly, in [an opinion piece](#) in the National Review Online, who said the Chitwood tweet was part of a pattern: a steady stream of post-election Tweets disparaging the scientific literacy of Republicans. She argued that the science community is overwhelmingly leftist, and often unconsciously (and sometimes consciously and aggressively) conflates its political views with the science when engaging on controversial issues.

That brought forth a torrent of Tweets challenging and rebuking Kelly. Nat Graham, a graduate student studying maize genetics at University of Missouri, offered to write a reply for the Genetic Literacy in the hopes that we can create a dialogue on this prickly issue going forward. To further a constructive debate, we are posting both of their commentaries:

Julie Kelly, National Review, December 5, 2016

The election and its aftermath has brought out the worst of their arrogance. The tweet was so egregious that I had to read through the author’s timeline to make sure he wasn’t being ironic:

“To all the beautiful, tolerant, progressive people: your food comes from an ugly, hateful, backwards place. This is a problem to be solved.”

That nasty condemnation came from a St. Louis–based plant scientist I met earlier this year who studies how fruits and vegetables grow, and how that research can help agriculture. Knowing how passionate he is about his work, I was stunned he’d make such a harsh, unsubstantiated accusation. After a heated Twitter exchange between us, he said he was referring to anti-LGBT laws in red states. Several farmers slammed him — one reminded him that Iowa was the third state to allow gay marriage — and suggested these beautiful progressives grow their own food.

But he didn’t back down. Here’s a follow-up: “The seat of intelligentsia is blue, except for agriculture: that is red. This is unfortunate for both plant science and intellectuals.” Poor genius trapped in Missouri.

It would be easy to dismiss this as a one-off, a sore loser venting after the election. Sadly, it represented the level of contempt, arrogance, and prejudice I saw on social media from many in the scientific community after the election. (I’m not naming this person or linking to his tweet here because my intent

isn't to single him out for abuse but simply to point to a striking example of the phenomenon.)

As someone who has written about agricultural biotechnology for the past two years, I'm well aware of the shaky marriage between science and agriculture, between blue scientists and red farmers. As a Republican, I often felt like an outlier myself within the scientific community; I discovered I'm a "climate denier" and how my position on global warming can undermine my credibility on any other scientific issue.

Leading up to the election, and particularly after Election Day, this tension was exposed in an ugly way, and not one that reflects favorably on the scientific community. It isn't their political opinions that are objectionable, it is how they abandon the very evidentiary principles that should guide not only their professional conduct but also their political commentary, particularly if they are taxpayer-funded scientists opining on social media for the world to see. They make accusations without proof, sweeping conclusions they cannot support, and predictions for a dystopian future that do not reflect reality. Many saw Nazis under the bed, open season on women, legal citizens being deported, gay marriage being overturned, the KKK in the cabinet. Godwin's Law prevailed. It's groupthink at its worst (remember that the next time you see a study or paper that has been peer-reviewed). Science writers and reporters were no better.

And while they could profess they were referring only to Trump or the alt-right or Steve Bannon, the signaling was clear: They were smearing everyone who voted for Trump. Farmers and rural America were particularly pilloried because they largely represented Trump's winning margin.

There is clear evidence that the scientific community is having a collective temper tantrum over the incoming Trump administration. The doomsday scenarios for not just our country but for the planet (it's always about the planet) would be hilarious if not peddled by folks we expect to be measured, thoughtful, somewhat sane professionals. Last week, thousands of women scientists sent a letter to President-elect Trump and said this:

Many of us feel personally threatened by this divisive and destructive rhetoric and have turned to each other for understanding, strength, and a path forward. We are members of racial, ethnic, and religious minority groups. We are immigrants. We are people with disabilities. We are LGBTQIA. We are scientists. We are women.

Yes, I am hearing Helen Reddy's voice now, too.

On November 30, another letter, sponsored by the Union of Concerned Scientists (UCS), was sent to Trump and the incoming Republican Congress. "Many of us are deeply troubled that some transition team members, senior administration officials and people nominated to head up federal agencies have a history of attacking scientists and misrepresenting science," writes Peter Frumhoff, the letter's author and the UCS director of science and policy.

The public is increasingly wary of trusting scientists to be objective. They would be wise to proceed cautiously with their political statements and activism. He and those who have joined him in signing the letter outline a series of requests, including one for the funding of scientific agencies to protect Americans from the "impacts of increasing extreme weather and rising seas." Also worth noting is that, while the letter

claims that “diversity makes science stronger,” 75 of the 88 prominent signatories on the letter are men.

The public is increasingly wary of trusting scientists to be objective. They would be wise to proceed cautiously with their political statements and activism. In October, a Pew Research Center poll on climate change showed that only 39 percent of the public “trust scientists a lot for full and accurate information.” Sixty-three percent said that scientists’ research is influenced by either their political leanings or their desire to advance their careers. On December 1, a Pew poll about scientists and GMOs showed that only 35 percent trusted scientists “a great deal” to give full and accurate information.

The science community is getting pushback even from some in the media. In a blistering article a few weeks after the election, John Tierney, a science writer and former New York Times columnist, criticized “two huge threats to science that are [peculiar to the Left](#) — and getting worse”: confirmation bias and the mixing of science and politics. (His piece is worth a read.) Tierney said bluntly that “to preserve their integrity, scientists should avoid politics and embrace the skeptical rigor that their profession requires. They need to start welcoming conservatives and others who will spot their biases and violate their taboos.”

It’s unlikely scientists will do so willingly. But given a skeptical public and Republicans in charge in Washington and in control of most state budgets, scientists may not have a choice. Setting aside political differences to advance important scientific policies and research is in everyone’s best interest.

Update: After this article was posted, the unnamed scientist tweeted indicating that he’d like to be identified:

I am proud to have made it into @NRO!@julie_kelly2: Scientists Should Stop Mixing Their Work with Politics — Dan Chitwood

Here was Julie Kelly’s reply to Chitwood:



Julie Kelly
@julie_kelly2



Following

On behalf of ugly, hateful, farmers, I invite these beautiful progressives not to eat. Ever.

[twitter.com/danchitwood/st ...](https://twitter.com/danchitwood/status/1234567890)

Julie Kelly is a National Review Online contributor. Her work has also appeared in The Wall Street Journal, Forbes, The Hill, Huffington Post and the GLP. Twitter: @julie_kelly2

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Nat Graham, biological sciences graduate student, University of Missouri

I woke up to a text message with a link to an [opinion piece in National Review Online](#) by Julie Kelly, suggesting that scientists should stay out of politics. The sender of the text was curious about my opinion as a scientist in the often politically contentious field of genetically-engineered crops (familiarily, GMOs). The article, for those who haven't read it, made the case that scientists should just stick to the science. The author's belief was that since a lot of scientists are left leaning politically, they can't be trusted to give objective conclusions about their research on subjects such as climate change. She seemed to take offense that scientists were expressing their interpretations of scientific evidence on social media.

It's easy to see how one could come to this conclusion; science is supposed to be based on facts and facts shouldn't have a political leaning. Missing is the fact that you can't separate science and politics. Science is done by people, and people are free to have whatever political opinions they want.

Most science research in the US, and the vast majority of university research, is funded by tax dollars granted by government agencies. How much funding granted is often decided by politicians with little scientific training, who are often trying to appease their voter base. The issue is that many scientific topics have real political implications. Climate change, for instance, is [thought to have a human component](#) by 71% of the left-leaning public, and only 27% of those who lean right.

Politicians from right-leaning districts have real motivation to appeal to their voters and limit funding. If scientists aren't actively conveying the importance of their findings to the public and those making policy decisions, they risk letting political whims guide research focus instead of the scientific evidence. Expressing the real-world implications of science research doesn't skew the science, it shows its immediate relevance. Surprisingly, the tendency we observe is that if the data do not confirm someone's political views, they are considered untrustworthy and should be disregarded. That's why the science must be communicated more clearly with greater participation of scientists, not less.

What is lost in all of this is that science isn't facts, science is a method. That method involves carefully designing experiments, observing and curating the results, and then publishing them for others to test themselves. Findings that contradict previous hypotheses are not only welcome as part of the process, they are required to move science forward.

The scientific method can be used to examine almost any hypothesis, and as long as the experiments are well designed, it is the responsibility of the scientific community to evaluate and then re-test any results themselves. This is why a scientific consensus is so important, it is a reflection of repeated experimentation by multiple minds in the field, which is often very difficult to orchestrate.

The author was correct on one point, science itself doesn't (or shouldn't) have a political slant. Following the scientific method means following the results, no-matter where they lead. The suggestion that the entire discipline is abandoning these principles in favor of political advancement implies scientists have given up on their professional responsibilities.

As someone who follows both politics and science closely, I can tell you that there isn't a political party that aligns completely with the scientific community. Those on the left love to talk about how anti-science the right is when it comes to human caused climate change, while at the same time rallying against genetic engineering. Both sides love to say that the research they are ignoring is biased by corporate influence, either by big oil or big ag, and are quick to discredit any scientist or organization they see as standing in their way. In the face of this, scientists, the people actually performing the research, have a right to defend themselves and their work.

For a long time, science has been used as a piece in the political chess match going on in Washington. With the popularity of social media though, scientists now can stand up for their research and ensure that data and evidence are not twisted to say something they don't. This can only benefit science as a whole, which should be celebrated no matter what your political views happen to be.

Nat Graham is researching new plant biotechnology methods at the University of Missouri. He can be found on Twitter [@natnotgnat](https://twitter.com/natnotgnat).