

# Scholarly communications in the time of COVID-19

*Meagan Phelan, Science Press Package Executive Director*

# What you'll learn today

- What *Science* is seeing in terms of COVID submissions by authors
- How the *Science* Press Package is working to support contextualized communications of standard and COVID content (all on “immediate release” / no embargo)
  - -Wellcome Trust rapid data-sharing agreement
- What authors are saying about visibility at the preprint versus journal stage
- What reporters covering this fast-moving content are saying about challenges/limitations of covering non-embargoed studies
- NOTE: We still need to do more data gathering from PIOs



# AAAS

## Mission:

Advance science,  
engineering, and  
innovation throughout the  
world for the benefit of all  
people.

## AAAS Goal:

Enhance communication  
among scientists,  
engineers, and the public

# Publishing in Journal Doesn't End with "Accept"

Acceptance at one of the *Science* family of journals marks the beginning of a separate process to communicate scientists' work with public audiences



# The Science Press Package Team at AAAS

6,000+ reporters globally

5 science writers who “translate” science

4 Communications Associates (main author “touch point”)

6 Journals

5 Online Press Packages built every week, on EurekAlert!

# Helping 6,000 Reporters Plan Their Story Pipelines...

Slipping Away in South America: Distinct Bird-Plant Interactions that Will Be Hard to Restore

When Brazilian Atlantic forests are disturbed by humans, large-bodied birds and the plants whose seeds they disperse are especially threatened, a...



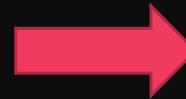
Himalayan Ice Loss Doubled in Recent Years, Cold War-era Spy Satellite Data Reveal

According to a new report based on declassified Cold War-era spy satellite film, Himalayan glaciers are receding twice as fast now as they were a...



An Ancient Organism's Feeding Habits Gives New Meaning to "Family Style" Meals

A new analysis of fossils from southern Namibia has allowed researchers to reconstruct the feeding habits of some of the earliest organisms in Ea...



## Himalayan glacier melting doubled since 2000, spy satellites show

Ice losses indicate 'devastating' future for region and 1 billion people who depend on it for water



va...html

# What's at stake?

“When I was in Congress, Congressmen told me they **read news pieces** on new research, not the research itself.”

- **Former AAAS CEO Rush Holt, Former Congressman**

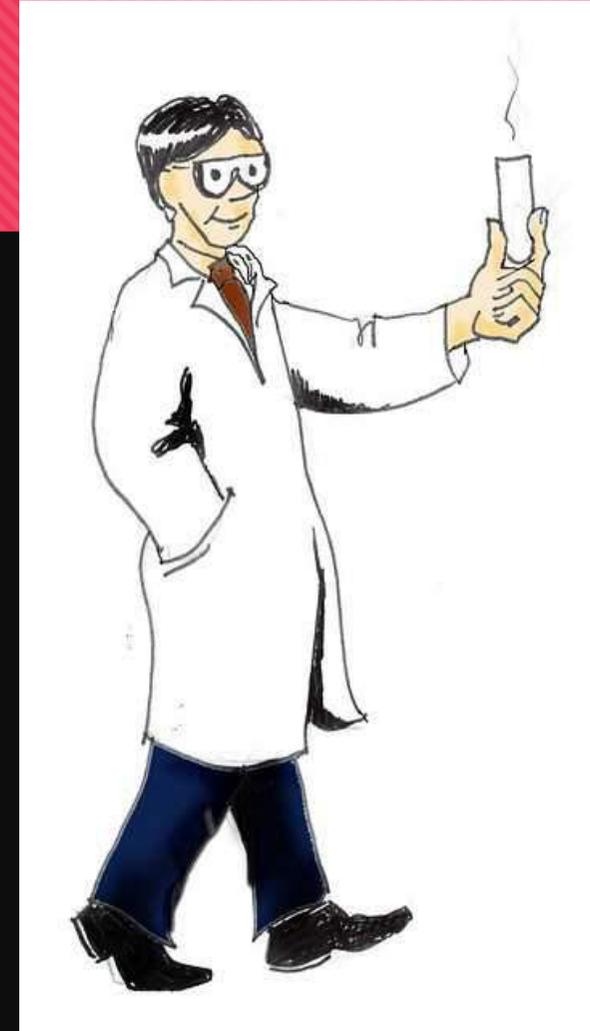




We want reporters to  
cover the science  
“right,” or not at all.

# We diagnose problems in science communication:

- Hype happens
- Basic research gets the boot



# Efforts that Matter

- “No” to hype
- “Yes” to context
- “Yes” to limitations



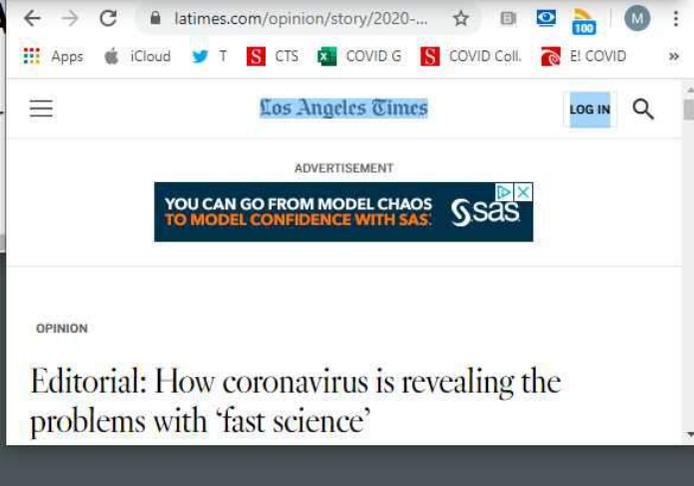
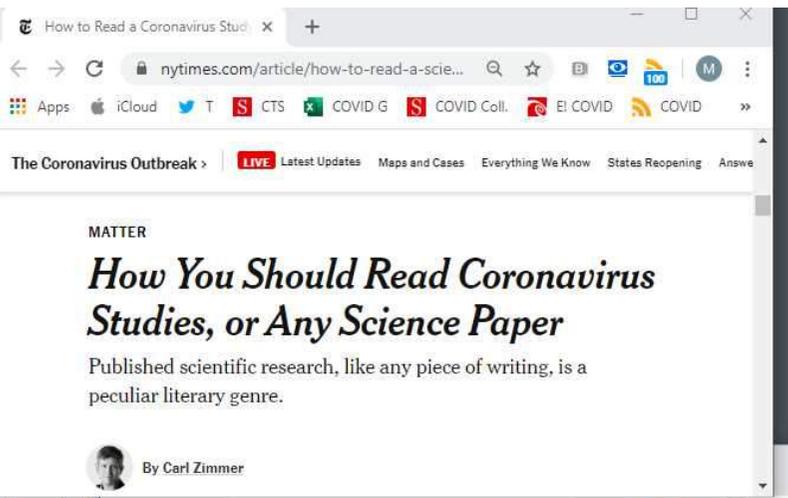
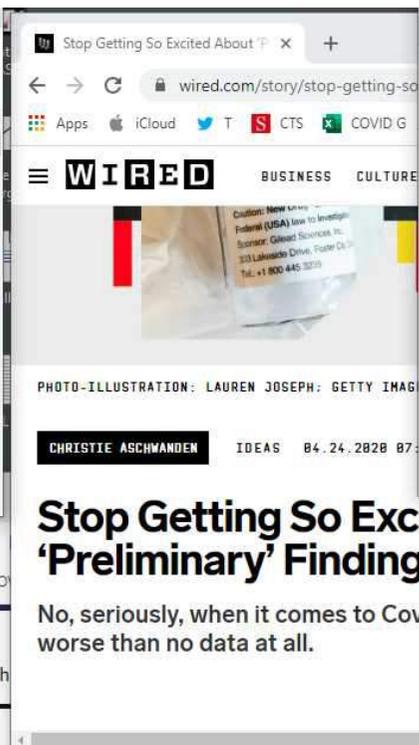
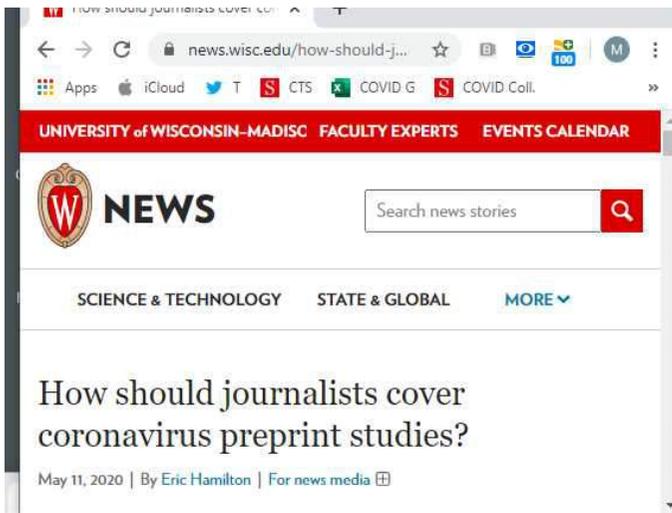
# Opening doors for scientists to press

- **Differentiate:** One-liner on how study moves field forward
- Consider **angles:** Pitch “surprisingly newsworthy elements” (*The Conversation*)
- Get **personal:** Is there a notable “personal story”?
- **Show us:**
  - **video** of methods/place/experiments/struggle
  - **infographic** (many free tools) to illustrate complicated data
- Be **transparent:** What this study does \*not\* say?
  - Limitations can make an interesting story

# Opening doors for scientists to press, public

- Engage
  - with **local** reporters
  - with **foreign** reporters
  - via **teleconferences**, connecting with many reporters
  - via **Facebook Lives** (post-pub), connecting with the public
- Develop **social media** messages (post-pub)
  - What **popular hashtags** relate to the work?

**First pandemic with  
preprints  
used at such scale**



Covid-19  
Scientific research on the coronavirus is being released in a torrent



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Reported Features

## Problems with Preprints: Covering Rough-Draft Manuscripts Responsibly

June 1, 2020 Roxanne Khamisi



Cold  
Spring  
Harbor  
Laboratory

**bioRxiv**

THE PREPRINT SERVER FOR BIOLOGY

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bioRxiv is receiving many new papers on coronavirus SARS-CoV-2. A reminder: these are preliminary reports that have not been peer-reviewed. They should not be regarded as conclusive, guide clinical practice/health-related behavior, or be reported in news media as established information.

COVID-19 SARS-CoV-2 preprints from [medRxiv](#) and [bioRxiv](#)

# What are we seeing at the *Science* journals?

Journal	Submissions	Accepts	Accept Rate	Preprint Ct	% w/ preprints
Science	1405	60	4%	459	33%
Science Advances	740	19	3%	246	33%
Science Immunology	161	8	5%	40	25%
Science Robotics	4	0	0%	0	0%
Science Signaling	18	1	6%	4	22%
Science Translational Medicine	356	8	2%	141	40%
	2684	96	4%	890	33%

# How is *Science* operating in COVID times?

- Faster review
- Expert editor-guided peer review, including for statistical rigor
- Edits that
  - remove claims;
  - firm up conclusions by asking for more data;
  - improve reproducibility by asking for more methods
- Focus on communicating context and limitations
- Focus on broad, accurate dissemination

# Communicating COVID-19 at *Science* Press Package

- Issue lay summaries to press under embargo
  - Convey advances and limitations
- Hold teleconferences (the same day)
- Hold Facebook Lives
- Highlight new research on social media
- Share lay summaries w/ policymakers

Health

## Coronavirus immunity remains big question mark for a country eager to reopen



A man's blood is collected for testing of coronavirus antibodies at a drive-through site in Long Island. (Tech View/AP)

By Joel Achenbach, Carolyn Y. Johnson and Paige Winfield Cunningham

Altmetric

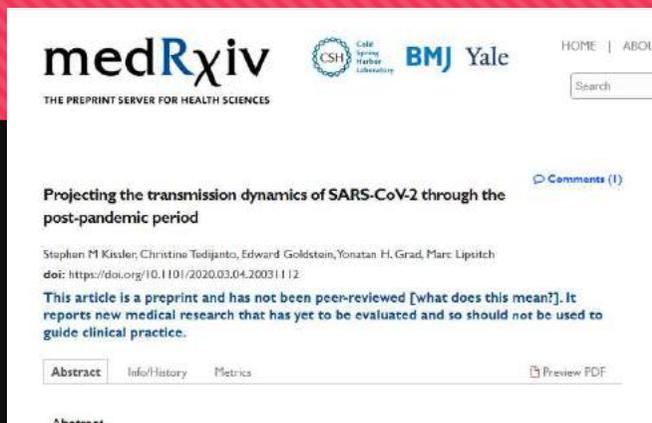


- Picked up by **548** news outlets
- Blogged by **47**
- Referenced in **1** policy sources
- Tweeted by **27711**
- On **23** Facebook pages
- Referenced in **1** Wikipedia pages
- Reddited by **27**
- Highlighted by **1** platforms

# Author feedback: preprint v journal visibility

“We had an **associated preprint** and received some press interest from that, but the **visibility expanded massively** with publication in *Science*.”

“Publishing in *Science* helped our article gain visibility **within the field** and gave it a **stamp of approval** that increased its profile substantially over the preprint. Publishing in *Science* also helped our work **enter into policy and mainstream conversation** almost immediately.”



The screenshot shows the medRxiv preprint server interface. At the top left is the medRxiv logo with the tagline 'THE PREPRINT SERVER FOR HEALTH SCIENCES'. To the right are logos for CSHL (Cold Spring Harbor Laboratory), BMJ, and Yale. A search bar is located in the top right corner. The main content area displays the title 'Projecting the transmission dynamics of SARS-CoV-2 through the post-pandemic period' with a 'Comments (1)' link. Below the title, the authors are listed: Stephen M Kissler, Christina Todjanto, Edward Goldstein, Yonatan H. Grad, Marc Lipsitch, with a DOI link: <https://doi.org/10.1101/2020.03.04.20031112>. A warning box states: 'This article is a preprint and has not been peer-reviewed [what does this mean?]. It reports new medical research that has yet to be evaluated and so should not be used to guide clinical practice.' At the bottom, there are tabs for 'Abstract', 'Info/History', and 'Metrics', along with a 'Preview PDF' button.

## More author feedback from a COVID-19 author:

“Since publication of my Policy Forum in *Science*, I have been contacted by and met with representatives of **Gates Foundation, Pew Charitable Trusts, and WHO** to discuss various aspects of the paper.”

“**Pick-up among policy people** seems to be much stronger than I had even hoped.”

@MeaganPhelan @ScienceMagazine @AAAS

... for example, from the long-standing success of the arXiv e-print repository in fields of physics, mathematics, and computer science, fueled by a combination of grants, in-kind support, and institutional memberships.

... struggle for control over information knowledge looms large. When Berners-Lee created the World Wide Web, his intention was to enable researchers to share their work. Not only have our research communication tools and practices thus far fallen short of the decentralization that the Web made possible, but the evolution of the Web itself also reminds us that making vast amounts of linked data readily accessible to all parties can trigger a number of unintended consequences. The dominance of a small number of social networks, shopping services, and search engines shows us that internet platforms based on data and algorithms can tend toward monopoly. In the search information space, contracts are being negotiated establishing de facto standards and conditions for how data analytics services are being provided. Learned societies are being wooed. Research assessment agencies are being proposed. Building blocks for publishing discipline portals are being tested. The time for the academic community to act in coordination is now. ■

### SCIENCE AND NOTES

... 8 April 2020; <https://groups.springer.com/jsp/groups/media/press-releases/>

### SCIENCE AND DECISION-MAKING: COVID-19

## Harnessing multiple models for outbreak management

Expert elicitation methods and a structured decision-making framework will help account for risk and uncertainty

By **Katriona Shea<sup>1</sup>, Michael C. Runge<sup>2</sup>, David Pannell<sup>3</sup>, William J. M. Probert<sup>4</sup>, Shou-Li Li<sup>5</sup>, Michael Tildesley<sup>6</sup>, Matthew Ferrari<sup>1</sup>**

**T**he coronavirus disease 2019 (COVID-19) pandemic has triggered efforts by multiple modeling groups to forecast disease trajectory, assess interventions, and improve understanding of the pathogen. Such models can often differ substantially in their projections and recommendations, reflecting different policy assumptions and objectives, as well as scientific, logistical, and other uncertainty about biological and management processes (1). Disparate predictions during any outbreak can hinder intervention planning and response by policy-makers (2, 3), who may instead choose to rely on single trusted sources of advice, or on consensus where it appears. Thus, valuable insights and information from other models may

... arise in group interactions, as agreeing with field “leaders” (dominant effects), focusing on suggestions raised in the process to the detriment of other (starting-point bias, groupthink, anchoring), the dominating effects of “loud voices,” overly rapid adoption of early ideas might, on more careful consideration, be correct (4, 5). In these formal methods, idea generation and idea evaluation are deliberately separated, allowing a fuller range of possibilities to be explored and a wide range of uncertainties to be assessed. As an example, in the IDEA protocol for expert elicitation (6), once experts are clear about questions, they individually provide their best estimates and ranges, receive feedback on how their estimates compare with others, discuss the results, and then provide an individual estimate. Some protocols, including IDEA, are designed to work remotely, an essential requirement in the pre-

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# Latest data from our reporter embargo survey

We ask reporters: How do you value embargoes?

- Very: 248 (45.8%)
- Moderately: 221 (40.8%)
- Not Very: 25 (4.6%)
- No answer: 48 (8.9%)

**N = 540+ reporters**

# What do reporters say?

- We don't have the time to do the author + outside expert interviews that we do when we have studies under embargo. – **Helen Branswell, STAT**
- We have less time, so we may not be able to contact as many outside **sources** (they are also very busy) – **Carl Zimmer, New York Times**
- It's harder than ever to get timely outside comment given that the infectious disease experts are all swamped. – **Lauran Neergaard, AP**
- ...we inevitably rely on **fewer sources** to evaluate them because of time pressure, with **simpler sanity checks** of the material rather than deeper parsing of methods (which is not good, to be clear, especially with some of the terrible preprints out there). – **Dan Vergano, BuzzFeed News**



## Christie Aschwanden

(journalist, author, editor)

“Where I’ve seen reporters go wrong on this is when they sort of grab these [preprints] because they want to be first,” Aschwanden says. “We do have pressure to be first and to break news, and I think preprints seem to offer this shiny opportunity to do that.”

“If a study is so weak that it warrants only critical coverage, then it might be a good decision not to give it more attention with a story,”

- The Open Notebook

# How do we help authors with preprint counterparts who are contacted by press?

- Encourage author to engage
- Author should convey to reporter, “my paper is under peer review but I’d like to take your questions now, to begin to answer them in-depth, so I can have answers ready when the peer-reviewed version is available”
- Author should return in-depth responses to reporter Sunday before publication, w/ peer-reviewed version as it rolls out in SciPak

○ "I use preprints to reduce the pressure on my work as it goes into journal peer review." – Yaniv Erlich



**Yaniv (((Erlich)))**

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Un-disciplined scientist.

[@MyHeritage](#)'s CSO. Previously, Prof. of CS at [@Columbia](#) U and PI at Whitehead Institute of MIT. Erdős–Bacon number=5.

📍 New York, NY, USA [🔗 TeamErlich.org](#) 📅 Joined February 2012

**367** Following **13K** Followers

Question for  
reporters to  
consider:

**What fraction of  
preprints on COVID-  
19 are not being  
published in  
journals?**

# Science Press Package work in Japan

# Questions?

@MeaganPhelan @ScienceMagazine @AAAS