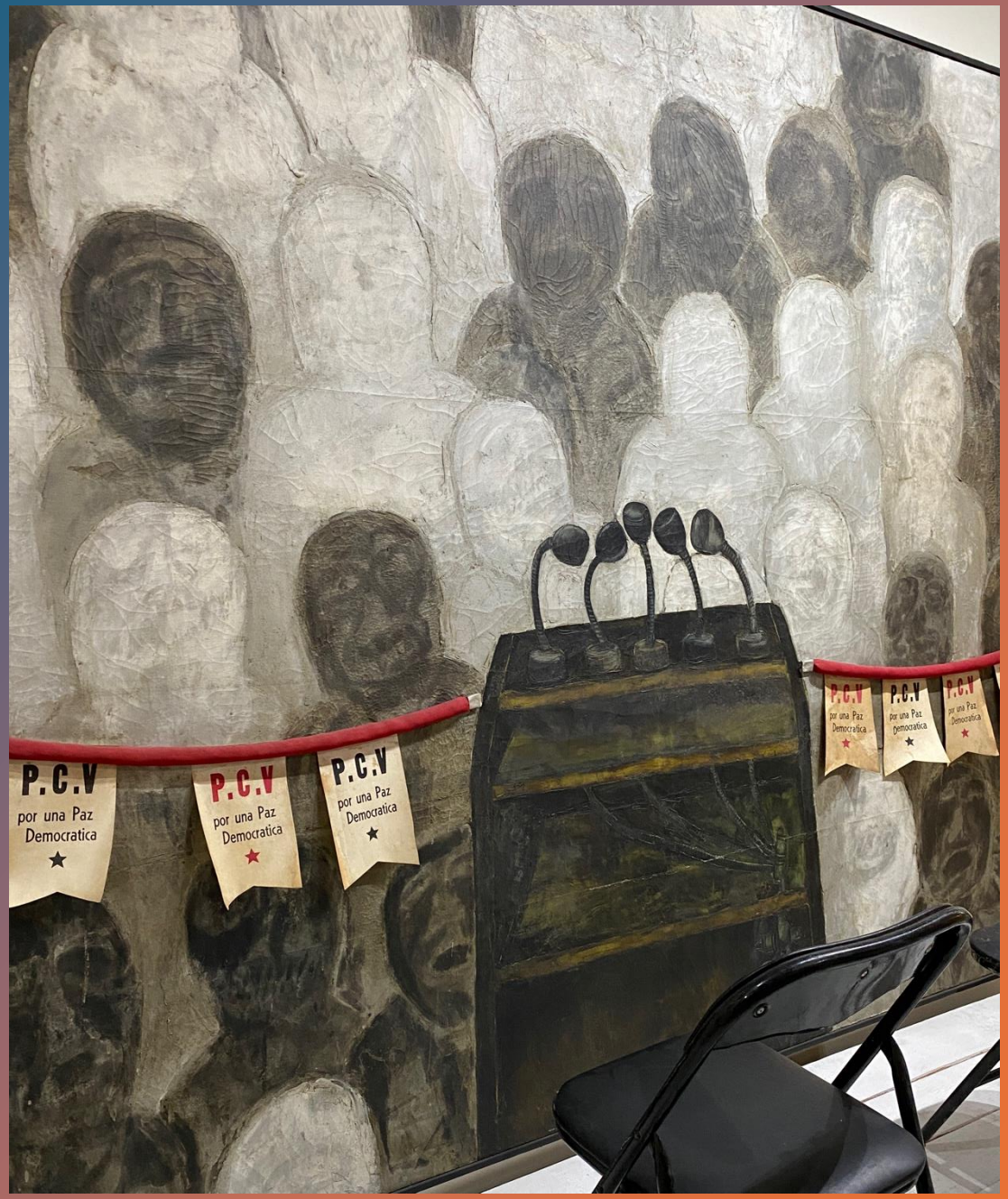


Science, Democracy, and Public Knowledge in America

- Sheila Jasanoff
- Harvard University
- Simons Alumni Fellows Symposium
- Simons Foundation
- September 30, 2025

The Rightful Place of Science

Key Question for Democracy

Why should the few be empowered to ***rule*** for the many?

Key Question for Modernity

Why should the few be empowered to ***know*** for the many?

Public Knowledge in the US: A Recurrent Tension

"Menace. Horrible. A real activist. Bleeding-heart liberal. Clean air extremist"

CLIMATEWIRE

Political appointees once kept a scientist 'hit list'

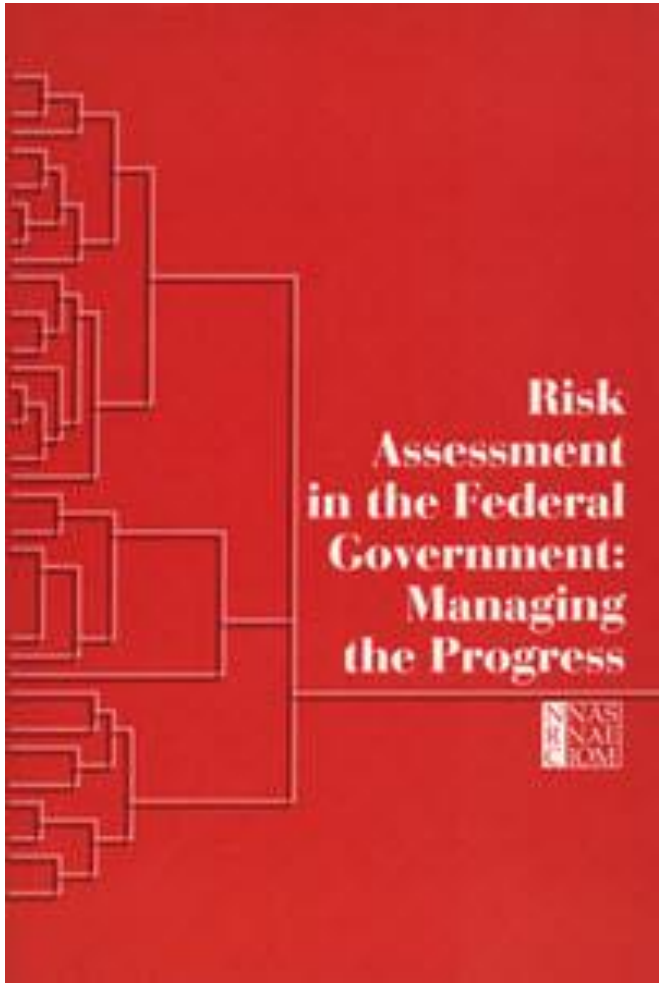
By SCOTT WALDMAN | 05/14/2018 08:15 AM EDT

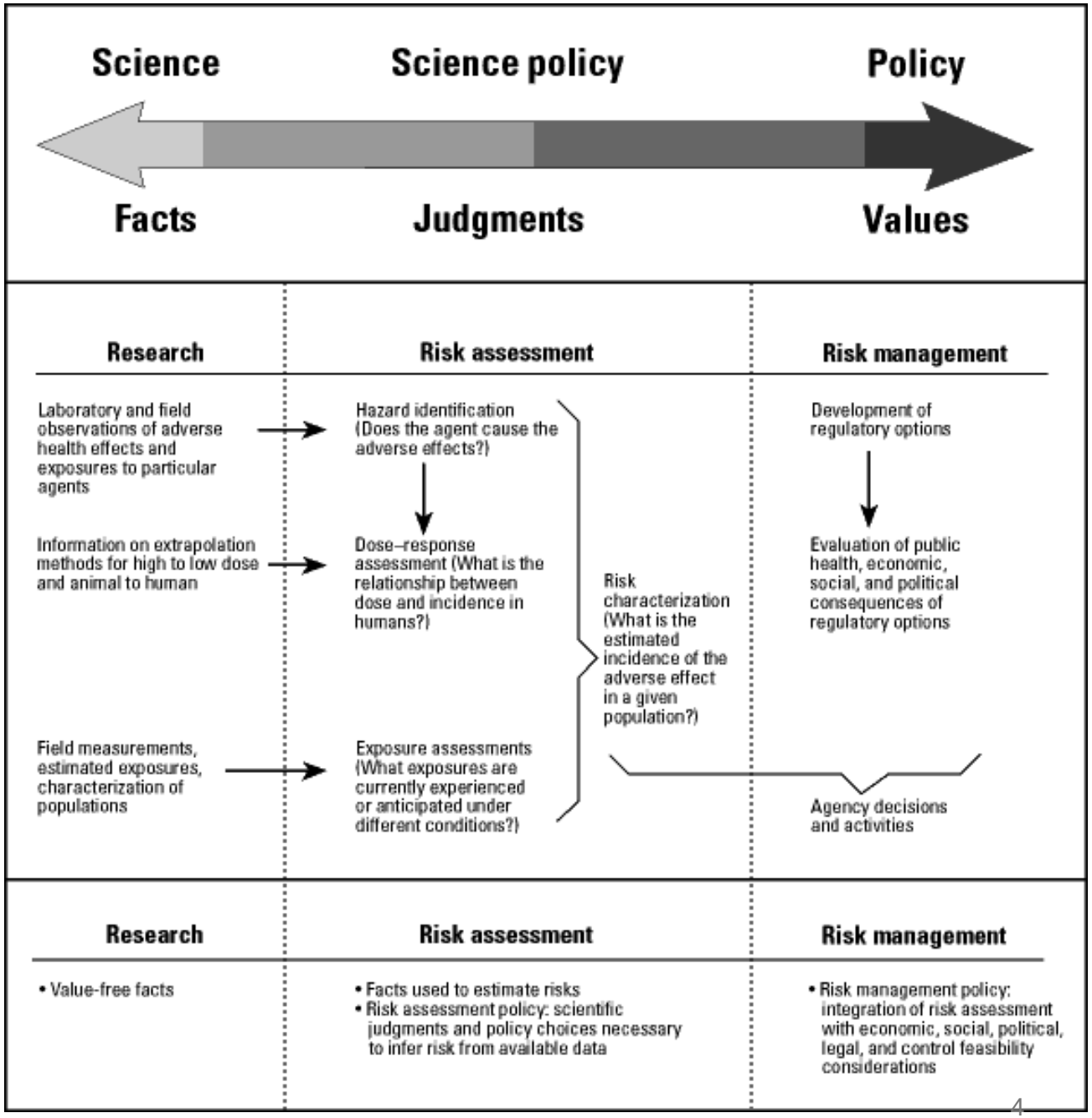
Menace. Horrible. A real activist. Bleeding-heart liberal. Clean air extremist. Those were the descriptions leveled at scientists serving on EPA's advisory boards and written on an infamous document known as the "hit list." It led to a purge of dozens of researchers deemed threats to industry and conservative policies. It was 1981.

A top EPA staffer who worked for then-Administrator Anne Gorsuch Burford was accused of compiling a "hit list" that targeted certain scientists. Pictured: Burford during her farewell speech when she resigned from the Reagan administration amid scandals. Ira Schwarz/Associated Press

By Scott Waldman | 05/14/2018 08:15 AM EDT for E&E News by Politico

An Attempted Restoration





Serviceable Truths

- "a state of knowledge that satisfies tests of scientific acceptability and supports reasoned decision-making, but also assures those exposed to risk that their interests have not been sacrificed on the altar of an impossible scientific certainty" (p. 250)

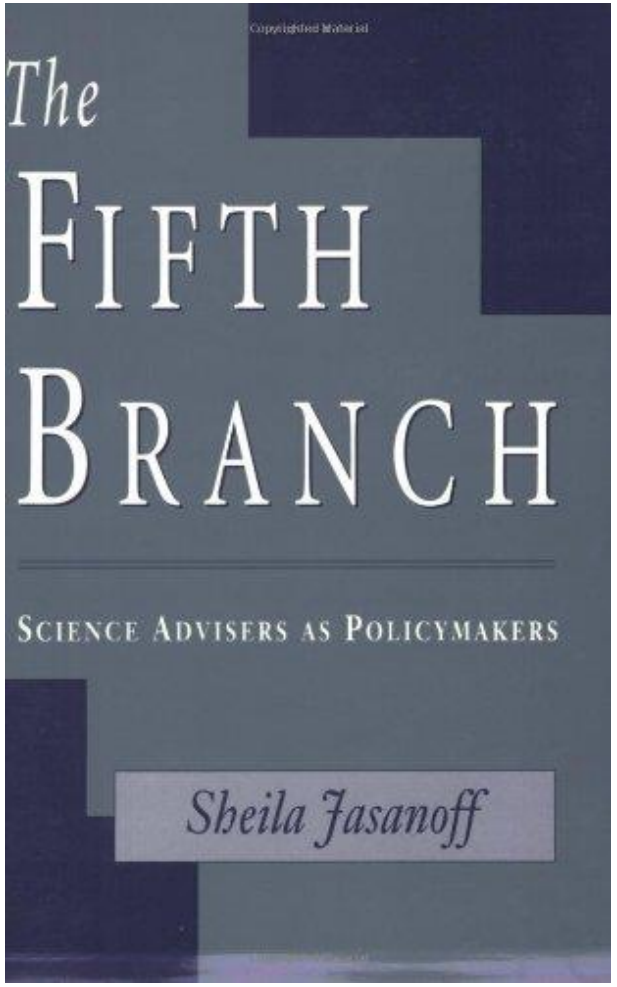


Table 4.1. Regulatory science and research science.

	Regulatory science	Research science
Goals	"Truths" relevant to policy	"Truths" of originality and significance
Institutions	Government Industry	Universities
Products	Studies and data analyses, often unpublished	Published papers
Incentives	Compliance with legal requirements	Professional recognition and advancement
Time-frame	Statutory timetables Political pressure	Open-ended
Options	Acceptance of evidence Rejection of evidence	Acceptance of evidence Rejection of evidence Waiting for more data
Accountability Institutions	Congress Courts Media	Professional peers
Procedures	Audits and site visits Regulatory peer review Judicial review Legislative oversight	Peer review, formal and informal
Standards	Absence of fraud or misrepresentation Conformity to approved protocols and agency guidelines Legal tests of sufficiency (e.g., substantial evidence, preponderance of the evidence)	Absence of fraud or misrepresentation Conformity to methods accepted by peer scientists Statistical significance

The Analytic-Deliberative Model (1996 National Research Council Report)

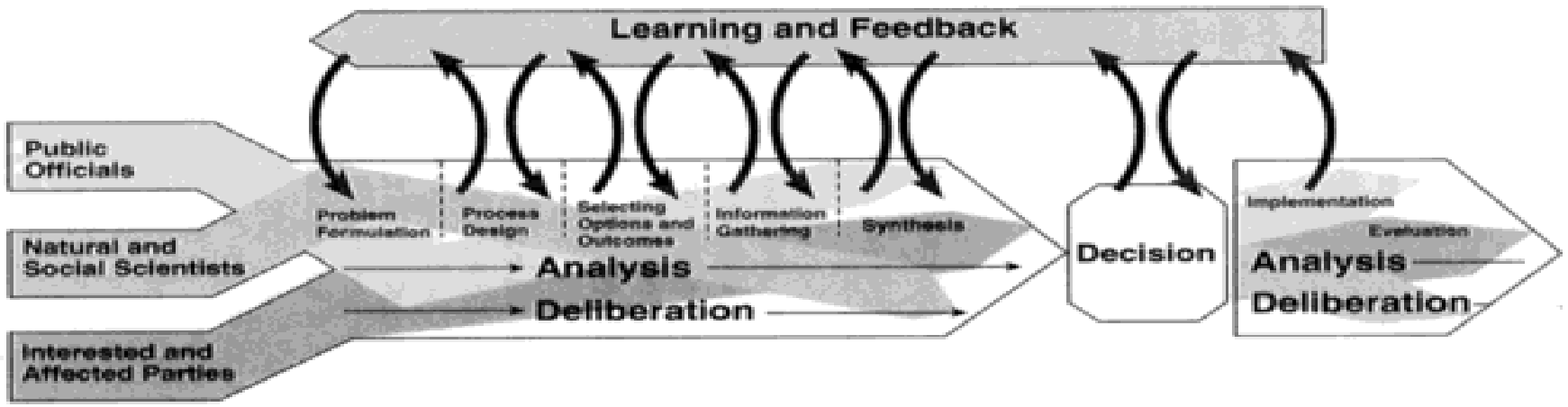
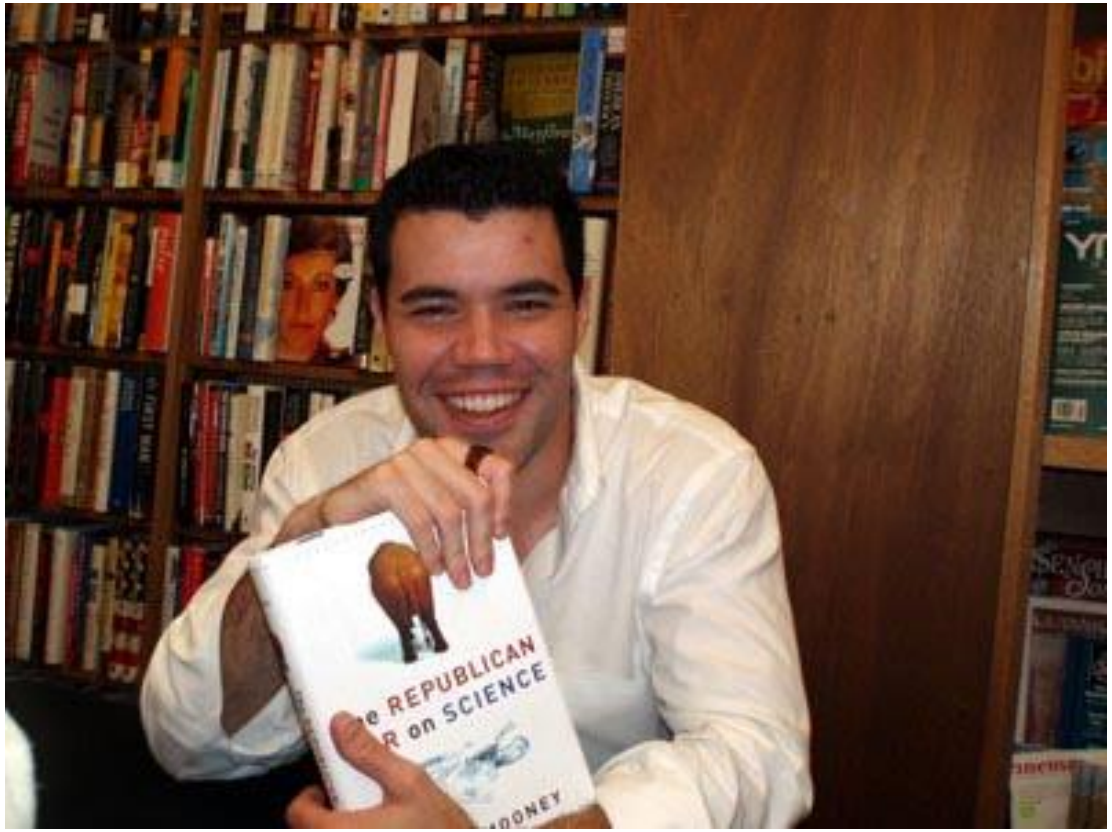


FIGURE 1-2. A schematic representation of the risk decision process.

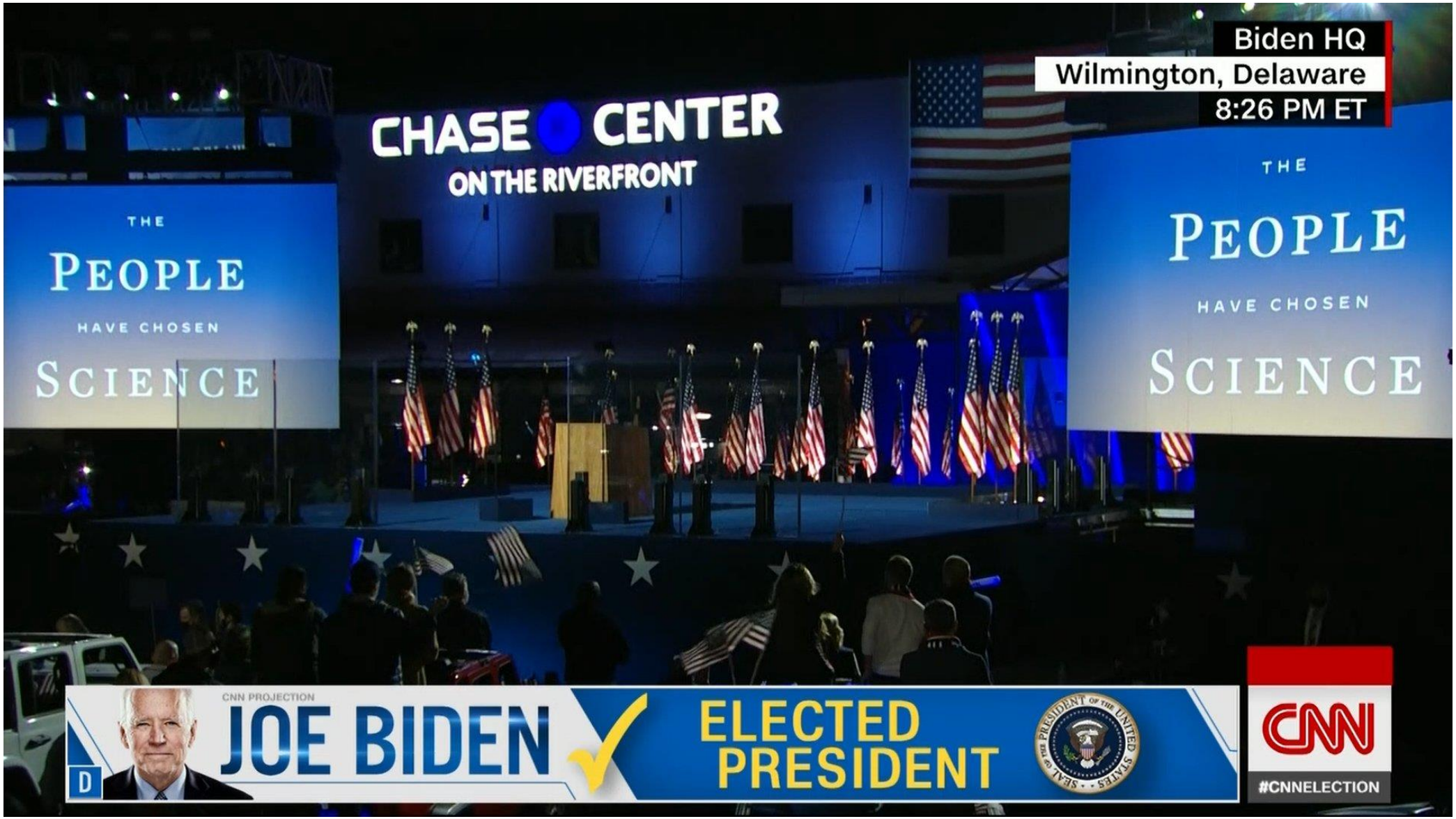
Polarization Comes to Science



Trump has taken longer to name a science adviser than any modern president

By Chris Mooney October 16

President Barack Obama walks with John Holdren, assistant to the president for science and technology, at the White House in March 2014. (Win McNamee/Getty Images)


Biden HQ
Wilmington, Delaware
8:26 PM ET
CHASE CENTER
ON THE RIVERFRONT
THE PEOPLE HAVE CHOSEN SCIENCE
THE PEOPLE HAVE CHOSEN SCIENCE
CNN PROJECTION
JOE BIDEN
ELECTED PRESIDENT
CNN
#CNNELECTION

U.S. Department of Transportation

ABOUT DOT PRIORITIES CONNECT

- Newsroom
- Press Releases
- In Case You Missed It
- Speeches
- Testimony
- Events
- Press Offices
- DOT Social Media
- Subscribe to USDOT Press Releases

President Trump's Transportation Secretary Sean P. Duffy: Biden-Buttigieg Ignored the Dangers of Wind Turbines Near Railroads & Highways, Put Climate Religion Ahead of Safety

Tuesday, July 29, 2025

USDOT calls on Congress to investigate why safety recommendations were dropped, the depth of the Biden-Buttigieg scheme

WASHINGTON, D.C. — U.S. Transportation Secretary Sean P. Duffy today announced that the Department of Transportation (USDOT) will restore safety recommendations previously overruled by the Biden-Buttigieg administration for wind turbines built near highways and railroads.

Secretary Duffy and his team recently discovered that Biden-Buttigieg overruled a safety recommendation for dozens of wind energy projects despite concerns that turbines can interfere with radio spectrum frequencies critical to safety.

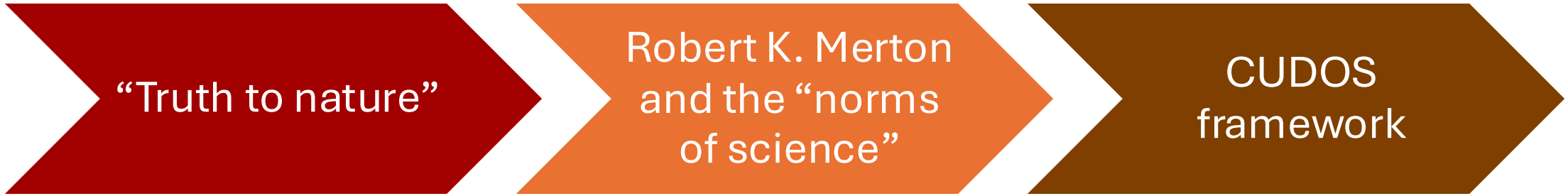
"Joe Biden and Pete Buttigieg put climate religion ahead of safety – blatantly ignoring engineers who warned of the danger of constructing wind turbines near railroads and highways. That's why I'm immediately implementing a higher standard of safety. What the past administration did is a shame, but it's a pattern for Biden and Buttigieg. They invested over $80 billion on DEI and the Green New Deal while safety was ignored," said **U.S. Transportation Secretary Sean P. Duffy**.

Media Contact

Press Office
US Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590
United States
Email: pressoffice@dot.gov

https://www.transportation.gov/newsroom/press-releases

Why did we trust science?



- Objectivity

- “institutional imperatives taken to comprise the ethos of modern science”

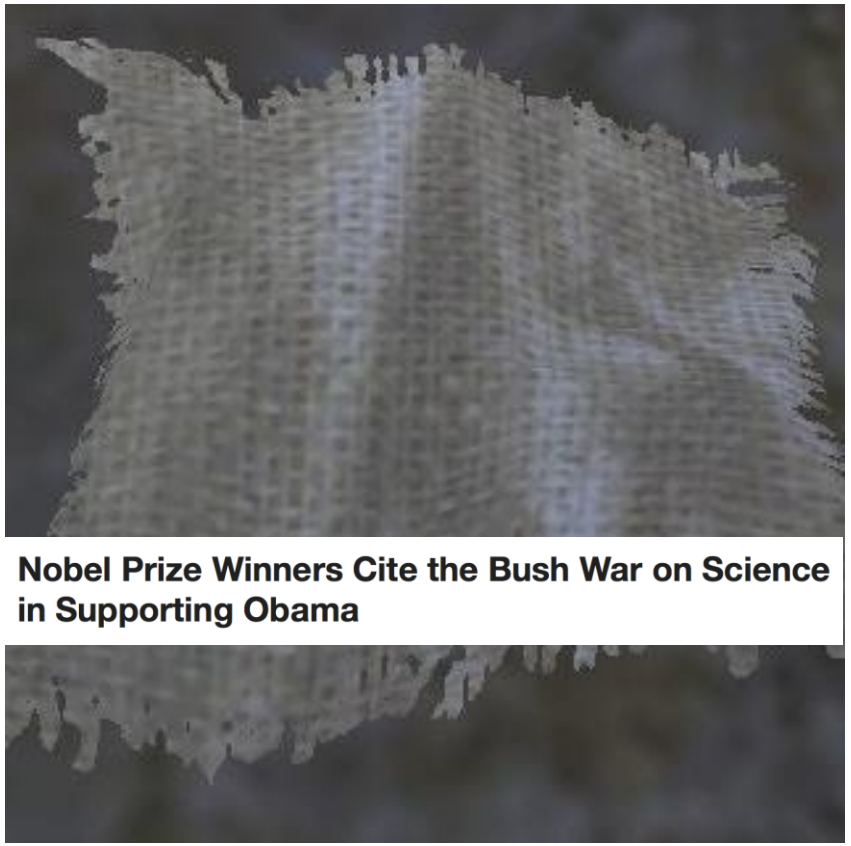
- Communism | communalism
- Universalism
- Disinterestedness
- Organized skepticism

The Mertonian Ideal and the “Social Contract”

- Science “speaks truth to power”:

Science, like any field of endeavor, relies on freedom of inquiry; and one of the hallmarks of that freedom is objectivity. Now, more than ever, on issues ranging from climate change to AIDS research to genetic engineering to food additives, government relies on the impartial perspective of science for guidance.

President George H.W. Bush, April 23, 1990
(quoted by Union of Concerned Scientists)



A Fraying Contract?

- Henry Waxman “minority report” in US House of Representatives 2003
  - Bush Administration’s abuses of science
  - Suppression of studies and data in federal agencies
  - Rejection of peer review
- Union of Concerned Scientists
  - February 18, 2004: Restoring scientific integrity in policymaking
  - 60 prominent signatories, including 20 Nobel laureates; later 400
  - Complaint of manipulation of scientific process
    - Lack of professional competence
    - Conflict of interest
    - Suggested actions
      - Sign scientists’ petition
      - Report abuses of science
- Scientists in the Kerry campaign

But *was* the Bush Administration "abusing" science?

- Office of Management and Budget, Office of Information and Regulatory Affairs (OIRA):
  - *September 15, 2003*: proposed bulletin on peer review to improve the scientific basis for regulatory decisions
  - *December 15, 2003*: Outcry from organized science (NAS, AAAS) and academics
  - *April 15, 2004*: heavily revised proposal for peer review of "influential" and "highly influential" scientific information

Defining “peer review”

- A “peer review,” as used in this document for scientific and technical information relevant to regulatory policies, is ***a scientifically rigorous review and critique of a study’s methods, results, and findings by others in the field with requisite training and expertise***. Independent, objective peer review has long been regarded as a critical element in ensuring the reliability of scientific analyses. For decades, the American academic and scientific communities have withheld acknowledgement of scientific studies that have not been subject to rigorous independent peer review. ***Peer review “has been an essential part of the American science scene and one of the reasons why American science has done so well.”***

Speaking "Truthiness" to Power

- Stephen Colbert lampooned American politics under President George W. Bush as a "no fact zone"
- Frank Rich, *New York Times*, November 5, 2006:
- In retrospect, the defining moment of the 2006 campaign may well have been back in April, when Mr. Colbert appeared at the White House Correspondents' Association dinner. Call it a cultural primary."

What do we make of these examples?

- The same administration stands up for the integrity of science while it is charged with abusing science.
- The purity of science matters in public discourse regardless of political positions.
- All sides agree that it is the *uses of science* that make it political.
- Debates crystallize around *expertise*.

New Resources to Think with about Science and Society

- Conventional wisdom about trust in science
  - “Deficit model”: lay ignorance
  - Media irresponsibility: amplification of discord
  - Corporate/political influence: cover ups
  - Distraction of the crowd; the digital age
- Insights from Science and Technology Studies
  - “It’s the endpoint, not the beginning!”
    - Fact, artifact, institution, norm, settlement, order emerge from politics
  - Competing rationalities, coexisting worlds (scenarios)
    - Co-production (is and ought)
  - “Reason is achieved, not attained.”
    - Uptake matters, not just production
    - Role of political culture

The Rightful Place of Science

Key Question for
Democracy

Why should the few
be empowered
to ***rule*** for the many?

Key Question for
Modernity

Why should the few
be empowered
to ***know*** for the many?

Parallel Constitutions?

- Questions of political delegation
- Explicit
  - Is power being exercised?
  - Which powers are authorized?
  - What are their limits?
  - How do we know them?
  - Who can challenge?
  - By what processes?
  - Represented – by whom?

- Questions of epistemic delegation
- Implicit
  - Power | Knowledge
  - A world without borders – ideally!
  - Epistemic subsidiarity
  - Futures and imaginaries
  - Authorized expertise
  - Ethics and responsibility – for whom, by whom?

Three “Bodies” of Expertise

- Bodies of knowledge
  - Experts are accountable to method and/or peers
  - May include instrumental skills or tacit knowledge
- Bodies of the experts themselves
  - Individual virtue is focal
  - Judged according to cultural norms of virtue (e.g., productivity, independence, conflicts of interest)
- Bodies through which expert advice is constituted
  - Held to principles of collective or group responsibility and legitimacy (e.g., representative of interests)

National Constructions of Expert Legitimacy: Three "Bodies" of Expertise

	United States	United Kingdom	Germany
Bodies of knowledge	Formal ("sound") science	Empirical common knowledge	Collectively reasoned knowledge
Embodied experts	Technically most qualified experts	Experienced "safe hands"	Authorized institutional representatives
Advisory **bodies**	Pluralistic, interested, but fairly balanced (*stakeholder*)	Members capable of discerning the public good (*civil service)*	Representative and inclusive of all relevant views (*public sphere*)


New Cracks in the Social Compact


PRESIDENT DONALD J. TRUMP
The WHITE HOUSE
45 | 47
PRESIDENTIAL ACTIONS
Restoring Gold Standard Science
Executive Orders
May 23, 2025

Executive Order: Section 1. Policy and Purpose

- Over the last 5 years, confidence that scientists act in the best interests of the public has fallen significantly. A majority of researchers in science, technology, engineering, and mathematics believe science is facing a reproducibility crisis. The falsification of data by leading researchers has led to high-profile retractions of federally funded research.
- Unfortunately, the Federal Government has contributed to this loss of trust. In several notable cases, executive departments and agencies (agencies) have used or promoted scientific information in a highly misleading manner. For example, under the prior Administration, the Centers for Disease Control and Prevention issued COVID-19 guidance on reopening schools that incorporated edits by the American Federation of Teachers and was understood to discourage in-person learning. This guidance's restrictive and burdensome reopening conditions led many schools to remain at least partially closed, resulting in substantial negative effects on educational outcomes — even though the best available scientific evidence showed that children were unlikely to transmit or suffer serious illness or death from the virus, and that opening schools with reasonable mitigation measures would have only minor effects on transmission.

Another View
(J. Mervis, *Science*, May 27, 2025)

- From lobster fishing bans to school closings during the COVID-19 pandemic, the misuse of science by federal agencies and individual researchers has fueled the public's growing distrust of science. So says U.S. President Donald Trump in a new executive order designed to promote "gold standard science" through transparency, replication, and taking swift action to correct errors and punish misconduct.
- But some research advocates, while embracing those principles, think Trump has credibility problems of his own that lead them to question his intent. They note that the new order says nothing about preventing political interference before disseminating scientific findings—which scientists say happened many times during Trump's first term. "That's quite an omission," says Kris West of COGR, a consortium of higher education institutions that track federal research policies.
- Instead, the order on Restoring Gold Standard Science gives a political appointee the power to decide when those findings need to be "corrected" and to take disciplinary action against those seen as the perpetrators of misinformation. "And putting that power in the hands of a political appointee who doesn't need to consult with scientific experts before making a decision is very troubling," West adds.

The Outlook for Science and Democracy

- Need a Second Enlightenment
- Not a short-term project!
- T.S. Eliot, “Journey of the Magi”
  - There was a Birth, certainly,
    We had evidence and no doubt. I had seen birth and death,
    But had thought they were different; this Birth was
    Hard and bitter agony for us, like Death, our death.
    We returned to our places, these Kingdoms,
    But no longer at ease here, in the old dispensation,
    With an alien people clutching their gods.
    I should be glad of another death.

After Truth: Questions for Public Knowledge

- Who claims to know?
- In answer to whose questions?
- On what authority?
- With what evidence?
- Subject to what oversight or criticism?
- With what openings for expressing countervailing views?
- And with what closure mechanisms in cases of disagreement?

A Role for Foundations: The Second Enlightenment Project

Content

Beyond the public communication model

Engagement with publics: but with *symmetry*

Coherence

Beyond *outcomes* and *impacts*

Toward transformation: correct for “STS lag”

Continuity

Cultivate *longue durée* thinking

Invest in (making, enlightening) people

Thank you!