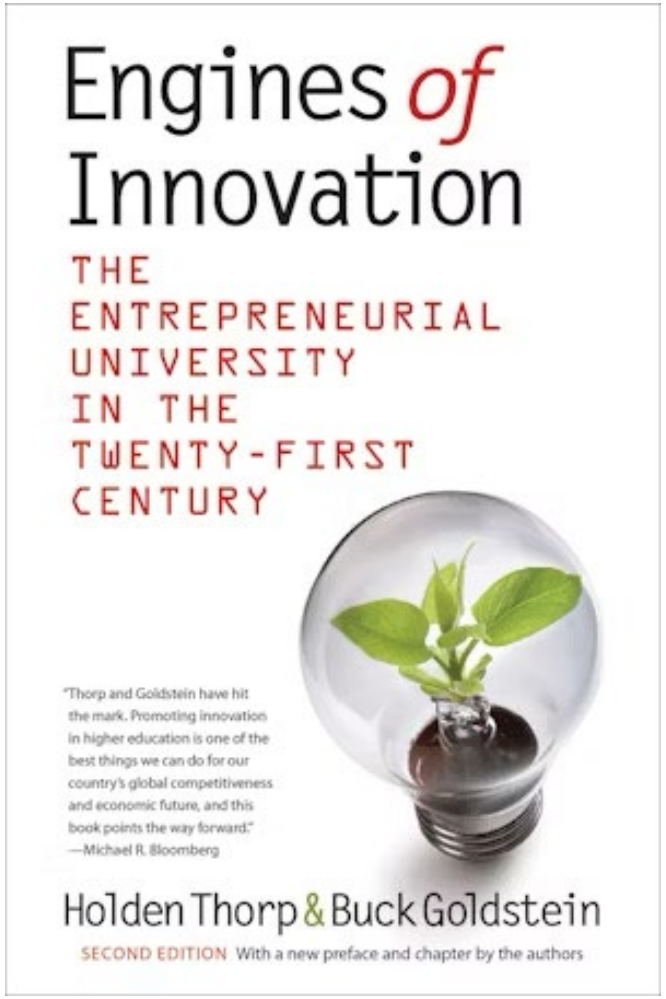
# *Science*

- 2023 journal impact factor is 44
- 12,000 submissions, 750 papers
- Investigative reporting and daily news
- Visuals, animations, videos and podcasts
- Five sibling research journals
- All research handled by professional editors except *Science Advances* (also Gold OA)

# Why US has led science

- Larger government funding
- Less government interference
- Strong IP protection
- Best talent from all over the world




We naively took it for granted that these aspects wouldn't change.

# We're losing all four

STAT+ | SPECIAL REPORT

## NIH grants plummeted $2.3 billion in Trump's first months, as federal-academia partnership crumbles

Funding of research on infectious diseases and biological systems hit hardest, STAT analysis shows

## RFK Jr. says he may bar scientists from publishing in top medical journals

Health Secretary Robert F. Kennedy Jr. took aim at reputed journals such as the Lancet and said his agency will create "in-house" publications instead.

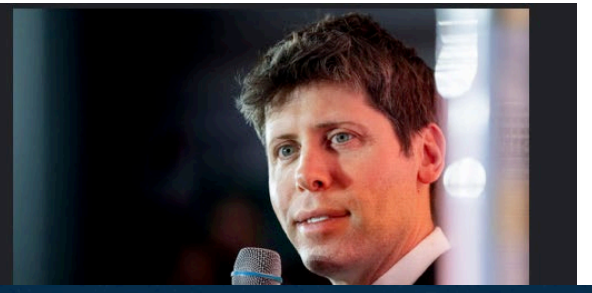
Updated yesterday at 8:33 p.m. EDT

"FREEDOM TO LEARN"

## OpenAI declares AI race "over" if training on copyrighted works isn't fair use

National security hinges on unfettered access to AI training data, OpenAI says.

ASHLEY BELANGER – MAR 13, 2025 12:20 PM | 473



★ ★ ★

## New Visa Policies Put America First, Not China

PRESS STATEMENT

MARCO RUBIO, SECRETARY OF STATE

MAY 28, 2025

# What are our values?

- The scientific record should be accurate, vetted, up-to-date, and supported by significant data disclosure
- Trainees should be prioritized over more powerful
- Everyone in the scientific enterprise (not just researchers) should be valued
- The public can understand science if they want to
- Scientific papers should be described accurately with appropriate caveats
- Talent should be welcomed from around the world

# Role of Journals - Science

As for the *Science* family of journals, we will continue to uphold the highest standards of scientific integrity while publishing groundbreaking research, provocative commentary, and news that is unencumbered by interference. These commitments are crucial for our readers and authors who span the globe. We will not change the principles and processes by which we serve the scientific community; those outside the United States should not have to alter their research agenda or methods because of bad decisions about science policy in the US. The *Science* journals stand in solidarity with similar comments made by our colleagues at the Journal of the American Medical Association and the Public Library of Science.

# Why we couldn't change our values even if we tried

A PRESIDENCY DENIED

## Vying for U. of Florida Presidency, Santa Ono Embraced Conservative Positions. It Didn't Work.

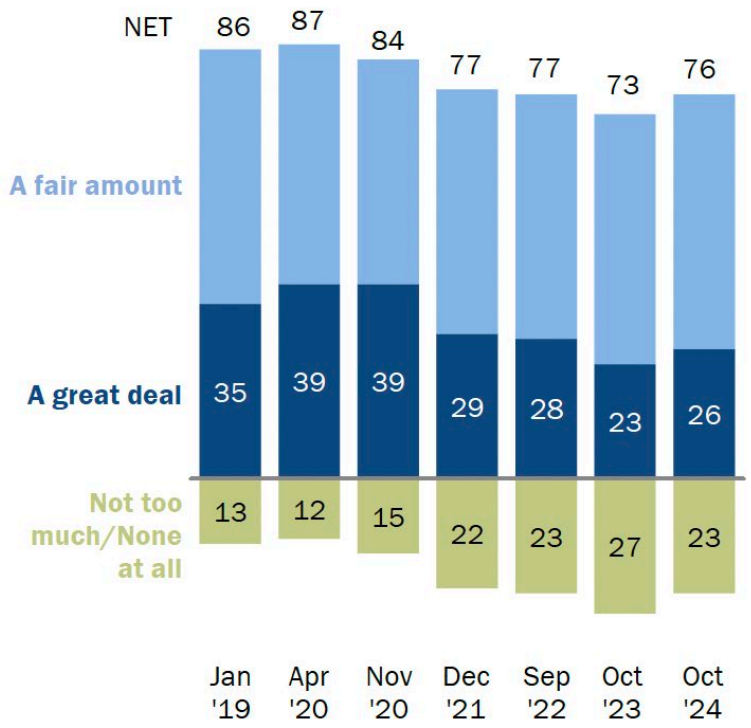
SCHOOL

## The Funniest Face-Plant by a College Official Trying to Appease Donald Trump Is Here

There's a lesson the size of the Big House.

## Confidence in scientists up slightly but remains lower than before pandemic

*% of U.S. adults who have ___ of confidence in scientists to act in the best interests of the public*

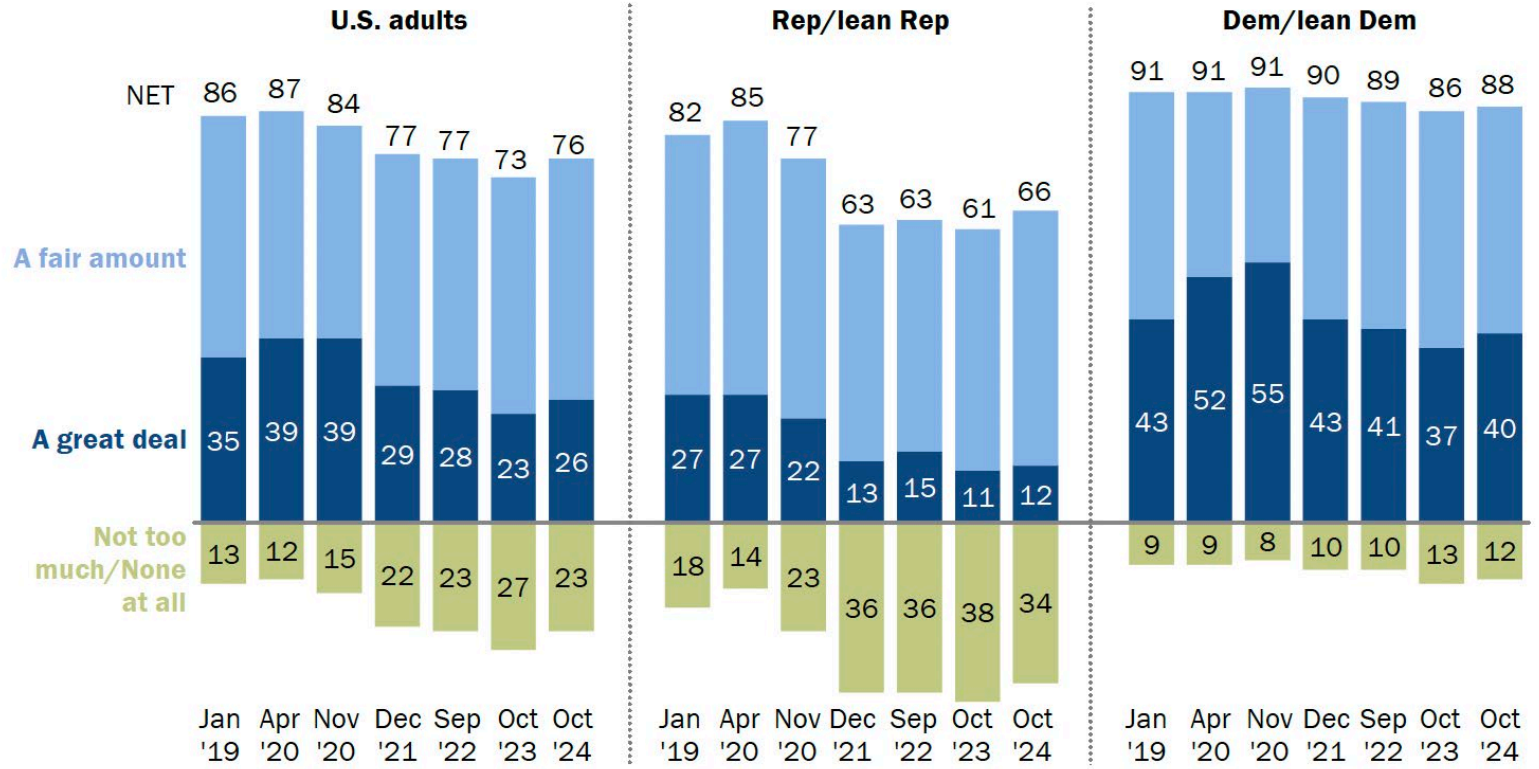



Note: Respondents who did not give an answer are not shown.
Source: Survey of U.S. adults conducted Oct. 21-27, 2024.
"Public Trust in Scientists and Views on Their Role in Policymaking"

PEW RESEARCH CENTER

## Confidence in scientists remains higher among Democrats than Republicans

*% who have ___ of confidence in scientists to act in the best interests of the public*



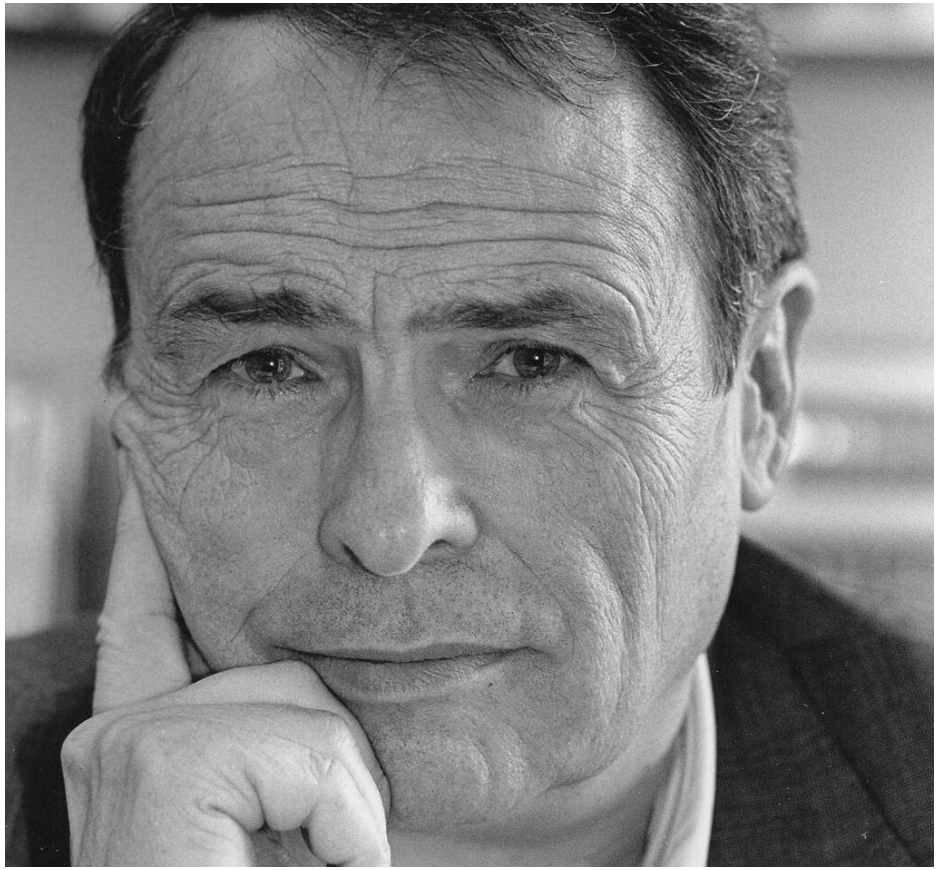

Note: Respondents who did not give an answer are not shown.
Source: Survey of U.S. adults conducted Oct. 21-27, 2024.
"Public Trust in Sc

PEW RESEARCH C

- **47% say scientists feel superior to others**
- **Only 45% say scientists are good communicators**

# Scholastic fallacy

- Academics often believe that the public sees issues the same way we do
- "Science literacy"
- Rhetoric about citizenship
- View of success – subsidized education, move to major urban area
- Trivialization of non-technical courses



Pierre Bourdieu

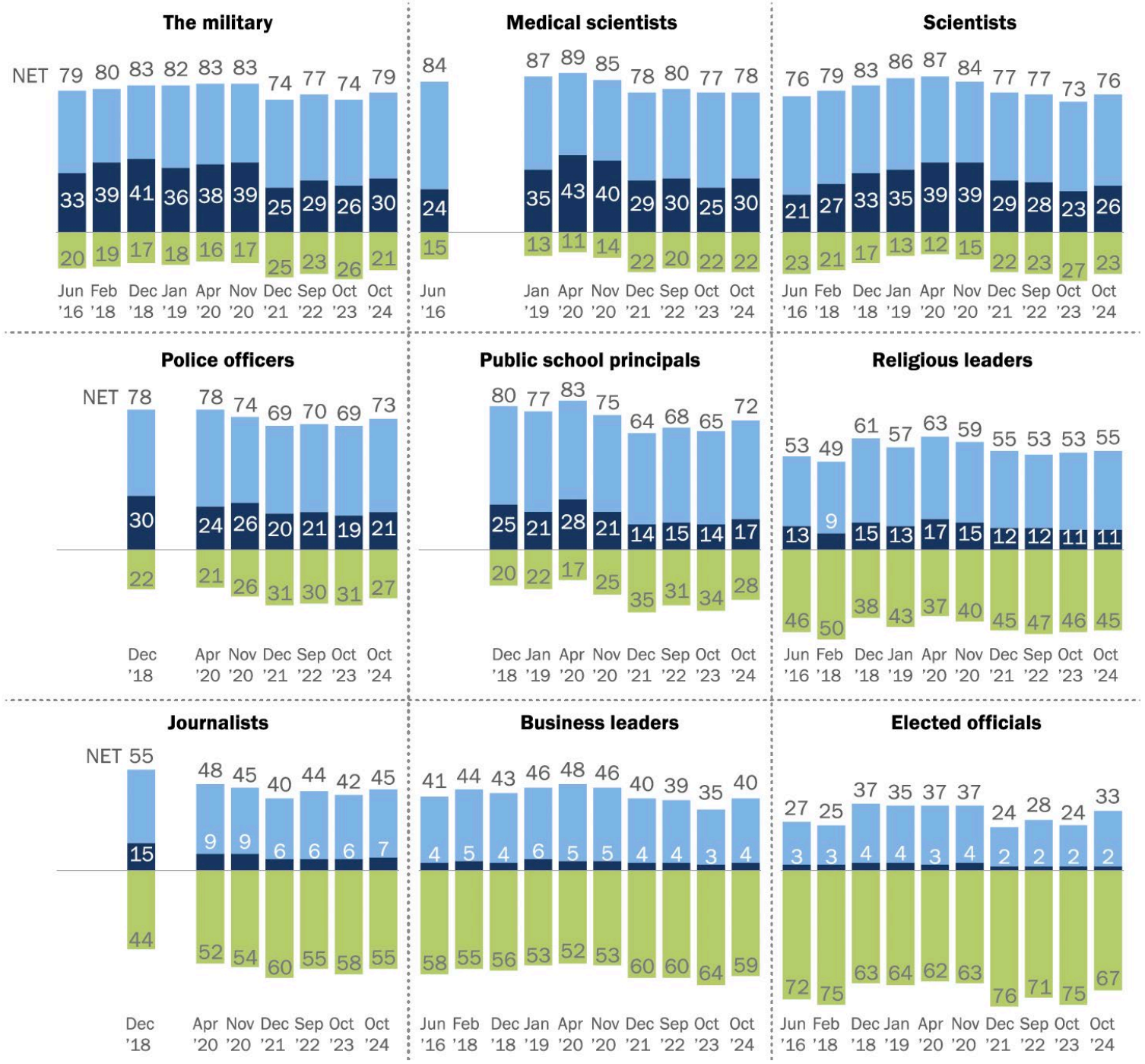
# Mission

The mission of Harvard College is to educate the citizens and citizen-leaders for our society. We do this through our commitment to the transformative power of a liberal arts and sciences education.

Beginning in the classroom with exposure to new ideas, new ways of understanding, and new ways of knowing, students embark on a journey of intellectual transformation. Through a diverse living environment, where students live with people who are studying different topics, who

# 'Did Joe Biden drop out?' Google searches spiked in key states on Election Day

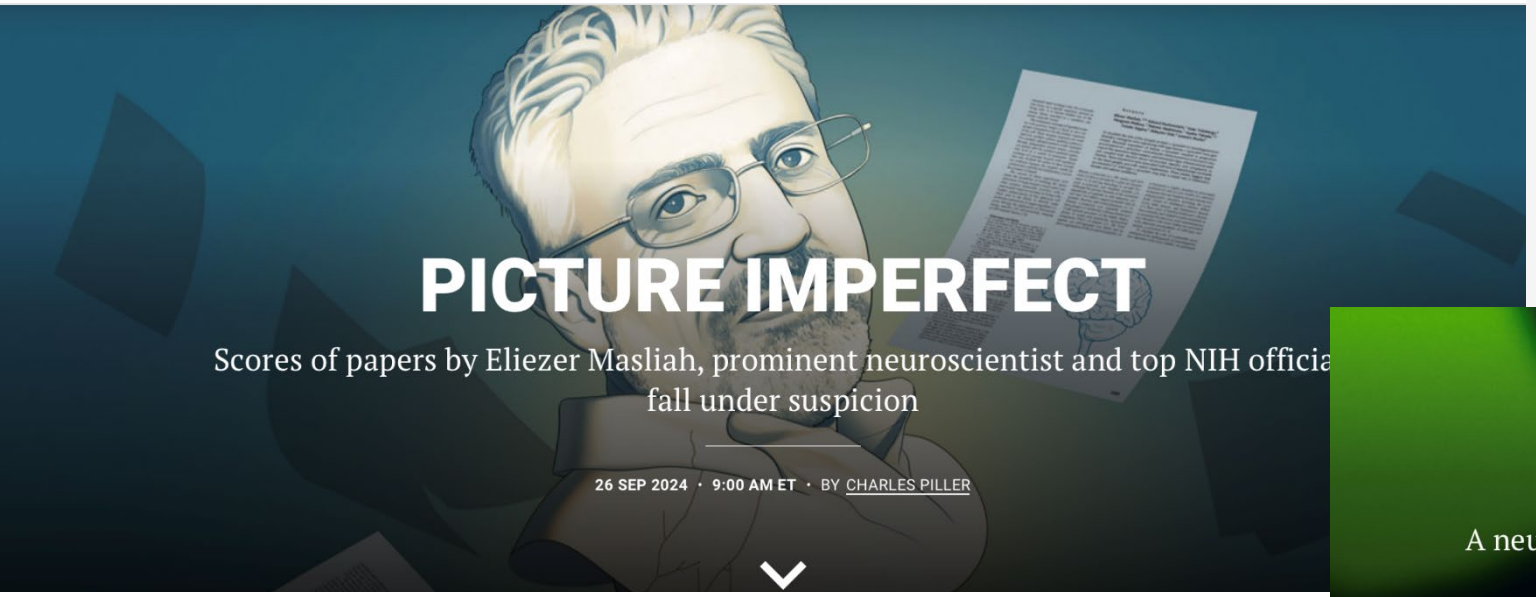
**By** Austin Williams | **Published** November 7, 2024 9:57pm EST | 2024 Election | FOX TV Digital Team |


The military
NET 79 80 83 82 83 83 74 77 74 79
33 39 41 36 38 39 25 29 26 30
20 19 17 18 16 17 25 23 26 21
Jun '16 Feb '18 Dec '18 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Medical scientists
84 87 89 85 78 80 77 78
24 35 43 40 29 30 25 30
15 13 11 14 22 20 22 22
Jun '16 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Scientists
76 79 83 86 87 84 77 77 73 76
21 27 33 35 39 39 29 28 23 26
23 21 17 13 12 15 22 23 27 23
Jun '16 Feb '18 Dec '18 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Police officers
NET 78 78 74 69 70 69 73
30 24 26 20 21 19 21
22 21 26 31 30 31 27
Dec '18 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Public school principals
80 77 83 75 64 68 65 72
25 21 28 21 14 15 14 17
20 22 17 25 35 31 34 28
Dec '18 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Religious leaders
53 49 61 57 63 59 55 53 53 55
13 9 15 13 17 15 12 12 11 11
46 50 38 43 37 40 45 47 46 45
Jun '16 Feb '18 Dec '18 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Journalists
NET 55 48 45 40 44 42 45
15 9 9 6 6 6 7
44 52 54 60 55 58 55
Dec '18 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Business leaders
41 44 43 46 48 46 40 39 35 40
4 5 4 6 5 5 4 4 3 4
58 55 56 53 52 53 60 60 64 59
Jun '16 Feb '18 Dec '18 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24
Elected officials
27 25 37 35 37 37 24 28 24 33
3 3 4 4 3 4 2 2 2 2
72 75 63 64 62 63 76 71 75 67
Jun '16 Feb '18 Dec '18 Jan '19 Apr '20 Nov '20 Dec '21 Sep '22 Oct '23 Oct '24

# How do we decouple science from other institutions that are losing trust?

**RATHER THAN BEING REACTIVE WE SHOULD BUILD THE SCIENTIFIC ENTERPRISE WE WANT BASED ON OUR VALUES – WE CAN'T AND SHOULDN'T CHANGE OUR VALUES, BUT WE CAN BE BETTER AT LIVING THEM**

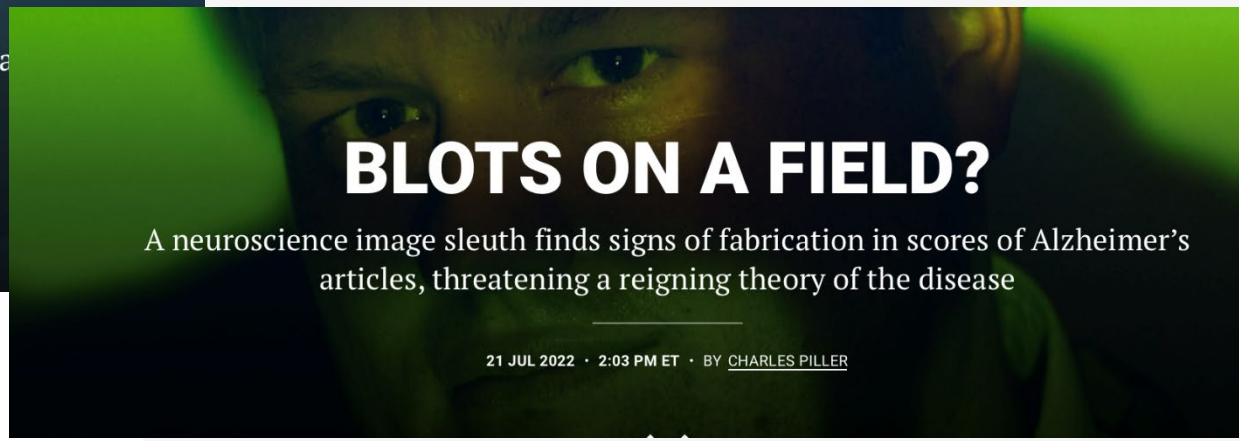
Science | AAAS



# PICTURE IMPERFECT

Scores of papers by Eliezer Masliah, prominent neuroscientist and top NIH officia
fall under suspicion

26 SEP 2024 · 9:00 AM ET · BY CHARLES PILLER



# BLOTS ON A FIELD?

A neuroscience image sleuth finds signs of fabrication in scores of Alzheimer's articles, threatening a reigning theory of the disease

21 JUL 2022 · 2:03 PM ET · BY CHARLES PILLER

IN THE LAB

# Dana-Farber expands studies to be retracted to 6, plus 31 to be corrected over mishandled data

By Angus Chen and Jonathan Wosen Jan

SCIENCEINSIDER | HEALTH

# NIH puts hold on $30 million trial of potential stroke drug

Agency will investigate safety and misconduct concerns before study begins

1 DEC 2023 · 9:00 AM ET · BY CHARLES PILLER

HIGHER EDUCATION

# Stanford president will resign after questions about research

An inquiry found no evidence Marc Tessier-Lavigne engaged in fraud or falsification of data but found 'serious flaws' in papers he co-authored

***Laboratory Culture***. Multiple members of Dr. Tessier-Lavigne's labs over the years appear to have manipulated research data and/or fallen short of accepted scientific practices. As a result, at least five publications in preeminent journals now require retraction or correction. When examining such behavior, the culture of the lab in which it occurred must be considered. The Scientific Panel has concluded that Dr. Tessier-Lavigne created a laboratory culture with many positive attributes, but the unusual frequency of manipulation of research data and/or substandard scientific practices from different people, at different times, and in labs overseen by Dr. Tessier-Lavigne at different institutions, suggests that there may have been opportunities to improve laboratory oversight and management.

Science has launched Proofig to catch some of this up front (but not all).

Science | AAAS

Los Angeles Times

BY HOLDEN THORP

AUG. 31, 2023 11:30 AM PT

# Opinion: We're retracting two papers from Stanford's outgoing president. That's part of how science should work

Maintaining the record getting much more expensive.

**Elisabeth Bik**
@MicrobiomDigest

I applaud @ScienceMagazine for taking fast and appropriate action and for being open and honest for what did not go well in handling the corrections around 2015. With the additional problems that were found by the 2022/23 investigation, retractions are a good outcome.

3:03 PM · Aug 31, 2023 · **8,029** Views

3:03 PM · Aug 31, 2023

**7** Reposts **57** Likes

SCIENCEINSIDER | SCIENTIFIC COMMUNITY

# Trump's science adviser defends funding cuts as a chance to 'revitalize' U.S. science

Michael Kratsios says DEI has led to a loss of public trust in universities

In 2009, a celebrated biotech executive published a paper in *Nature* that promised to revolutionize the treatment of Alzheimer's disease. In December of 2023, the journal retracted the research, acknowledging a number of anomalies and errors, but denying conscious fraud. The retraction came after almost 15 years of questions about the original paper being ignored and suppressed, during which the paper racked up over 800 citations, misdirected huge quantities of money, and helped the researcher become president of a premier university. The paper's irreproducibility had been demonstrated by 2012, but it took a decade to be fully addressed.

Science | AAAS

# Correction is courageous

## Correction is courageous

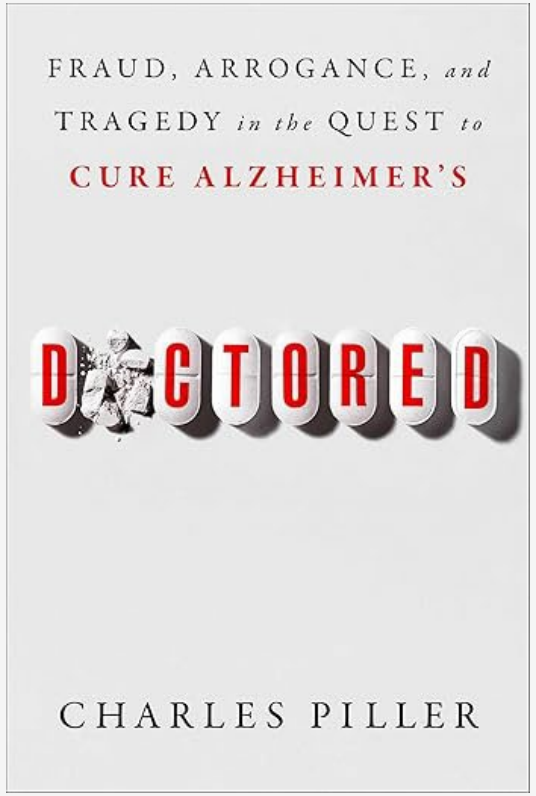
In a year when disagreements over scientific matters like COVID-19 continue to occupy political discourse, the surfacing of a spate of high-profile research errors is regrettable. It's crucial that the public trusts science at a time when so many topics—artificial intelligence, climate change, and pandemics—cast shadows of uncertainty on the future. Errors, intentional or not, erode confidence in science. It's not surprising that science integrity has become a focal point for major institutions in the United States, from the White House to the National Institutes of Health. Evaluating policies on misconduct is essential, but the idea of a scientific ecosystem that is free of errors is an unattainable utopia. However, evolving criticisms about the sluggishness of existing processes. In the past four years, *Science* has doubled the rate at which it issues an Editorial Expression of Concern. Unfortunately, authors and institutions often contest such notices, even though they can be removed if concerns are resolved or a correction is posted.

The journal *PLOS ONE* was recently sued over a Notice of Concern. In this case, an author of a published paper contacted the journal to request a correction. *PLOS ONE* decided to post a notice while the correction was being investigated and finalized. *PLOS ONE*, like *Science*, is clear in its policies that an alert does not assert misconduct. Nevertheless, another author of the paper sued to prohibit the notice because she claimed

**H. Holden Thorp**
Editor-in-Chief,
*Science* journals.
hthorp@aaas.org

**Correction and retraction are also an admission by the journals that we and the reviewers missed something.**

# Book by Science journalist, Charlie Piller




Leaning over a plate of pasta during lunch at an upscale San Francisco hotel, Selkoe pressed me to concede that some in the media are far too pessimistic about such drugs derived from the "amyloid hypothesis," which blames the build-up in the brain of "amyloid-beta proteins" — including the sticky plaques thought to promote a cascade of biochemical changes that lead to Alzheimer's dementia. We owe greater deference, he said, to doctors "who have taken care of hundreds of patients with Alzheimer's and have been through this long journey."

To date, we have had no factual challenges to any of Charlie's stories. It is his opinion that lecanemab isn't an effective drug, still massive disagreement about this among physicians.

# Response in STAT

**By Dennis J. Selkoe** Feb. 14, 2025

Selkoe is co-director of the Ann Romney Center for Neurologic Diseases, Department of Neurology, Mass General Brigham, and Vincent and Stella Coates professor of neurologic diseases at Harvard Medical School.

STAT's excerpt from Charles Piller's book contains errors of fact, distortions, and misleading messages to our patients. But rather than refuting these point-by-point, I will address three faulty premises of his poorly supported case against the basic science and new treatments of Alzheimer's disease.

***Science* is not state media for the scientific enterprise. Public opinion and politics are driven by anecdote, not data.**

# What doesn't work

**We also have to stand up for papers that are correct….**

RESEARCH ARTICLE | CORONAVIRUS

# The Huanan Seafood Wholesale Market in Wuhan was the early epicenter of the COVID-19 pandemic

MICHAEL WOROBEY, JOSHUA I. LEVY, LORENA MALPICA SERRANO, ALEXANDER CRITS-CHRISTOPH, [...], AND KRISTIAN G. ANDERSEN +13 authors Authors Info & Affiliations

*SCIENCE* • 26 Jul 2022 • Vol 377, Issue 6609 • pp. 951-959 • DOI: 10.1126/science.abp8715

RESEARCH ARTICLE | CORONAVIRUS

# The molecular epidemiology of multiple zoonotic origins of SARS-CoV-2

JONATHAN E. PEKAR, ANDREW MAGEE, EDYTH PARKER, NIEMA MOSHIRI, [...], AND JOEL O. WERTHEIM +24 authors Authors Info & Affiliations

*SCIENCE* • 26 Jul 2022 • Vol 377, Issue 6609 • pp. 960-966 • DOI: 10.1126/science.abp8337

# Defending papers in Congress


- "Invited" to testify before the Select Subcommittee on the Coronavirus
- Nature and Lancet didn't show
- Was able to explain the peer review process, preprints, how we try to get accurate media coverage, post-publication process
- "Don't agree on things but have 'guts and balance.'"

# (Not) prioritizing trainees

**I am gratified that the Panel concluded I did not engage in any fraud or falsification of scientific data.** Specifically, the Panel did not find that I engaged in research misconduct regarding the twelve papers reviewed, nor did it find I had knowledge of or was reckless regarding research misconduct in my lab.

**Although the report clearly refutes the allegations of fraud and misconduct that were made against me, for the good of the University, I have made the decision to step down as President effective August 31.**

**If fraud occurs in the PIs lab, the PI is responsible.**

News • University

## Stanford president criticizes Daily report on alleged research falsification as 'replete with falsehoods'

# Warner Bros, Amy Pascal Win ‘How To Rule The World’ Auction; Freshman Theo Baker Forced Resignation Of Nobel-Shortlisted Stanford President With Articles For School’s Newspaper

By Mike Fleming Jr
November 2, 2023 8:39am

3
COMMENTS

Theo Baker and Stanford University
Linkedin/Getty

# Valuing all of the scientific enterprise

## My career earthquake

During my first few years in grad school, I proudly told colleagues that my research on earthquake hazard mitigation technology would save countless lives and help prevent trillions of dollars of infrastructure damage. I wasn't lying. My adviser and I truly felt as though we were about to deliver a technological breakthrough. But our confidence came crashing down one afternoon, when we met with representatives of a state agency to discuss moving our work beyond the pilot scale. "The risk of using a brand new technology is too high. The approval and implementation process can take decades," one official told us. I left the meeting feeling deflated.

I went home and thought deeply about my priorities. I saw real problems in the world: natural hazards, environmental injustice, social inequity—the list goes on. I went to grad school because I wanted to make a difference. I felt that the world was burning, and I wanted to help people in the here and now, not decades in the future. Suddenly, it became clear that wasn't going to happen.

I tried to pivot my project so that it could be implemented more quickly. But my Ph.D. committee was unenthusiastic. One committee member went so far as to tell me that if I went in that direction, I would be wasting time.

I was discouraged. I seriously considered quitting, and I wavered

**"I've come to realize that ... my scientific expertise is valuable in other arenas."**

student asked, "We see important issues in Arizona! What can we do?" A congressperson responded, "Call your representative! We want to hear from you." That response was unsatisfying to me. I raised my hand and pointed out we wanted to do more. Later, the congressperson reached out and agreed to partner with our network to bring more scientific expertise into decision-making. We started to meet with lawmakers regularly, submit written briefs, and testify to committees—work that we've continued to do remotely during the COVID-19 pandemic.

My role with the network has brought me a renewed sense of joy and accomplishment. I'm still pursuing my Ph.D. research, and

Science | AAAS

**From Nobel Laureate Randy Schekman:**

Image via Wikipedia

*"There's a great deal of displeasure in the life-science community with the control of journals that don't use scientists to make decisions," Mr. Schekman told me. "There are many scientific journals that have scientists as editors, but they have not captured the same kinds of very interesting, groundbreaking studies that are published in Cell, Nature, and Science." Lured by name prestige, researchers route their best work to those journals. That means they neglect other outlets where scientist-editors have more control.*

Our data show there is no detectable difference between editorial judgments made by academic or professional editors.

# Breaking free of the deficit model

EPUB
Public Understanding of Science
Volume 25, Issue 4, May 2016, Pages 415-426

https://doi.org/10.1177/0963662516629750

SAGE journals

*Essay Competition*

## In science communication, why does the idea of the public deficit always return? Exploring key influences

**Brianne Suldovsky**

**Abstract**

Despite mounting criticism, the deficit model remains an integral part of science communication research and practice. In this article, I advance three key factors that contribute to the idea of the public deficit in science communication, including the purpose of science communication, how communication processes and outcomes are conceptualized, and how science and scientific knowledge are defined. Affording science absolute epistemic privilege, I argue, is the most compelling factor contributing to the continued use of the deficit model. In addition, I contend that the deficit model plays a necessary, though not sufficient, role in science communication research and practice. Areas for future research are discussed.

**It's an arbitrary decision that scientific knowledge is privileged over history, sociology, politics, psychodynamics, etc.**

Example, science faculty blaming K-12 education pedagogy when their students don't do well. (Maybe it's not the pedagogy but whether the students are safe and not hungry.)

# Exaggerating what's actually in the paper

# Microsoft claims quantum-computing breakthrough — but some physicists are sceptical

**The tech giant aims to make 'topological' quantum computers that will reach useful scales faster than competing technologies.**

By Davide Castelvecchi

Article | Open access | Published: 19 February 2025

# Interferometric single-shot parity measurement in InAs–Al hybrid devices

Microsoft Azure Quantum, Morteza Aghaee, Alejandro Alcaraz Ramirez, Zulfi Alam, Rizwan Ali, Mariusz Andrzejczuk, Andrey Antipov, Mikhail Astafev, Amin Barzegar, Bela Bauer, Jonathan Becker, Umesh Kumar Bhaskar, Alex Bocharov, Srini Boddapati, David Bohn, Jouri Bommer, Leo Bourdet, Arnaud Bousquet, Samuel Boutin, Lucas Casparis, Benjamin J. Chapman, Sohail Chatoor, Anna Wulff Christensen, Cassandra Chua, ... Justin Zilke + Show authors

*Nature* **638**, 651–655 (2025) | Cite this article

# No chance

## Science communication will benefit from research integrity standards

**Uncertainty is a core tenet of science – researchers should be supported so they can communicate it with confidence to the public.**

Scientists have been exaggerating their findings outside of the literature for centuries. Need trusted intermediaries – requires respecting communicators as much as researchers. (Nature published this before they got played by Microsoft.)

# What are our values?

- The scientific record should be accurate, vetted, up-to-date, and supported by significant data disclosure
- Trainees should be prioritized over more powerful
- Everyone in the scientific enterprise (not just researchers) should be valued
- The public can understand science if they want to
- Scientific papers should be described accurately with appropriate caveats
- Scientific talent should be welcomed from all over the world.

# Where we stand

- It's a privilege to do this work
- There are no magic words. It's a slog.
- Self-reflection ≠ capitulation.
- A lot of people are in pain, compassion is crucial; a lot of people are happy, they want change
- They're picking on us. Sorry.
- Stop saying "science literacy".
- Teach the students who show up rather than blaming K-12.
- Call out our community when values are not upheld.
- Be humble. Science is not perfect. Admit when we're wrong.
- Most people don't know how things work in our world and there's no reason they should
- Be meticulous. Every mistake will be exploited.
- Don't hide. Answer questions on the record.
- There are 6 million scientists; they'll never all be on the same page.
- Stop implying a liberal arts education is required for citizenship.

**Most scientists believe and are doing all of this, but anecdotes drive politics and public opinion.**


IDEAS

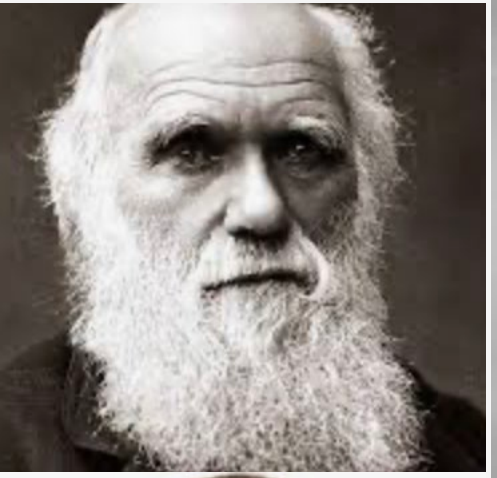
# AMERICA AND ITS UNIVERSITIES NEED A NEW SOCIAL CONTRACT

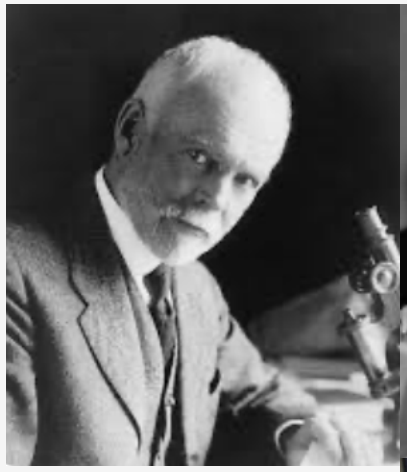
Fifty dollars for STEM, five cents for citizenship—that's how America apportions its education dollars. Our beleaguered universities must redress the balance—helping the country and themselves.

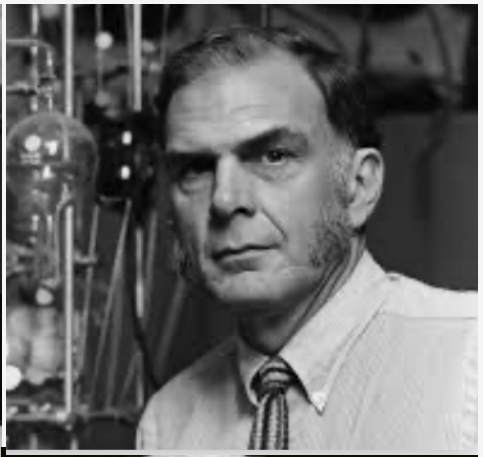
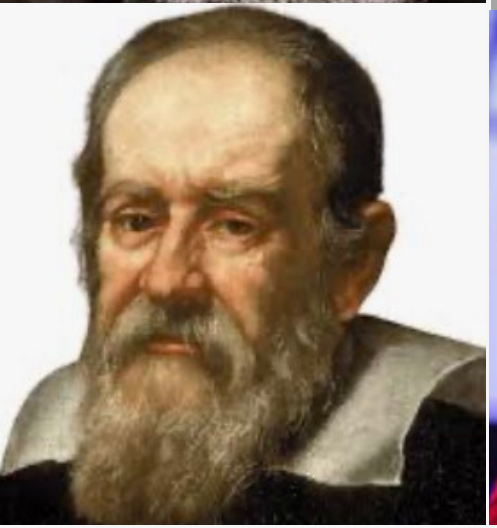
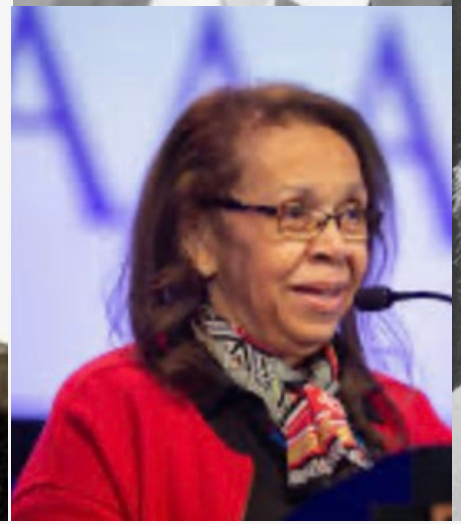
By Danielle Allen

- Teach more, take care of patients more
- Shift focus from research temporarily to build support

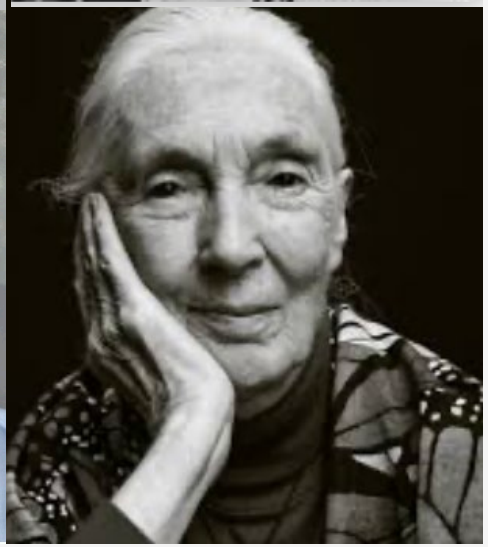
"an important element of getting through this moment is going to be resilience -- and resilience for the activities that are our core mission. So much as there's a lot of work to do to protect universities in this time, an aspect of protection is resilience, is keeping the work going. So I think finding that inner conviction that doing the work and proving its worth is a part of the project of protection is really necessary."







**Do the work.**

# ScienceAdviser

https://science.org/scienceadviser

Delivering the world of science to your inbox every weekday, keeping you up to date on the most important trends and breakthroughs.

- Top picks of news and research from *Science* journals and other publishers
- Exclusive reporting and analysis
- Editor's curation of recommended further reading
- Revolving daily segments

# Amazing team - Editorial


AAAS
www.aaas.org

# Amazing team - Visuals