




Using Data to Convey Policy Positions



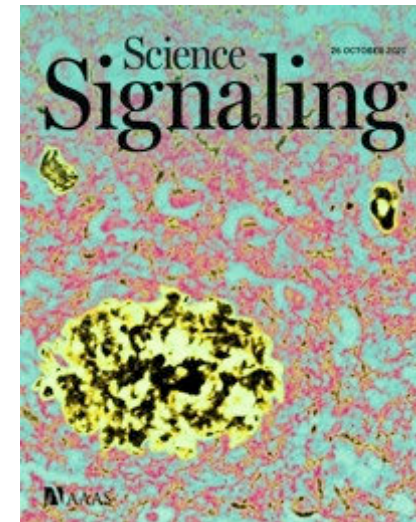
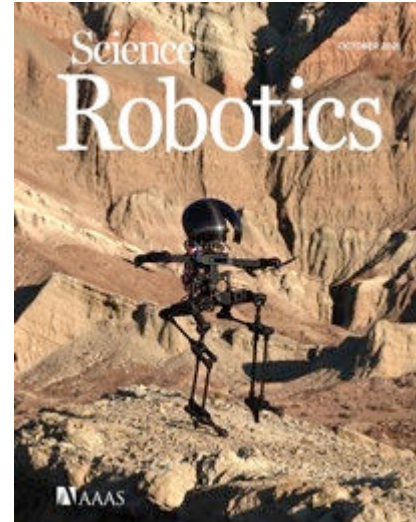


The mission of AAAS is to advance science, engineering, and innovation throughout the world for the benefit of all

Advancing Science, Serving Society

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

Nonprofit Publisher of the *Science* Family of Journals



87 scientists founded AAAS at the Academy of Natural Sciences in Philadelphia



Arden House: The first time AAAS updated its governance structure



The Double Bind: The Price of Being a Minority Woman in Science

Stitzley Michele Malcom
Paola Quick Hill
Janet Welsh Brown

New frontiers in science diplomacy

Navigating the changing balance of power
January 2010



1848

1874



First class of AAAS Honorary Fellows

1900

1923



First award established

1951



1973

Science & Technology Policy Fellowships

1975

First class

2010



2022



2023



AAAS & POLICY

We are leading the charge to ensure the proper use of scientific evidence in all aspects of decision making and policymaking, including in local, state, federal and international policies.

We also produce evidence-based science and technology updates, including analyses of federal investments in science and engineering research and development.



THE COMMUNICATIONS APPROACH

Objectives

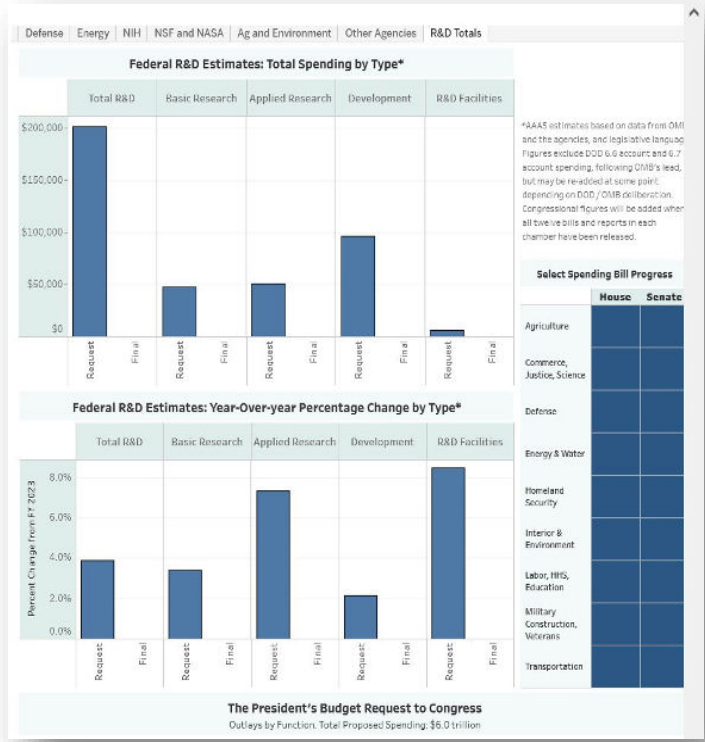
- Position AAAS as a leading nonpartisan representative voice of the scientific enterprise
- Promote the role of science in addressing complex societal challenges
- Make the case that a more diverse, equitable and inclusive scientific enterprise benefits society and fosters scientific excellence

Our Vision

- From organizational news amplifier
- From influencing policy behind the scenes
- From reactive media relations
- ⊕ To thought leadership driver
- ⊕ To shaping public and private policy debates
- ⊕ To proactive news engine

R&D BUDGET & POLICY PROGRAM

BEFORE



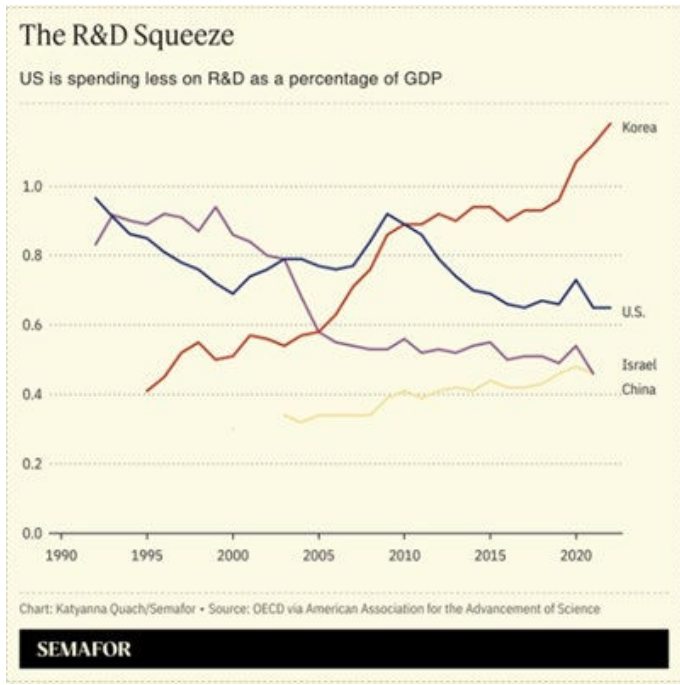
AFTER



Biden open access order under threat from Republican budget bill

The draft federal budget written by House Republicans would increase overall research and development spending by 19 per cent, while its counterpart in the Democrat-controlled Senate would cut it by 4 per cent, according to analysis provided by the American Association for the Advancement of Science.

The House version, however, would sharply cut some key parts of National Institutes of Health and the National Science Foundation, while primarily reserving increases for military accounts. Both the House and Senate versions “would make drastic cuts to basic research – 51 per cent and 48 per cent respectively in FY 2024”, said Joanne Padrón Carney, the association’s chief government relations officer.



The American Association for the Advancement of Science published new data Tuesday on global R&D spending and by one measure, Silicon Valley should be slightly worried. The percentage of GDP the US government spends on R&D has dropped to pre-pandemic levels, putting it in 12th place globally.

R&D BUDGET & POLICY PROGRAM

When public affairs, government relations and branding collaborate:

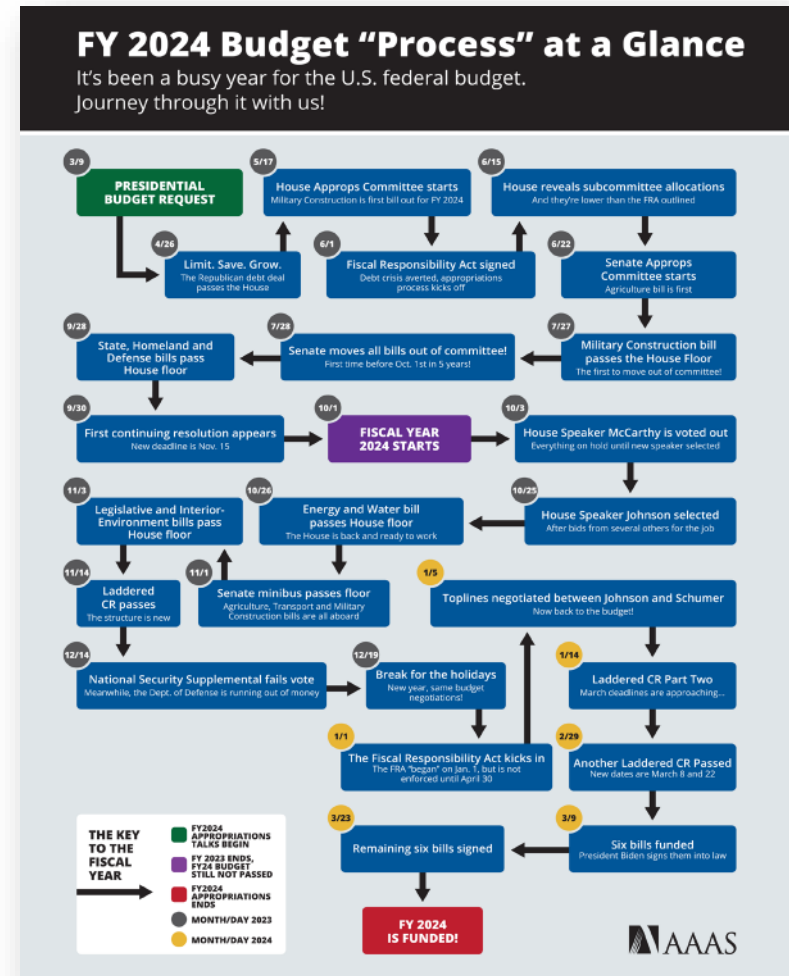


1/3 Breaking News 📰: AAAS CEO @sudipparikh's statement on Congress passing 4th CR for FY24 federal budget, and what's at stake with looming Fiscal Responsibility Act deadline and consequences across #STEMM [aaas.org/news/automatic...](https://www.aaas.org/news/automatic...)

"If Congress fails to fund the federal government by April 30, large automatic cuts to research and development will be triggered. These cuts would have real and lasting consequences for the science and technology foundations of our future health, economy, and national security."

Sudip S. Parikh
CEO, American Association for the Advancement of Science
Executive Publisher, Science Family of Journals

ALT



R&D BUDGET & POLICY PROGRAM



BY CAITLIN EMMA

With help from Jordain Carney

QUICK FIX

APPROPRIATIONS

THE R&D RUNDOWN: The nonprofit American Association for the Advancement of Science, or AAAS, is out with a new analysis of the House and Senate’s fiscal 2024 plans for federal agencies that deal heavily in research and development. Of note, the National Institutes of Health’s Institute of Allergy and Infectious Diseases and Office of the Director [are facing significant cuts proposed by House Republicans](#), at 20 percent and 25 percent respectively compared to current funding, which would bring both programs down to funding levels last seen in fiscal 2018. Senate appropriators, meanwhile, would [return the National Institute of Standards and Technology](#) to “pre-CHIPS and Science Act funding levels, with a 39 percent decrease compared to last year’s appropriations.”

OPEN ACCESS (PUBLISHING MODELS)

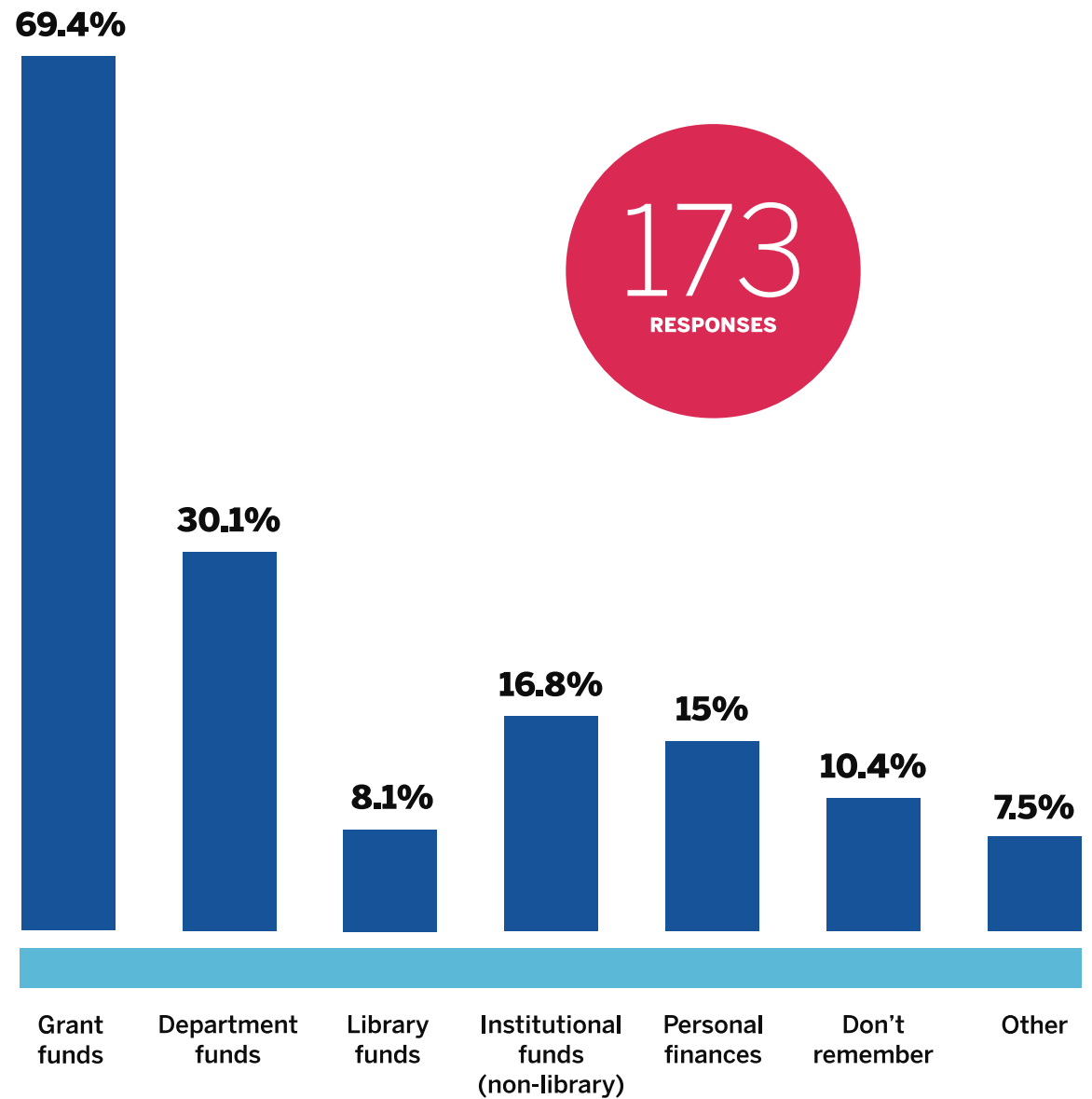
We look at open access through the lens of our 120,000 scientist and engineer members – the scientific enterprise

- Open access to scientific information is important
- Open access to useful information is critically important
- Communication of accurate understandable science with every audience is paramount
- Some current models of open access are fatally flawed

Most researchers are using grant funds to pay APCs – and women are more likely to use grant funds than men

Women were **nearly three times** as likely as men to have paid APCs using grant funds ($p < 0.05$).

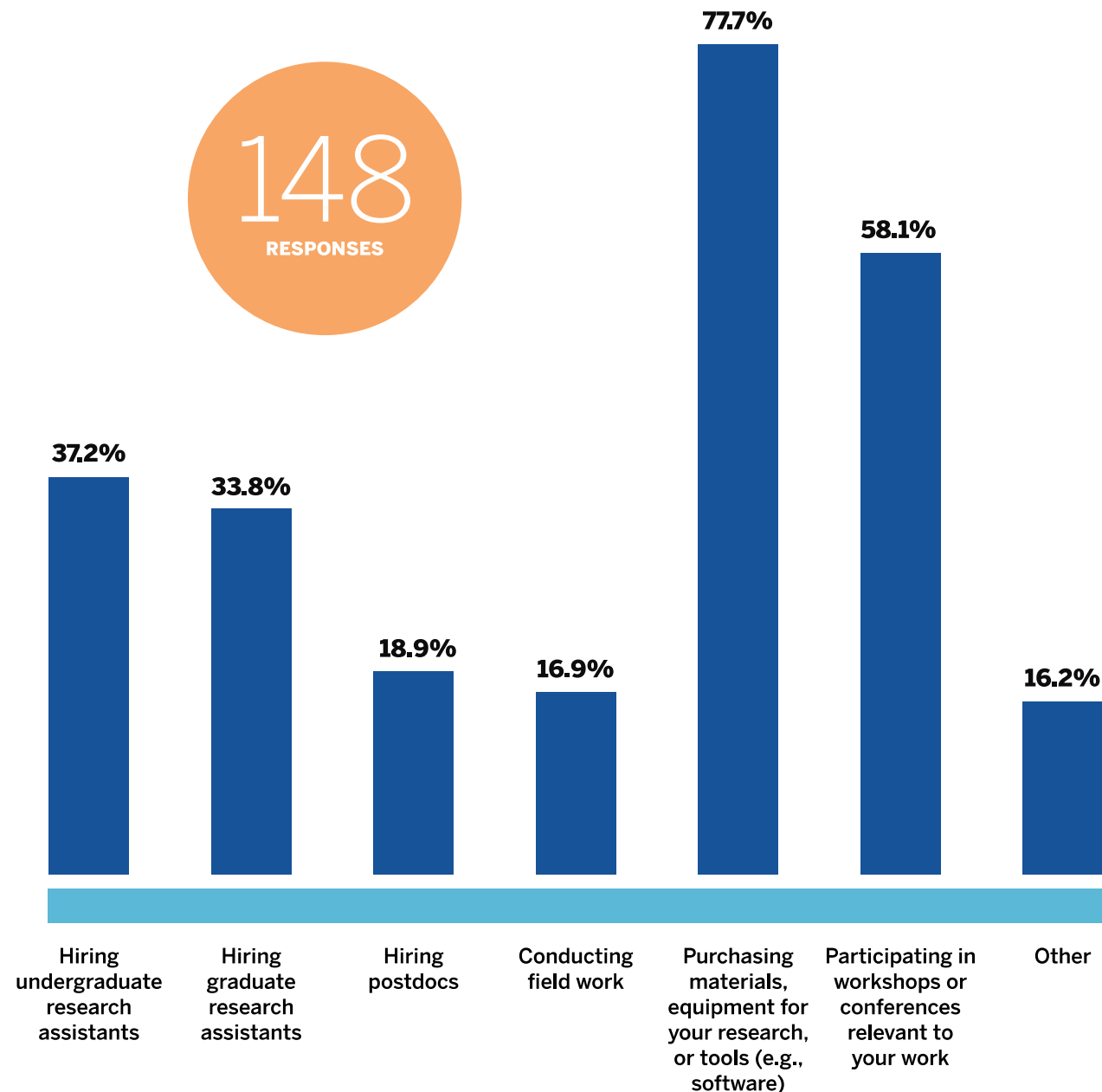
*Adjusting for race, length of time conducting research, and institution size



APCs create significant tradeoffs – and women appear to make tradeoffs more frequently than men

Compared with men, women were more than **2.5 times** as likely not to attend workshops and conferences so that they could pay APCs ($p < 0.05$).

*Adjusting for race, length of time conducting research, and institution size



EQUITABLE ACCESS FOR AUTHORS

AAAS Statement on OSTP Federally Funded Research Guidance



25 August 2022

by: Sudip Parikh

AAAS, the nonprofit publisher of the Science family of journals, supports the objectives of the White House Office of Science and Technology Policy and has a long history of advocating for equitable access to scientific research and data while ensuring a more inclusive publishing ecosystem for scientists. We have open access policies for five of our subscription-based journals and provide gold open access publication through Science Advances. Additionally, all research of immediate relevance to public health, or that reports the reference sequence of a genome, is freely available upon publication.

Most relevant, it is already our policy that authors who publish with one of our journals can make the accepted version of their manuscript publicly available in institutional repositories

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WHAT THEY ARE SAYING:
White House Federally Funded Research Guidance Hailed as a Win for Innovation and Equity

AUGUST 31, 2022

EDITORIAL

Public access is not equal access

On 31 August, the White House Office of Science and Technology Policy provided guidance for scientific publishing aimed at making publications and their supporting data—the products of federally funded research—publicly available online as early as possible by the end of 2022. The American Association for the Advancement of Science (AAAS), the publisher of *Science* and the Science family of journals, strongly supports this guidance. As writers, several paths to public access remain possible. It will matter greatly to the scientific enterprise which becomes predominant.

As a scientific membership organization, AAAS looks at public access through the lens of scientists and organizations. We have operational units across public access—

“Public access should foster a diverse universe of authors and readers...”

Research, not yet released, and much more. It also discourages an academic or smaller schools, including historically Black colleges and universities, and to encourage disciplines like math and the social sciences, although it cautions “open access” or “preprints” that would not be infeasible for many scientists and institutions.

AAAS, like AAAS, believes the scientific enterprise should be in a position to make the best use of every paper. It is a question of revenue that must be published somewhere in a publisher's ecosystem. The primary incentive for publishers is to assign more papers, which further advances scientific publishing more widely, and allows the scientific literature. As a publisher of a gold OA journal, we've made the

choice to maintain editorial quality and not accept papers just to meet financial targets—but we understand the temptation.

As a scientific membership society, AAAS will be the best path forward for the enterprise. It seems, we are actively seeking to balance the tension between equitable access for readers and equitable access to publishing.

As such, we're in a good position to make available through progressively priced license models that research institutions pay more. We will

also support broader public access through a public utility “open OA model” which allows Science authors to post their “white accepted manuscript” to fully open-research and, instead, submit, submit, or license additional fees in a publicly regulated market. This approach allows immediate public access without requiring authors to pay a prohibitive charge, while maintaining the ability of Science to fund its mission of conducting groundbreaking research, discovery and disseminating the results of research to society.

AAAS recognizes that its approach is not perfect and we will work for all journals, so we continue to explore other ideas. We are eager to work with the White House, funding agencies, and supporters to develop a plan that is the optimal route for authors and readers. In the meantime, we appreciate comments that would change or correct published and placed into the public realm regardless of a scientist's geographic location, institutional affiliation, academic rank, or identity. We must not see more structural inequity into the very fabric of the enterprise we seek to improve.

—Sudip Parikh, M. Malcolm, Bill Moran

Published in the September 2022 issue of *Science* magazine

SCIENCE | SEPTEMBER 2022 | VOL. 367 | NO. 6461 | 1281

Sudip Parikh is the chief executive officer of the American Association for the Advancement of Science (AAAS) and executive vice president of Science Advances.

M. Malcolm is senior advisor and director of I&D Change at AAAS.

Bill Moran is the executive director of the Science Journal at AAAS.



Exploring the Hidden Impacts of Open Access Financing Mechanisms

AAAS SURVEY ON SCHOLARLY PUBLICATION EXPERIENCES & PERSPECTIVES

EXECUTIVE SUMMARY

Broad access to rigorous, peer-reviewed scientific information is critical to scientific innovation and US global competitiveness. Over the past two decades, US policy has focused heavily on increasing access to published research with tremendous benefits for science and society. The White House Office of Science and Technology Policy (OSTP) recently released guidance aimed at making scientific publications supported by federal funding publicly available without an embargo by the end of 2025.

While open access has tremendous benefits, the primary mechanisms that have evolved to enable OA for publishers—the article processing charge (APC)—has created concerning unintended consequences. APCs, which are fees paid to publishers, have increased in a pay-to-publish model that is contributing to equity issues for those who publish and where, in a recent survey, the American Association for the Advancement of Science (AAAS) sought insight into researchers' and institutions' opinions on scientific publishing, we received complete responses from 422 researchers across the country and learned that:

- Most Researchers Do Not Currently Budget for Publishing Costs & Many Have Not Yet Seen APCs: Nearly two-thirds of researchers (67.6%) reported that they did not budget for publishing costs, slightly over one-third had never paid APCs.
- Most Researchers Find It Difficult to Obtain Funds for APCs: Of the researchers who had paid APCs (34.7%), most reported it being very difficult (62.3%) or difficult (32.3%) to obtain funds to pay APCs. Researchers at institutions ranging from 1,000 to 10,000 students were three times as likely to find it difficult to very difficult to obtain funds as institutions larger than 10,000 students.

Recommendations
Ensuring the publication of research is a public good and should be supported by the federal government. AAAS recommends study, evidence-based solutions, and implementation of a national infrastructure to fund open access publishing.

- Data is critical to inform policy and practice.
- AAAS strongly encourages the development of a national infrastructure to fund open access publishing.
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- AAAS strongly encourages the development of a national infrastructure to fund open access publishing.



Leading on Equitable Access for Authors to Publish Open Access

Comments to Draft Agency Plans



External Presentations



Co-Hosted Webinar with NSF

WEBINAR
How can public access advance equity and learning?

JULY 17, 2023
11:30 a.m. - 1:00 p.m. ET

Global Discussions



Thought Leadership

EDITORIAL

Public access is not equal access

On 25 August, the White House Office of Science and Technology Policy provided guidance for scientific publishing aimed at making publications and their supporting data—the products of federally funded research—publicly available without an embargo by the end of 2025. The American Association for the Advancement of Science (AAAS), the publisher of *Science* and the *Science* family of journals, strongly supports this guidance. As written, several paths to public access remain possible. It will matter greatly to the scientific enterprise which become predominant. As a scientific membership organization, AAAS looks at public access through the lens of scientists and engineers. We have experimented with various public access models over the past decade. The *Science* family has five subscription journals that libraries pay for access to content, and one journal for which authors pay an “article processing charge” to make the version of record of their paper freely available (“gold open access (OA)”). All six journals publish excellent science and influential analyses, but their sustainability models differ. Each model supports the high quality that authors, readers, librarians, and funders expect us to provide through rigorous peer review shepherded by professional editors, careful editing, access to all relevant data, striking and informative visuals, and an engaging website. Importantly, we put substantial post-publication resources into preventing misinformation by informing accurate coverage of research through mainstream and social media.

From our experience, open and accessible data are essential to scientific integrity and reproducibility, and we require this accessibility immediately upon publication. Public access to trusted scientific information is also important, and situationally appropriate communication of accurate and understandable science with every audience is paramount. When any reader is unable to separate wheat from chaff, we must help by providing expertise to sift well-done from poorly done science.

Public access should foster a diverse universe of authors and readers regardless of their economic circumstances. This drives scientific excellence and public understanding. Some models for public access are bad for inclusivity. Gold OA journals, for which authors pay publication charges, work for senior scientists who are well-funded, tenured, and overwhelmingly male and white, but not so much for early-career scientists who may be poorly funded, not yet tenured, and much more diverse, also disadvantaged are scientists at smaller schools, including historically Black colleges and universities, and in underfunded disciplines like math and the social sciences. Although it enables “open access” to readers, this model can be inequitable for many scientists and institutions.

Gold OA damages the scientific enterprise when it incentivizes a volume business model in which every paper is a quantum of revenue that must be published somewhere in a publisher's ecosystem. The perverse incentive for publishers is to accept more papers, which furthers academia's publish-or-perish mindset, makes predatory publishing more enticing, and dilutes the scientific literature. As a publisher of a gold OA journal, we've made the costly decision to maintain editorial quality and not accept papers just to meet financial targets—but we understand the temptation.

As a scientific membership society, AAAS seeks the best path forward for the enterprise it serves. We are actively seeking to balance the tensions between equitable access for readers and equitable access to publishing. As such, *Science* is made available through progressively priced licenses whereby larger, more research-intensive institutions pay more. We will soon provide immediate public access to all taxpayer-funded research through a policy called “green OA-zero day,” which allows *Science* authors to post their “author accepted manuscript” (a fully peer-reviewed and revised version), without delay or incurring additional fees, in a public repository of their choice. This approach allows immediate public access without requiring authors to pay a publication charge, while maintaining the ability of *Science* to fulfill its mission of communicating groundbreaking research discoveries and illuminating the impact of research on society.

AAAS recognizes that its approach is not perfect and may not work for all journals, so we continue to explore other ideas. We are eager to work with the White House, funding agencies, and anyone else to implement policies that optimize equity for authors and readers. In the meantime, our approach ensures that world-changing science is published and placed into the public realm regardless of a scientist's geographic location, institutional affiliation, academic rank, or identity. We must not sew more structural inequity into the very fabric of the enterprise we seek to improve.

—Sadip Parikh, Shirley M. Malcom, Bill Moran

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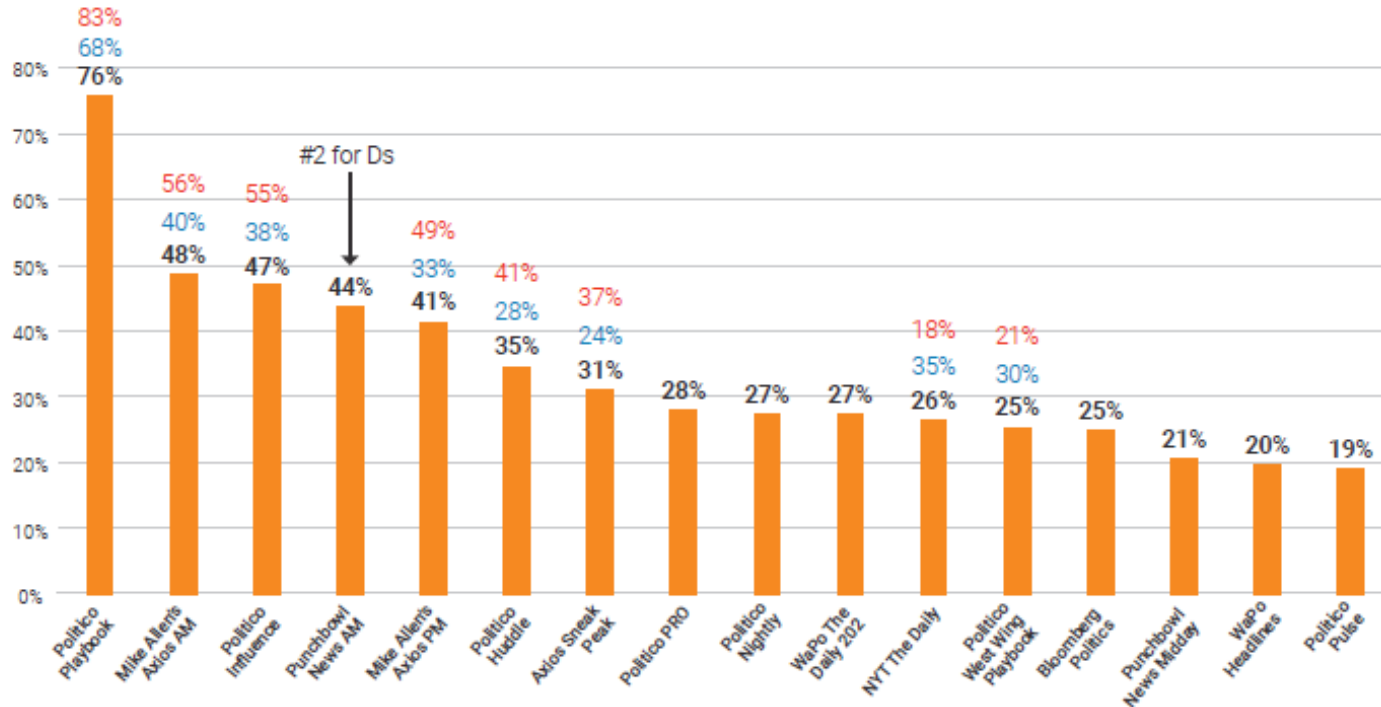
“Public access should foster a diverse universe of authors and readers...”

HOW ARE POLICYMAKERS GETTING THE NEWS?

THE TOPLINE

Newsletters Are The Dominant Source of Daily Information

Top Newsletters for Policy Insiders



2023 POLICY INSIDERS MEDIA HABITS

“POLICY PAK”: Science for policy—and policy-makers

Evergreen Topics for PolicyPak as Identified by Axios, WashPo, POLITICO Morning Tech & POLITICO Future Pulse

- Talent flows/immigration/healthcare workforce
- Artificial intelligence
- Quantum computing
- Climate insurance
- Social science and health disparities
- International collaboration
- Pollinator status
- Vehicle electrification
- Race and Justice
- And more....

Post Embargo List: Press officers are welcome to sign up!
policipak@aaas.org



The screenshot shows the header of a Science Press Package email. The header includes the Science Journals AAAS logo, the text "Policy Press Package", and social media icons for Facebook, Twitter, Instagram, and YouTube, along with the date "26 April 2024". The main content area is titled "Highlighted studies for the week of April 22-26..." and lists several research topics. On the right side, it states "This edition of the Science Press Package was produced by:" followed by the names of Zachary Graber and Matthew Wright. Below this, it lists contact information for the Science Family of Journals / AAAS, including email addresses and phone numbers for Zachary Graber, Meagan Phelan, and Matthew Wright.

Science | Policy Press Package
JOURNALS AAAS

26 April 2024

Highlighted studies for the week of April 22-26...

- Register now: April 26 news briefing with researchers who fought to unlock GLP-1 drugs for obesity ***Non-embargoed news briefing***
- Exposure to noise – even while in the egg – impairs bird development and fitness (*Science*)
- Conservation actions have improved the state of biodiversity worldwide (*Science*)
- Policy Forum: Corporate emission targets are incompatible with global climate goals (*Science*)
- More than 50% of plastic waste audited from 2018 to 2022 lacks branding, rendering its origins untraceable (*Science Advances*)
- Higher functional diversity can help imperiled Canadian drylands endure drought and climate change (*Science Advances*)
- ***FREE for two weeks*** Two decades of dengue surveillance in Thailand reveals how different viral types shape the risk of severe disease (*Science Translational Medicine*)

This edition of the Science Press Package was produced by:

- Zachary Graber
- Matthew Wright

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