



Steven Koonin of New York University was awarded a 2023 Barry Prize for Distinguished Intellectual Achievement. In [this video](#), Barry Honig of Columbia University interviews Dr. Koonin about the relationship between science and the mission of the university, at a time when political pressures on the university are changing the way science is done.

Barry Honig, Columbia University

I'm Barry Honig, professor of computational biology and biophysics at Columbia University. I'm also a member of the board of the American Academy of Science and Letters, a newly formed learned society devoted to excellence in intellectual achievement. In the context of that society, I was privileged last year to be part of the award given to Steven Koonin. The award is called the Barry Prize, and we're going to be giving these prizes each year for excellence in intellectual activity.

Let me say a few words about Steve Koonin, whom I'll be interviewing, but really having a discussion with today. Steve has accomplished a remarkable set of achievements that are really extraordinary. He's a theoretical physicist, got his PhD in physics from MIT, was a professor at Caltech, and in the context of his academic activities and research in theoretical physics, was elected to the US National Academy of Sciences. Beyond that, his activities in the public sector have been perhaps even more remarkable. He was provost of Caltech, moved to British Petroleum, where, as chief scientist, he moved that company toward renewable energy. He was undersecretary of science in the Department of Energy during the Obama administration and a member of JASON, a group of scientists who advised the US government on technical matters. Following all that, Steve has gained some notoriety in climate science, and his book, *Unsettled: What Climate Science Tells Us, What It Doesn't, and Why It Matters*, published in 2021, has certainly offered many of us an opportunity to understand the issues underlying climate science in ways that one doesn't get from the popular press or even other sources.

Let's start with that. Steve, what have your activities in this general area, which range from the underlying science to communication to public policy, told you about the state of science today, about intellectual integrity underlying science and underlying the public face of science?

Steven Koonin, New York University

Speaking specifically about climate science and energy technologies, I always thought that the proper role of the technical folks, the scientists and engineers, was to inform decisionmakers, whether they're in the private sector or the government, about the options, the tradeoffs, one with the other, and so on. Unfortunately, in these areas, many of the scientists have evolved to

persuading, or attempting to persuade, rather than to inform. That makes it particularly problematic, because the media love climate scare stories, and industry loves to jump on the energy transition as a way of making profit. All of these conspire together, but at the root, it's that scientists have morphed from informing to persuading.

Honig

Do you think that's a particular feature of climate science, or is it something that's spread to other areas, or even started in other areas? Has there always been some of this in academia?

Koonin

Of course, there always has been, but never to the extent that we see it now. It embraces scientific institutions, it embraces the technical leadership of corporations. You just can't say anything that is counter to the narrative that we must rapidly reduce greenhouse gas emissions. Of course, there are countervailing considerations, but many people who know better dare not say it, because they'll get cancelled.

Honig

Obviously, this issue of cancel culture goes beyond it, but it's particularly focused in climate science. What does it say about academia? Has academia changed in the last 20, 30 years, perhaps there are other factors? What can be done about it?

Koonin

In the softer subjects of philosophy, cultural studies, and so on, there's been a loss of objectivity and an absence of vigorous debate, diverse points of view, if you like, a different form of diversity. It is an objective fact. You can see it in the hires that are done, in the courses that are taught. We're starting to see the pendulum swing back in a more sensible direction. Many universities are now looking for people who can bring a diversity of perspectives to the campus, rather than just fall in line with the narrative.

Honig

I also have a sense it's swinging back, but there's a lot still happening in the other direction. There was an editorial in the *Wall Street Journal* today about the National Institutes of Health and DEI initiatives. Basically, for certain types of grants to universities, but also in almost every individual grant, you have to make the equivalent of a statement of devotion to DEI principles. It's quite shocking, and I'm not sure how the tide turns. Do you think it can come internally within universities from government action?

Koonin

A lot of this has got to do with government regulation, at least the NIH example that you cited. Government regulations change with administrations, they change with the composition of Congress. That one is probably relatively easy to swing around. I think in the softer subjects, the diversity you talked about, cultural studies, it's going to be harder. But in the technical subjects, I come back to energy and climate, there are underlying techno-economic realities that you can't

evade, no matter what policies you would like, you've got to respect those realities. We're already seeing in Europe, particularly, policy actions that are getting effectively shouted down by business, by the populace, because they're much too severe, much too extreme. In the end, as Feynman would have said, reality will prevail. We'll get it right. The question is, how much damage will be done to societies in terms of energy reliability, energy affordability, geopolitical standing, before the tide really reverses?

Honig

Let me ask you an unusual question. If you were climate czar, how would you like us to respond to the possibility that we are affecting the climate in a serious way? Where should we be moving in the future? How should we be moving there?

Koonin

The first thing to do is to cancel the climate crisis. Acknowledge that there's a problem, but by all indications, we have a century or more to get it right. Net zero by 2050, which is a common mantra, is just ridiculous. It's both unnecessary and unachievable. The second thing I would like is a more honest representation of the science. That involves, for example, adversarial reviews of the assessment reports and so on. The third is that there is low-hanging fruit that we can and should pick up to help reduce emissions now, flaring of natural gas, for example, leaky natural gas pipelines, distribution systems, particularly vehicle efficiency, these are all things that are easily within reach and can be gently nudged.

Another very important part of the problem is to acknowledge that there are six and a half billion people on the planet who do not have adequate energy; some of them are in terrible energy poverty. The world has a moral obligation to ensure that they have reliable and affordable energy. The best way to do that right now is to provide them with fossil fuel capabilities: coal, natural gas, and oil. We should not be stopping that. We should be, in fact, encouraging it because we're improving the human condition that way.

Finally, I'd like to see more R&D in emissions, such as technologies, small nuclear reactors, batteries, carbon capture. These are all things that are not technically or economically mature, but they could be with more concerted effort on the part of the government and private sector. I would stop short of forced or encouraged deployment that's going to be very expensive and very disruptive. We need to realize we've got time to deal with this. The energy system is one of the most crucial for society, and we best change it by orthodontia rather than tooth extraction.

Honig

Finally, we're both academics and, at least for me, and I assume for you, it means a great affection for the academic enterprise, what it's achieved in the last 50 or many more years. I certainly find what I see around me very depressing. I assume you do as well. Do you see any hope of internal correction? You said earlier that it swings back. How might this happen? How might we be saved from ourselves? Can we save ourselves from ourselves?

Koonin

I think it depends on which parts of the university you're looking at. I've been teaching master's level students both climate and energy at NYU, MBAs and engineers mixed, which is interesting in its own right. You might argue that this is the more factually receptive cohort among the students. But I find that when I go through those subjects, the eyes get opened up because I just teach facts right out of the official documents. There is, among some fraction of the students, a willingness to be educated about facts and critical thinking. The faculty are going to be much harder, but I'm trying to do my bit by writing books and doing presentations about the facts because energy and climate are such complicated and nuanced subjects that you really need some guidance framework to think your way through it.

Honig

I certainly agree. Are there any final comments you'd like to make as we end this interview?

Koonin

The academy is doing a great service by trying to recognize, honor, promote a factually driven approach with integrity to many of these subjects. It's not the only effort, but I see it as perhaps freeing up other people, other organizations to diverge a bit more from the narrative, not only in climate and energy, but in broader social matters.

Honig

We at the academy appreciate that you've gotten involved with us. We're really delighted, Steve, and we look forward to working with you in the near and more distant future. Thank you.

Koonin

Good. Thank you.