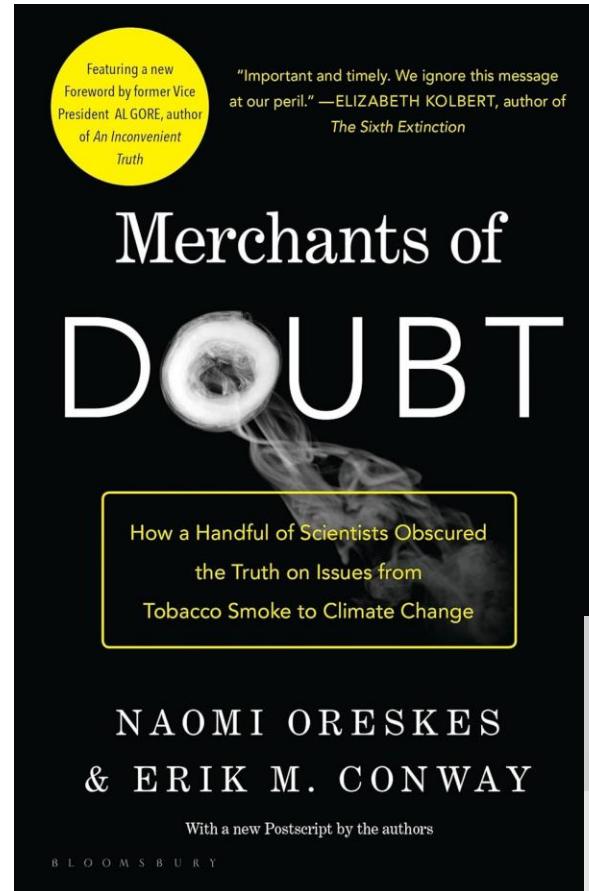


Class Reading and Assignments

- Three chapters of Merchants of Doubt required before Dr. Oreskes meets with the class
- All other reading will be papers and articles available in shared Zotero library.
- Assignments will be related to reading and some will be part of the group project.



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Members	2
Group Type	Public, Closed Membership
Group Library	Anyone can view, only members can edit

Group Invitations

Science Public Information Network

Join Ignore

Preparation for Guest Speakers

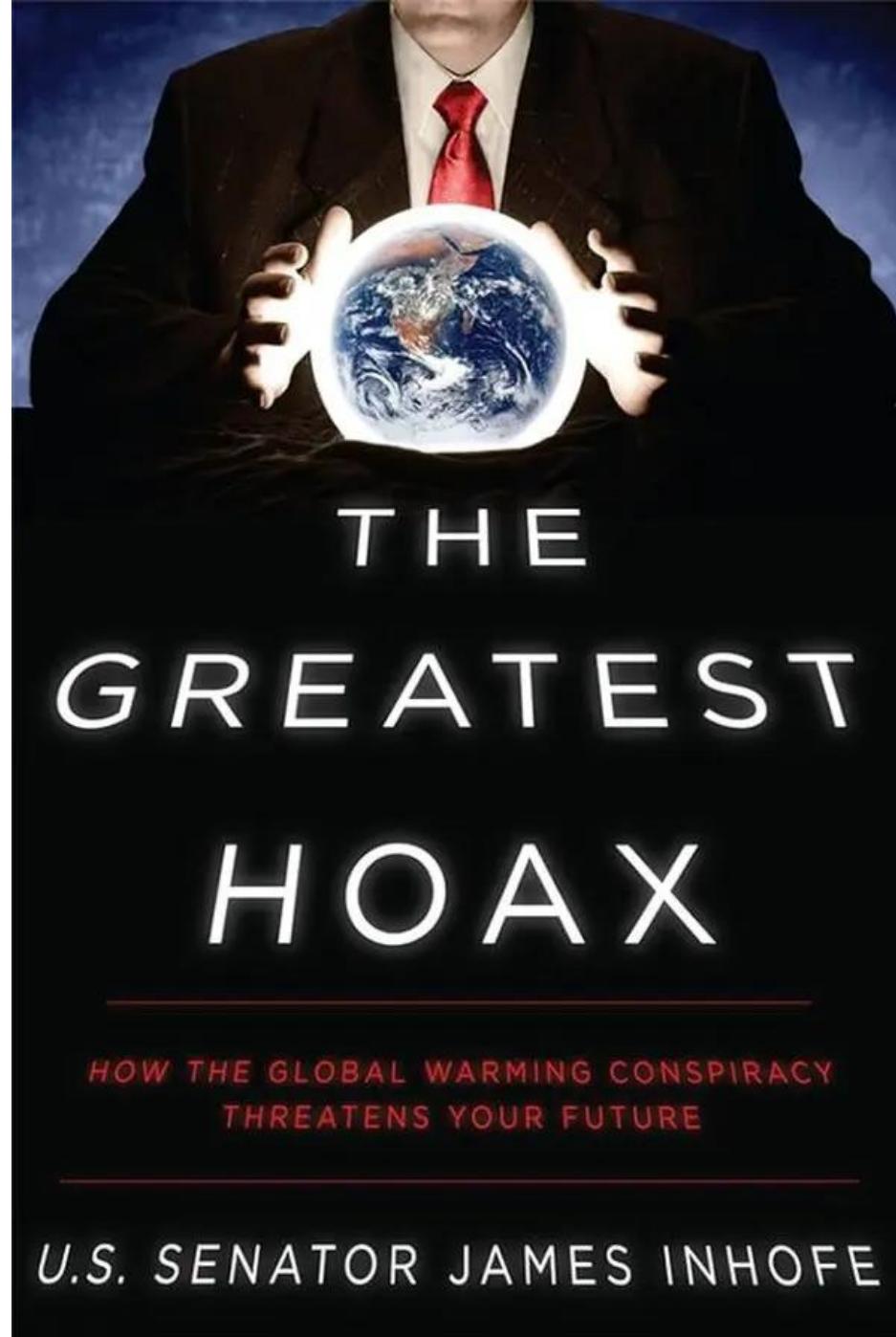
- Readings should be done BEFORE lectures
- For each guest speaker, you will need to submit a question based on the reading
- All guest speakers will be done on Zoom

Date	Topic	Guest Speaker
4/7/25	The Limitations of Peer Review	Boyana Konforti – Former Editor of F1000
4/14/25	Retraction and the problem of metrics	Ivan Oransky – Founder of Retraction Watch
4/21/25	New Models for scientific publishing	Stefano Bertozzi – Former Dean of Berkeley SPH and Editor of Rapid Reviews in Infectious Disease
4/28/25	Disinformation and the Merchants of Doubt	Naomi Oreskes - Harvard Professor and author of Merchants of Doubt
5/7/25	Distilling Science- Expert Panels	Bruce Alberts – Former President of the National Academies of Science
5/21/25	Dissemination and credibility of science misinformation on the internet	Mallory Harris and Kate Starbird – Professors at UMD and UW
5/28/25	Combatting Misinformation	Joe Bak Coleman The Berkman Klein Center for Internet & Society at Harvard University
6/2/25	Case Study 4: COVID Vaccines	Peter Hotez – Baylor University Vaccine Expert

Misinformation Case Studies

Each student will identify an example of scientific misinformation from a field of their choosing and present a report to the class describing the following:

- The study, its findings, and its flaws.
- Its dissemination in the scientific and non-scientific communities
- The role of the conventional media and social media in its spread
- The impact on public opinion and public policy
- Strategies for responding to misinformation
- Present to the class



Assignments and Grading



Class Reading and
Assignments – 20%



Preparation for guest
speakers – 20%



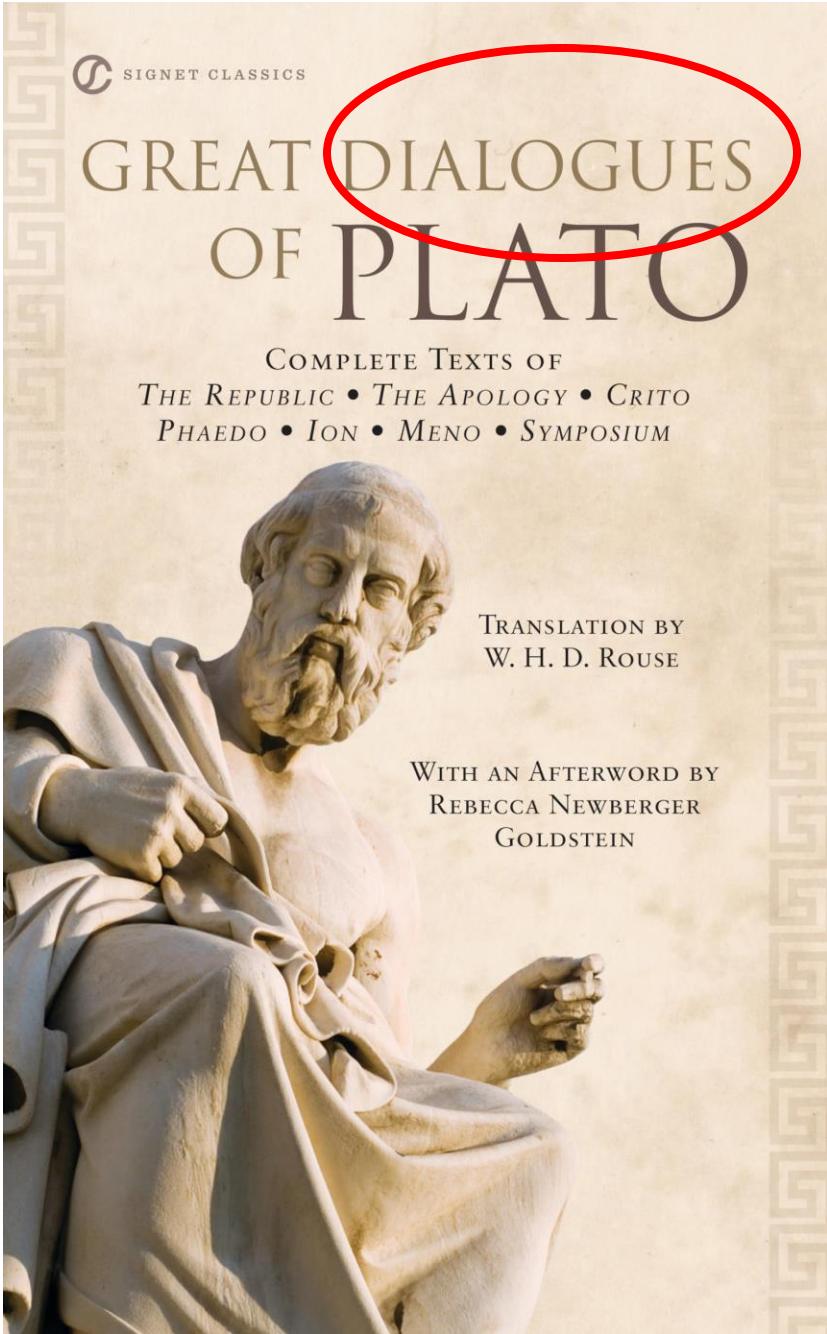
Misinformation Case
Study – 30%



The Public Health
Collaborative Journal
Project – 30%

Without
Communication,
There is No
Science



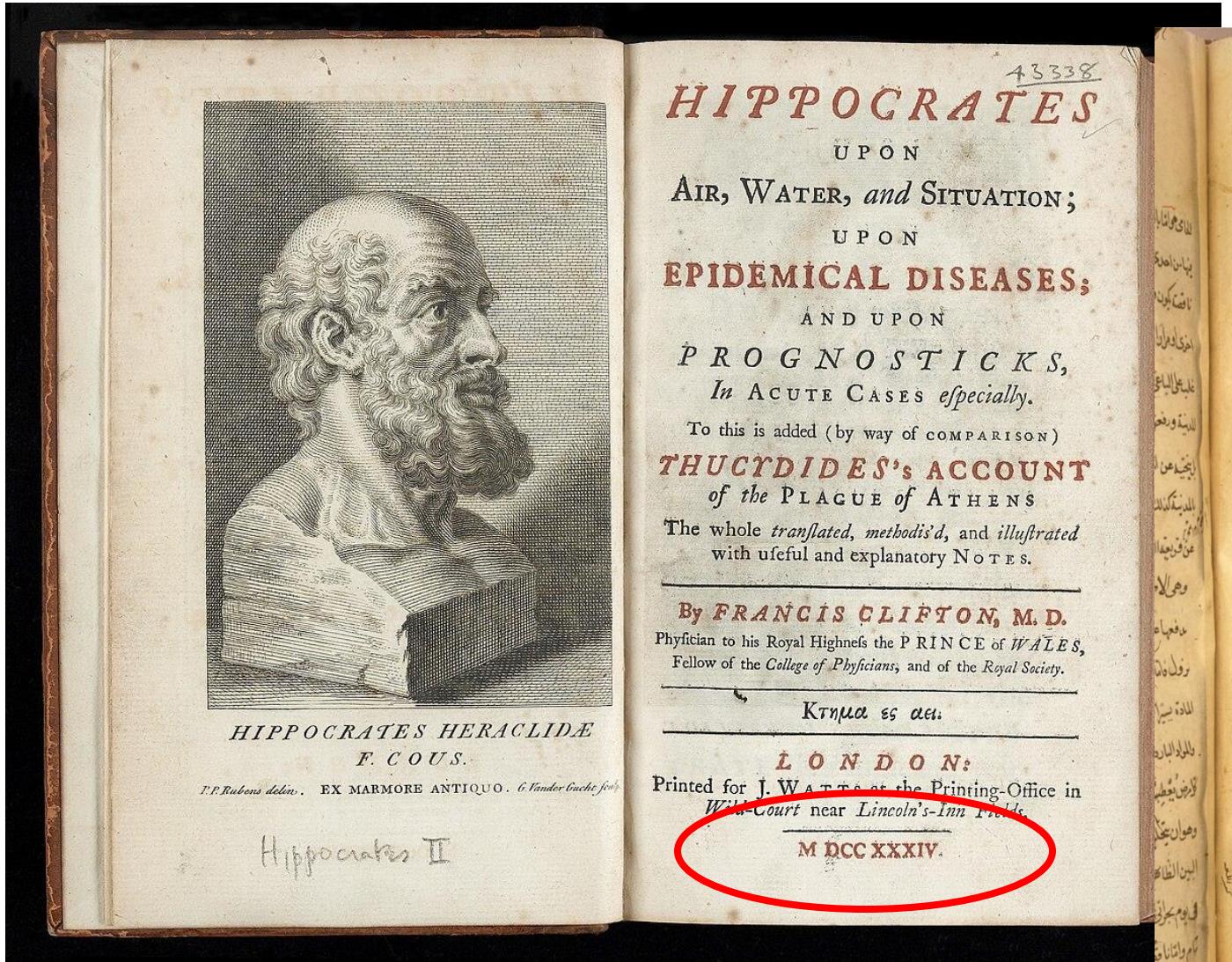


Science Began as a Conversation

We Know About
It Because It
Was Written
Down



The Birth of Public Health Communication



43338

Vita brevis aet uolo
ga: tempus autem
aratum: exprimitur fal-
lax: indubius aut difficile.
Opereris autem non solum
se ipm prebere faciet
que erit, sed etiam exag-
rare et presentis ea
que extremitatis sunt.
In perturbationibus uer-
is et uomitibus qui spu-
re fuit: siq[ue]t qualia
oportet purgari pur-
gari: et coferat et bri-
ferunt. Si uero non: conra-
tuiz. Sic et manutie-
figitez quales oportet.
Pueri fratres: et coferat et
ben ferunt. Si uero non co-
trariunt: Contemplari
ig[ne]t oportet. et ipsu[m]
et regionem: et estates:
et egestitudines in q[ui]bus
oportet: autem no[n].

Temores et certe die-
te iaduimus sic
passionib[us] et iacutis ep-
ritudinib[us] q[uod] non que-
nunt difficiles. Ad ulti-
miz remittantur: que
adduntur diete difficiles
et ierum resumptiones
iunctio existens difficiles.

In exercitatuibus
ad sumum bone-
habituidines fut falla-
ces. si in ultimo fut.

لماي و ملابا
بليسا و ملابا
ناصه بوكون
بردي افولان
علاب على البا
اللبيه و ملابا
بريجن عن
المدرسه كلما
عن دينها
وهي الا
دفعها
رول فدا
المادة سير
بالليل الباره
لا يضر بعيلها
رووان عدن
البن الفاكه
في يوم بحر
كم و ملابا

حکام البهان
ت النفع و ما يحقق
الجذب و غير المحبة
زفة و نعم المعرفة
لهم حمال المأرين من
سقوطها و معزتها
المقال الأول
نیروالر ف البهان
سلفي الخطاب
الجانب المرض
هذا ان المرض
ان الحافظة وقد
بعضها القاتل
وابس مثلك
الدائم شکر الفضل
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E Filosofo, e Matematico primario del
SERENISSIMO
GR.DVCA DI TOSCANA.

*Doue ne i congressi di quattro giornate si discorre
sopra i due*

MASSIMI SISTEMI DEL MONDO
TOLEMAICO, E COPERNICANO;

*Proponendo indeterminatamente le ragioni Filosofiche, e Naturali
tanto per l'una, quanto per l'altra parte.*

CON PRI

VILEGI.



IN FIORENZA, Per Gio: Batista Landini MDCXXXII.

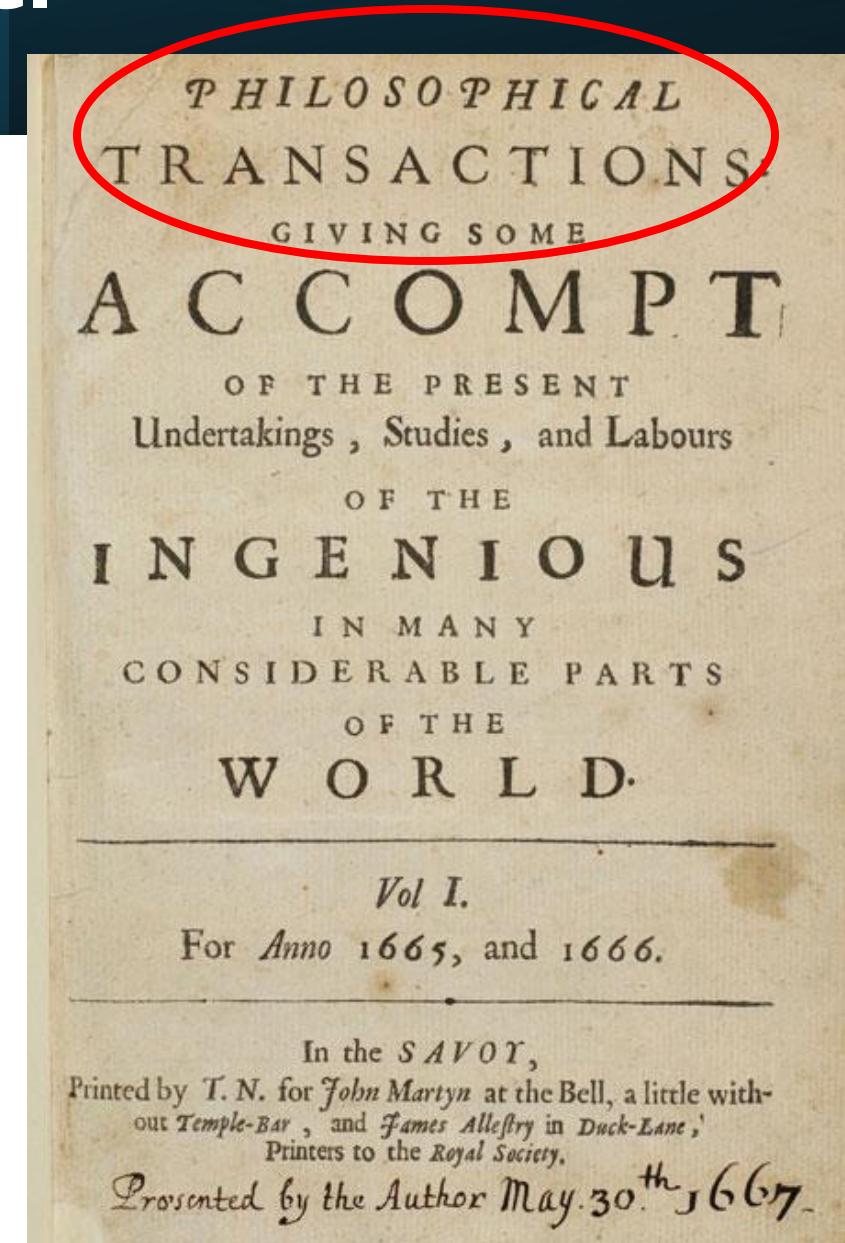
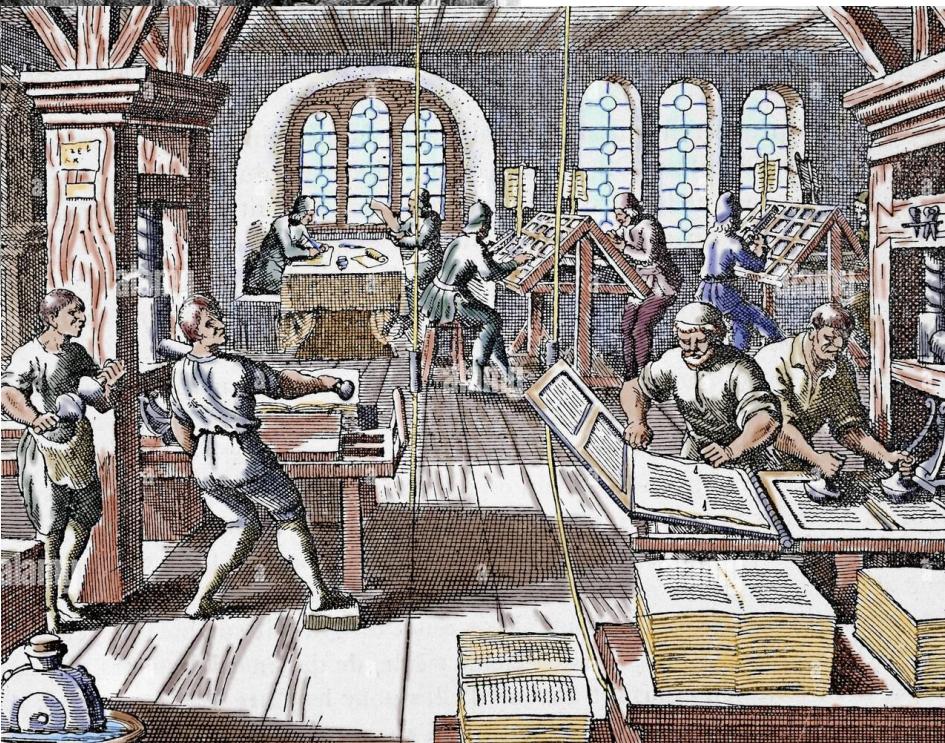
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The Birth of Scientific Journals

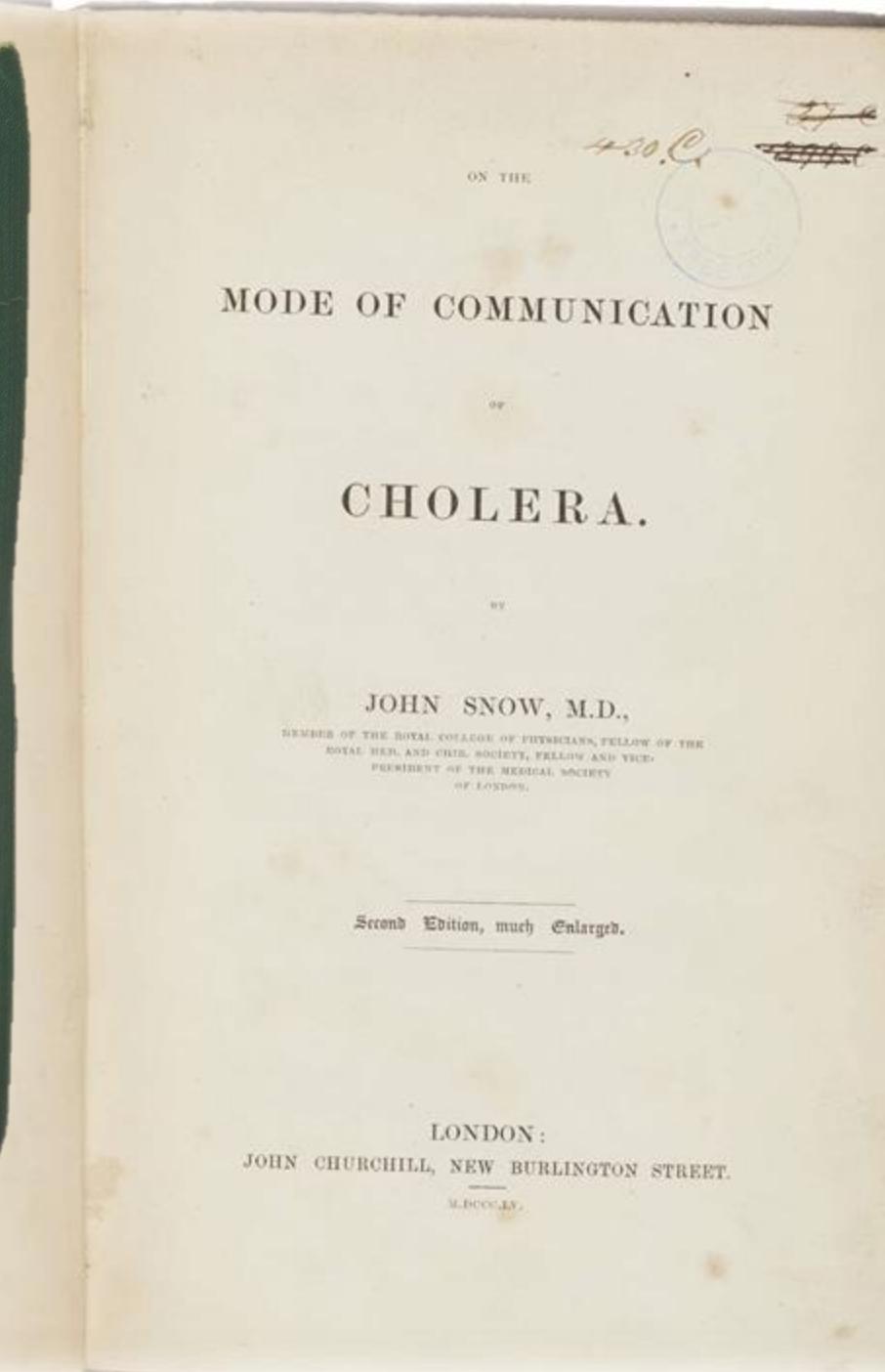
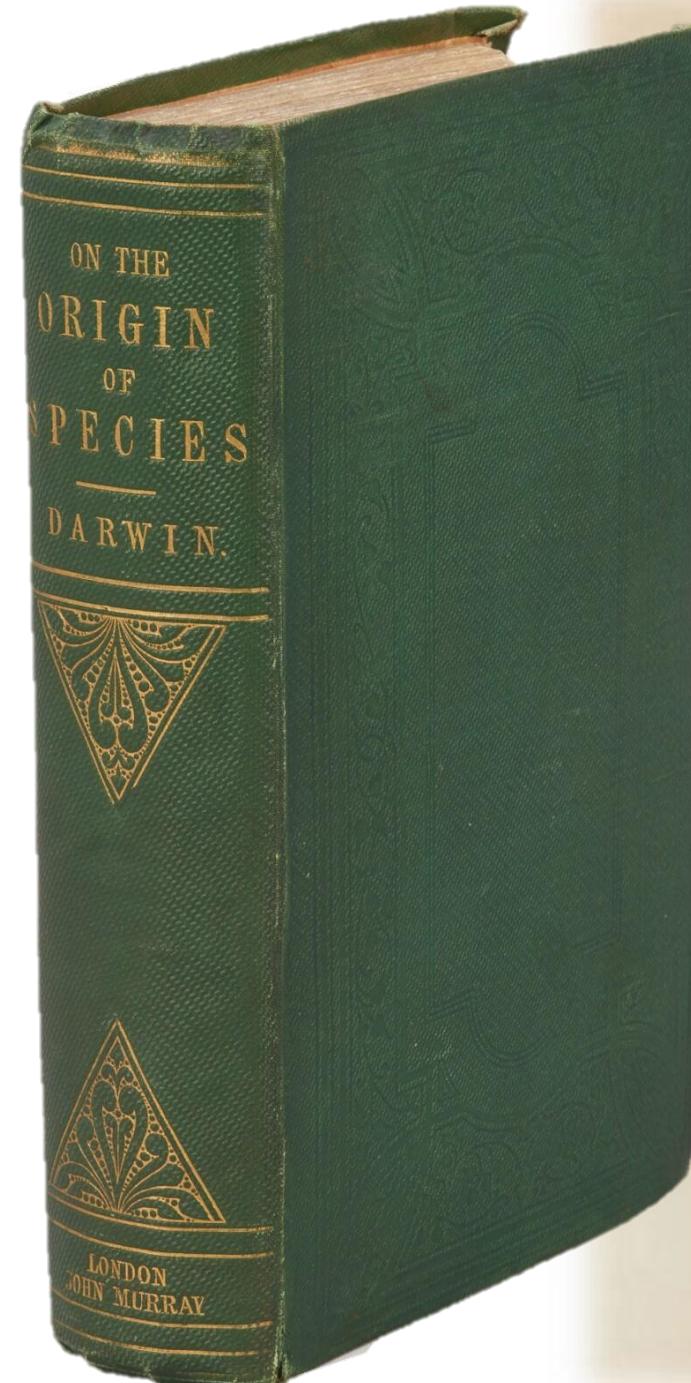
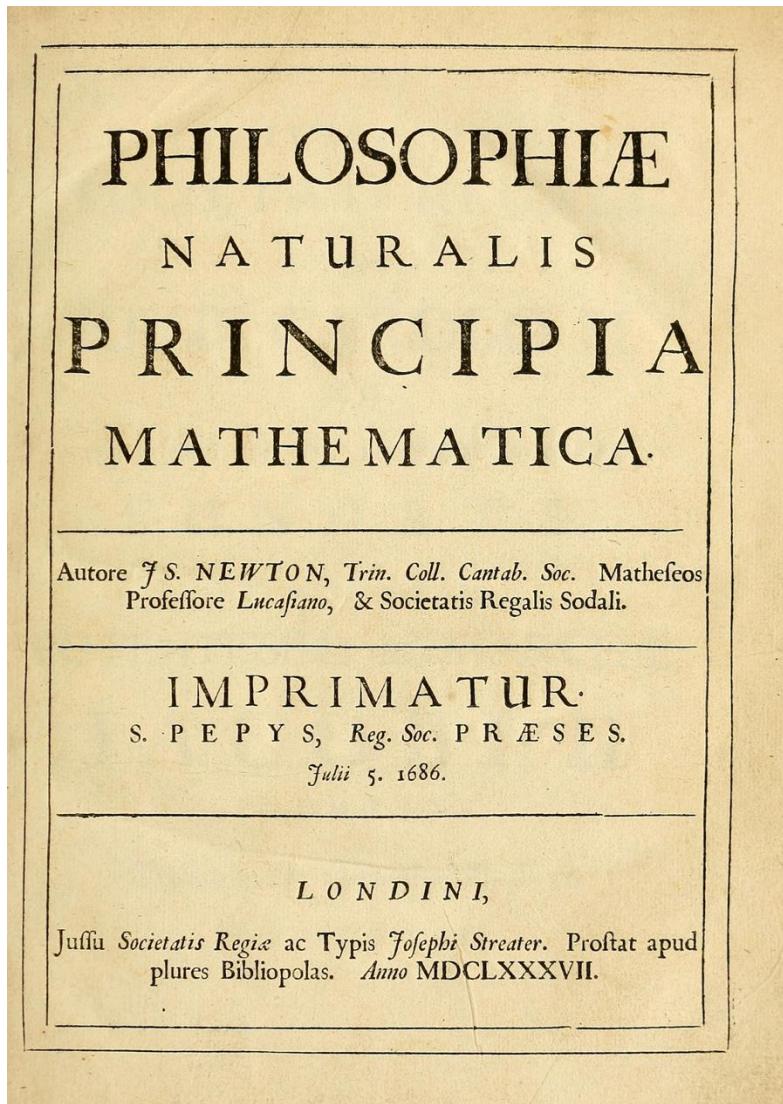


The Birth of Scientific Journals

Printing Press Model



Big Scientific Ideas Were in Books



JOUR
OR THE
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CONTAINING
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THE
FIELD NATURALIST
MAGAZINE.
JANUARY.



"First, to place before the general public the grand results of scientific work and scientific discovery, and to urge the claims of science to a more general recognition in education and in daily life; and secondly, to aid scientific men themselves, by giving early information of all advances made in any branch of natural knowledge throughout the world."



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WILLIAMS &
14, HENRIETTA STREET, COVENT GARDEN,
AND 20, SOUTH FREDERICK STREET, BIRMINGHAM.
1878.

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It is matter of common observation that whenever his appearance in a district, he is soon surrounded by birds, particularly swallows, which dart at him and to purpose, as may be supposed, of distracting his attention.

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A WEEKLY ILLUSTRATED JOURNAL

"To the solid ground,
Of Nature trusts the mind which builds for aye."

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THURSDAY, NOVEMBER

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The FELLOWS of the ROYAL SOCIETY are hereby informed that the First part of the PHILosophical TRANSACTIONS, Vol. CLIX, for the year 1865, is now published, and ready for delivery on application at the Office of the Society in Burlington House, daily, between the hours of 10 and 4.

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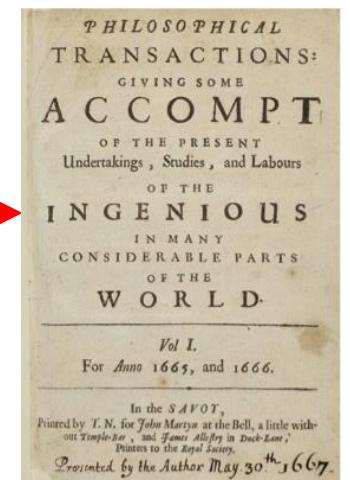
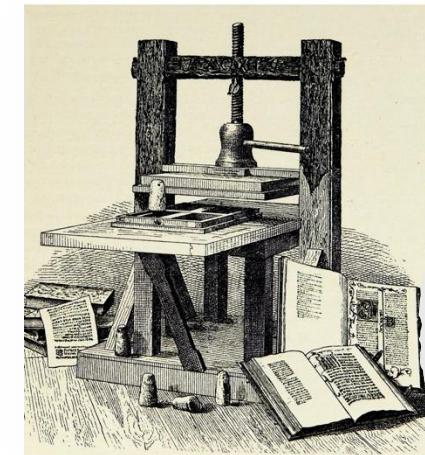
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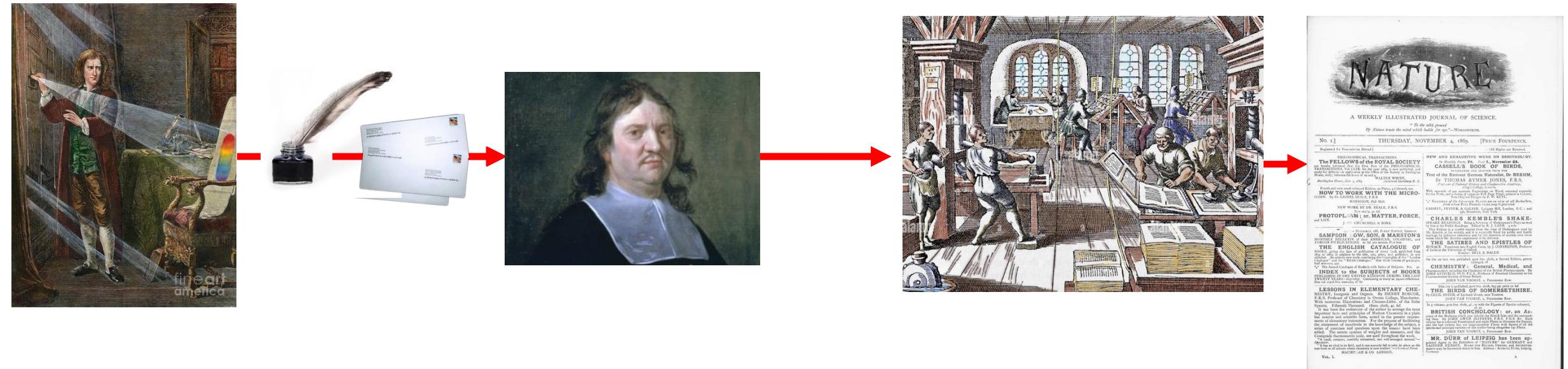
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The Evolution of Scientific Publishing 1660 – 1860

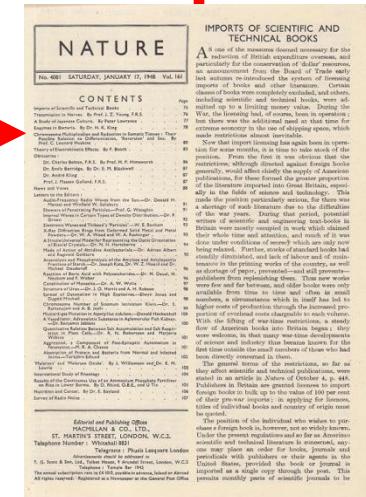
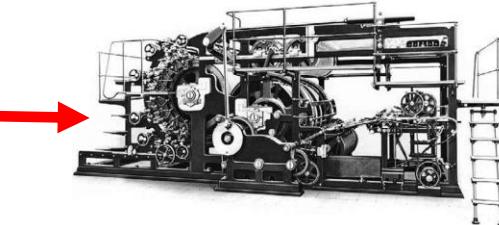


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1660 – 1860



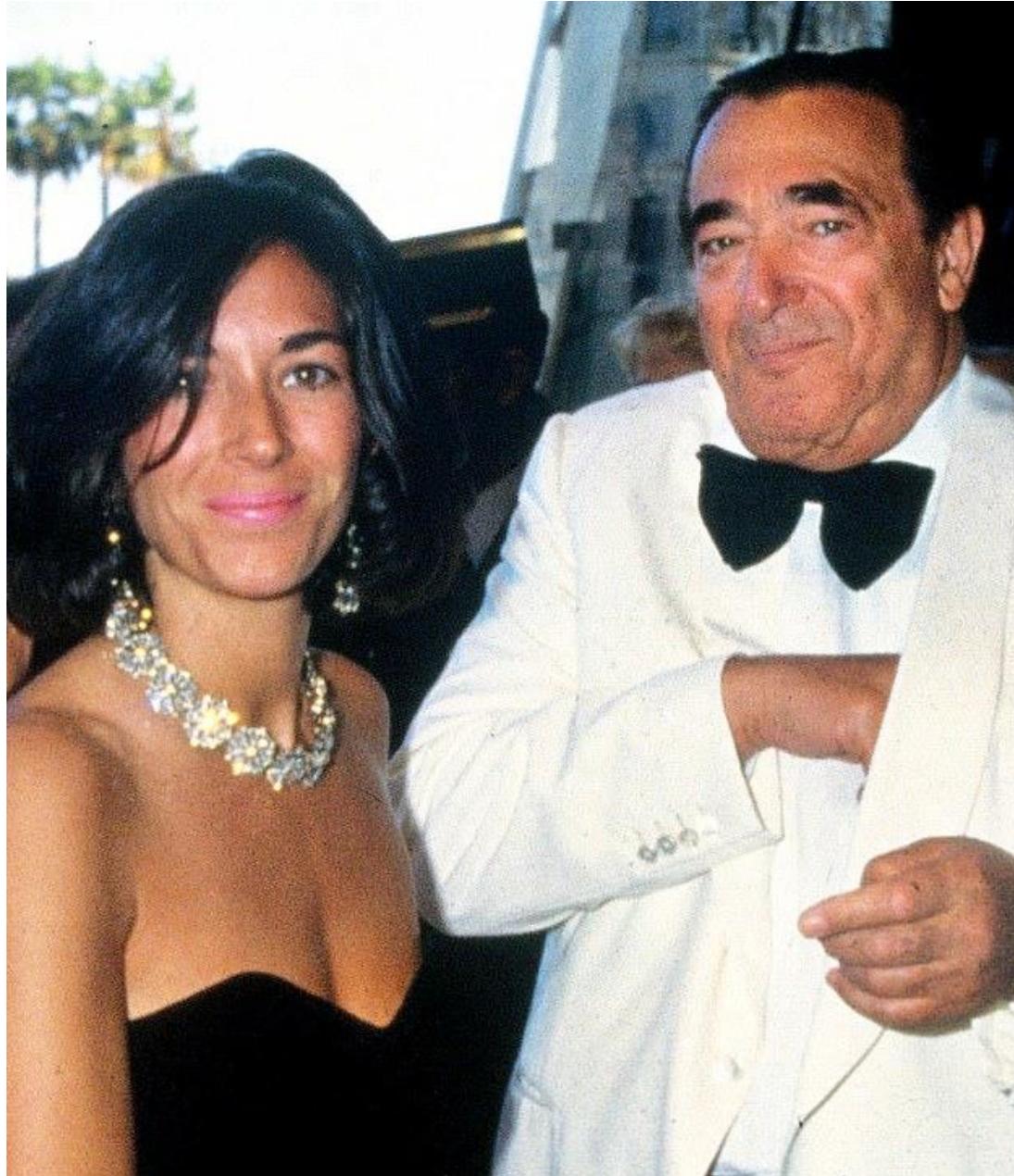
The Evolution of Scientific Publishing 1860 – 1950



The Rise of Grant Funded Science

- The Rise of For-Profit Scientific Publishing

The Maxwell Model



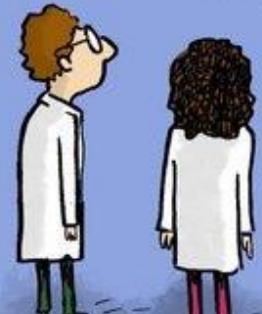
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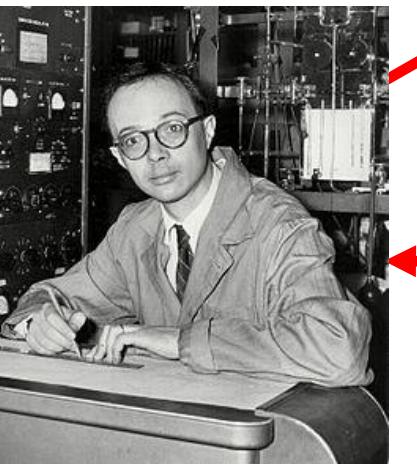
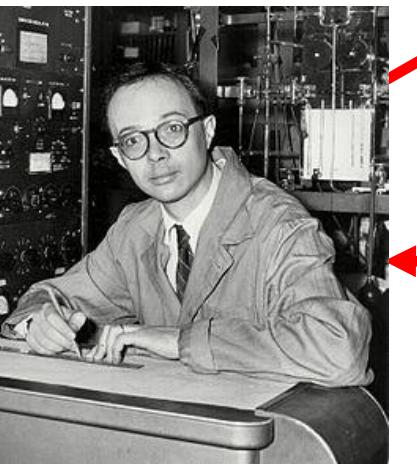
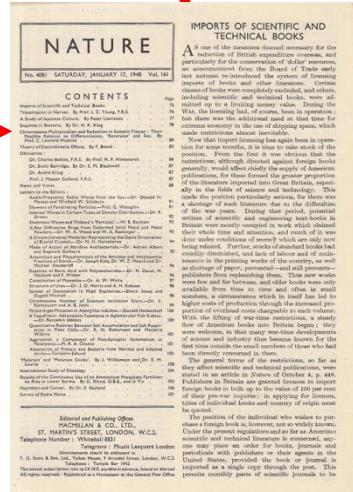
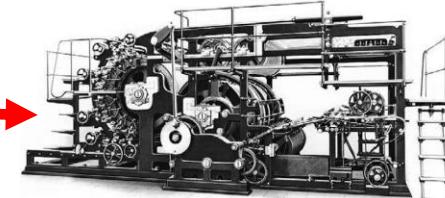
PEDROMICS

Conventional Publishing is Exploitative

- **\$25 Billion per Year**
- **>30% Margins**
- **Billions in free labor**
- **Financial model based on limiting access**



The Evolution of Scientific Publishing Technology and the Rise of Peer Review



Peer Review Is Inadequate

Effect on the Quality of Peer Review of Blinding Reviewers and Asking Them to Sign Their Reports

A Randomized Controlled Trial

Fiona Godlee, BSc, MRCP; Catharine R. Gale, BSc; Christopher N. Martyn, DPhil, FRCP

Context.—Anxiety about bias, lack of accountability, and poor quality of peer review has led to questions about the imbalance in anonymity between reviewers and authors.

Objective.—To evaluate the effect on the quality of peer review of blinding reviewers to the authors' identities and requiring reviewers to sign their reports.

Design.—Randomized controlled trial.

Setting.—A general medical journal.

Participants.—A total of 420 reviewers from the journal's database.

Intervention.—We modified a paper accepted for publication introducing 8 areas of weakness. Reviewers were randomly allocated to 5 groups. Groups 1 and 2 received manuscripts from which the authors' names and affiliations had been

PEER REVIEW, as usually practiced by biomedical journals, protects the identity of reviewers but not of authors. Concerns about bias, lack of accountability, and poor quality of peer review have brought this practice into question. Two interventions, which together would reverse the balance of anonymity, have been suggested as possible solutions: removing authors' identities from the manuscript (blinding) and asking reviewers to sign their reports (signing).¹⁻³

	No.	Mean No. of Errors Identified	Unadjusted Rate Ratios (95% Confidence Interval)	Adjusted Rate Ratios (95% Confidence Interval)*
Not asked to sign and not blinded	72†	1.9	1.0	1.0
Asked to sign and not blinded	30	1.8	0.9 (0.7-1.5)	0.8 (0.6-1.2)
Not asked to sign and blinded	59	2.1	1.1 (0.9-1.4)	1.1 (0.9-1.4)
Asked to sign and blinded	60	1.7	0.9 (0.7-1.2)	0.9 (0.6-1.1)

*Authors' identities (odds ratio, 0.5, 95% confidence interval, 0.3-1.0).

Conclusions.—Neither blinding reviewers to the authors and origin of the paper nor requiring them to sign their reports had any effect on rate of detection of errors. Such measures are unlikely to improve the quality of peer review reports.

Presented at the Third International Congress on Peer Review in Biomedical Publication, Prague, Czech Republic, September 18, 1997.

Reprints: Christopher N. Martyn, DPhil, FRCP, MRC Environmental Epidemiology Unit, University of Southampton, Southampton, England SO16 6YD (e-mail: c.martyn@mrc.soton.ac.uk).



The Limits of Conventional Peer Review

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ORIGINAL ARTICLE

Once-Weekly Insulin for Type 2
Diabetes without Previous
Insulin Treatment

Editor's Note: This article was published on May 1, 2020, at NEJM.org.

This article has been retracted.

ORIGINAL ARTICLE

Cardiovascular Disease, Drug Therapy, and Mortality in Covid-19

THE LANCET

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ARTICLES | ONLINE FIRST

RETRACTED: Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis

Prof Mandeep R Mehra, MD • Sapan S Desai, MD • Prof Frank Ruschitzka, MD • Amit N Patel, MD

Published: May 22, 2020 • DOI: [https://doi.org/10.1016/S0140-6736\(20\)31180-6](https://doi.org/10.1016/S0140-6736(20)31180-6) • Check for updates

Summary

Background

Hydroxychloroquine or chloroquine, often in combination with a second-generation macrolide, are being widely used for treatment of COVID-19, despite no conclusive evidence of their benefit. Although generally safe when used for approved indications such as autoimmune disease or malaria, the safety and benefit of these treatment regimens are poorly evaluated in COVID-19. TS

Methods

We did a multinational registry analysis of the use of hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19. The registry comprised data from 671 hospitals in six continents. We included patients hospitalised between Dec 2019, and April 14, 2020, with a positive laboratory finding for SARS-CoV-2. Patients who received one of the treatments of interest within 48 h of diagnosis were included in one of four treatment groups (chloroquine alone, chloroquine with a macrolide, hydroxychloroquine alone, or hydroxychloroquine with a macrolide), and patients who received none of these treatments formed the control group. Patients for whom one of the treatments of interest was initiated more than 48 h after diagnosis while th

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Letters | 7 July 2020

Effectiveness of Surgical and Cotton Masks in Blocking SARS-CoV-2: A Controlled Comparison in 4 Patients FREE

Seongman Bae, MD, Min-Chul Kim, MD, Ji Yeun Kim, PhD, Hye-Hee Cha, BS, Joon Seo Lim, PhD, ... [View all authors +](#)

[Author, Article and Disclosure Information](#)

<https://doi.org/10.7326/M20-1342>

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This article has been retracted. See [Notice of Retraction](#).

Background: During respiratory viral infection, face masks are thought to

Early report**Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children**

A J Wakefield, S H Murch, A Anthony, J Linnell, D M Casson, M Malik, M Berelowitz, A P Dhillon, M A Thomson, P Harvey, A Valentine, S E Davies, J A Walker-Smith

Summary

Background We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods 12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Barium follow-through radiography was done where possible. Biochemical, haematological, and immunological profiles were examined.

Findings Onset of behavioural symptoms was associated by the parents, with measles, mumps, and rubella vaccination in eight of the 12 children, with measles infection in one child, and otitis media in another. All 12 children had intestinal abnormalities ranging from lymphoid nodular hyperplasia to aphthous ulceration. Histology showed patchy chronic inflammation in the ileum in 11 children and reactive ileal-lymphoid hyperplasia in seven, but no granulomas. Behavioural disorders included autism (nine), disintegrative dyslexia (one), and possible postviral or vaccinal encephalitis (two). There were no focal neurological abnormalities and MRI and EEG tests were normal. Abnormal laboratory results were significantly raised urinary methylmalonic acid compared with age-matched controls ($n=7$, $p<0.03$), low haemoglobin in four children, and low serum IgA in six children.

Interpretation We identify a new associated gastrointestinal disease and developmental regression in a group of previously normal children, which was generally associated in time with possible environmental triggers.

Lancet 1998; **351**: 637–41

See *Commentary page*

Inflammatory Bowel Disease Study Group, University Departments of Medicine and Histopathology (A J Wakefield FRCS, A Anthony MB, J Linnell PhD, A P Dhillon MRCPATH, S E Davies MRCPATH) and the **University Departments of Paediatric Gastroenterology** (S H Murch MB, D M Casson MRCP, M Malik MRCP, M A Thomson FRCP, J A Walker-Smith FRCP), **Child and Adolescent Psychiatry** (M Berelowitz FRCPsych), **Neurology** (P Harvey FRCP), and **Radiology** (A Valentine FRCR), Royal Free Hospital and School of Medicine, London NW3 2QG, UK

Correspondence to: Dr A J Wakefield

Introduction

We saw several children who, after a period of apparent normality, lost acquired skills, including communication. They all had gastrointestinal symptoms, including abdominal pain, diarrhoea, and vomiting and, in some cases, food intolerance. We describe clinical findings, and gastrointestinal features of these children.

Patients and methods

12 children, consecutively referred to the department of paediatric gastroenterology with a history of a pervasive developmental disorder with loss of acquired skills and intestinal symptoms (diarrhoea, abdominal pain, bloating and food intolerance), were investigated. All children were admitted to the ward for a week, accompanied by their parents.

Clinical investigations

We took histories, including details of immunisations and exposure to infectious diseases, and assessed the children. In 11 cases the history was obtained by the senior clinician (JW-S). Neurological and psychiatric assessments were done by consultant staff (PH, MB) with HMS-4 criteria.¹ Developmental assessments included a review of prospective developmental records from parents, health visitors, and general practitioners. Four children did not undergo psychiatric assessment in hospital; all had been assessed professionally elsewhere, so these assessments were used as the basis for their behavioural diagnosis.

After bowel preparation, ileocolonoscopy was performed by SHM or MAT under sedation with midazolam and pethidine. Paired frozen and formalin-fixed mucosal biopsy samples were taken from the terminal ileum; ascending, transverse, descending, and sigmoid colons, and from the rectum. The procedure was recorded by video or still images, and were compared with images of the previous seven consecutive paediatric colonoscopies (four normal colonoscopies and three on children with ulcerative colitis), in which the physician reported normal appearances in the terminal ileum. Barium follow-through radiography was possible in some cases.

Also under sedation, cerebral magnetic-resonance imaging (MRI), electroencephalography (EEG) including visual, brain stem auditory, and sensory evoked potentials (where compliance made these possible), and lumbar puncture were done.

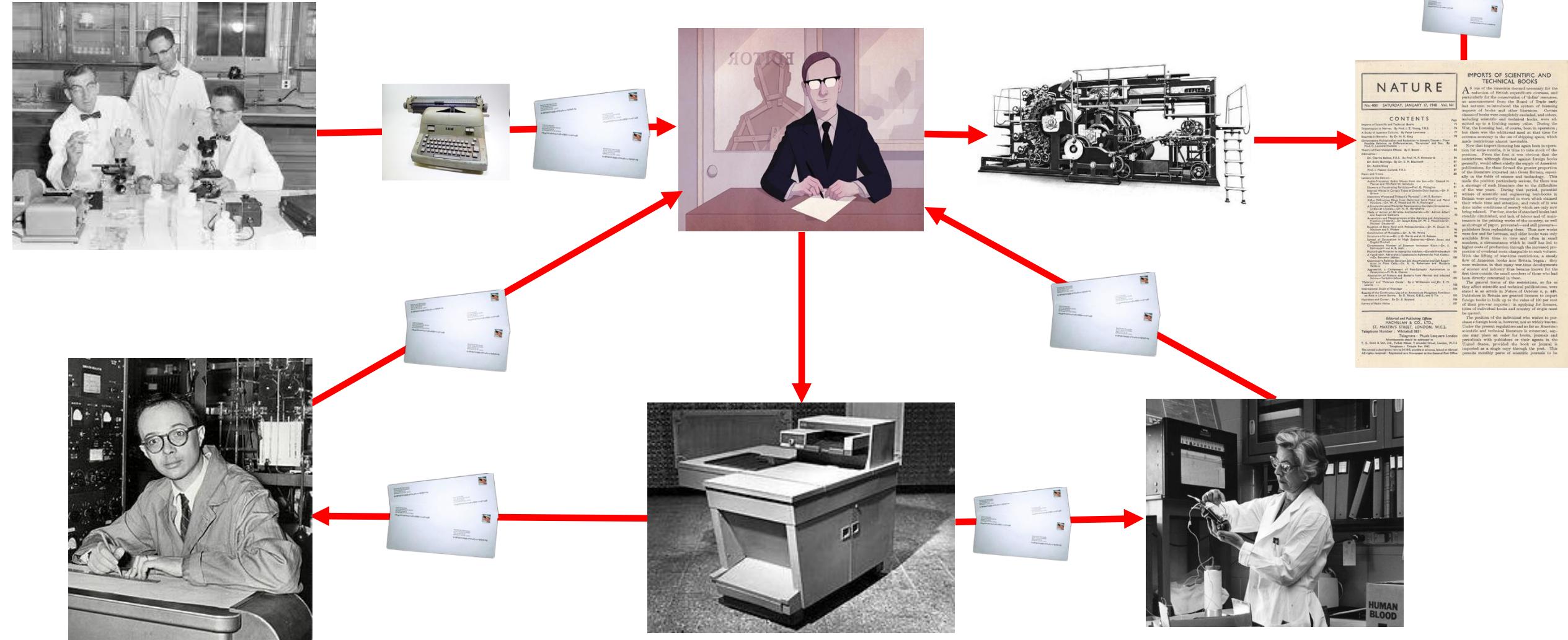
Laboratory investigations

Thyroid function, serum long-chain fatty acids, and cerebrospinal-fluid lactate were measured to exclude known causes of childhood neurodegenerative disease. Urinary methylmalonic acid was measured in random urine samples from eight of the 12 children and 14 age-matched and sex-matched normal controls, by a modification of a technique described previously.² Chromatograms were scanned digitally on computer, to analyse the methylmalonic-acid zones from cases and controls. Urinary methylmalonic-acid concentrations in patients and controls were compared by a two-sample *t* test. Urinary creatinine was estimated by routine spectrophotometric assay.

Children were screened for antiendomysial antibodies and boys were screened for fragile-X if this had not been done

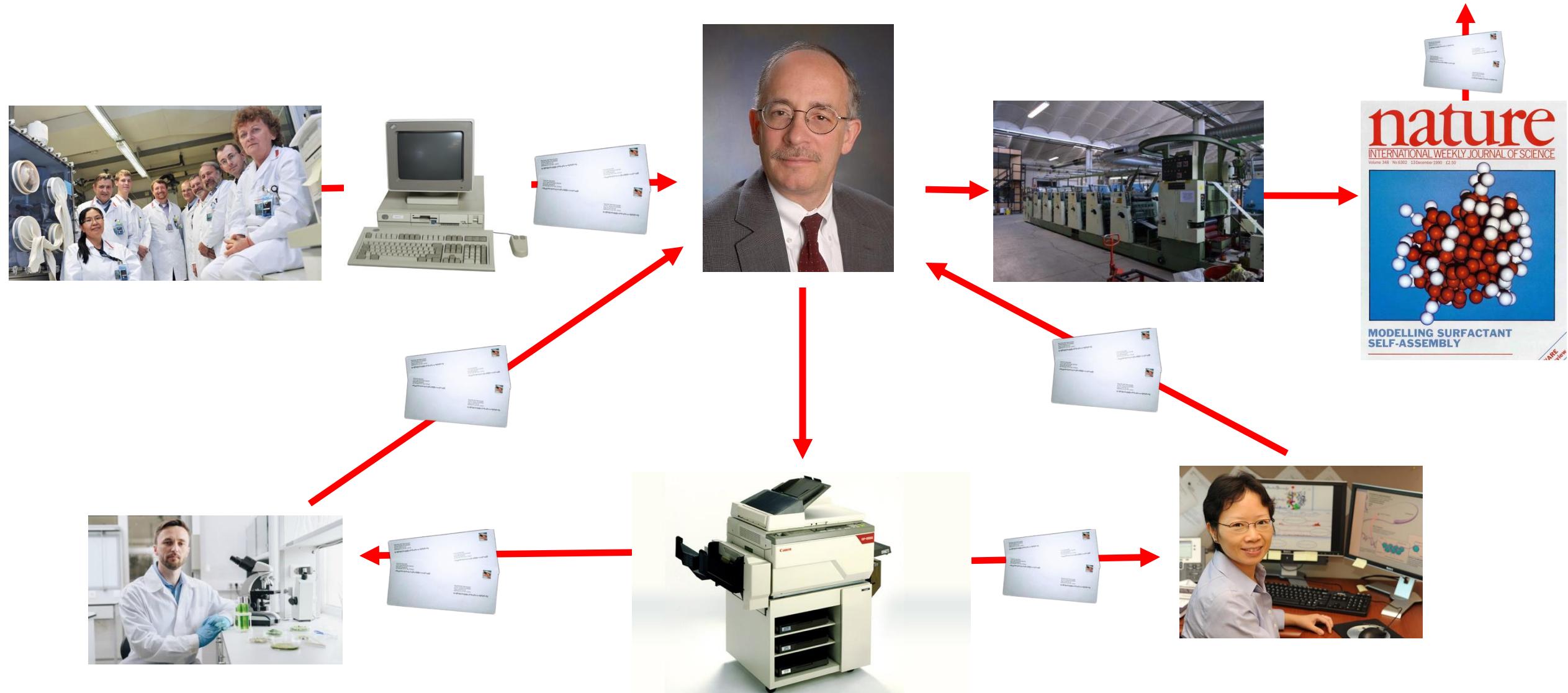
Retraction is Too Little, Too Late

The Evolution of Scientific Publishing



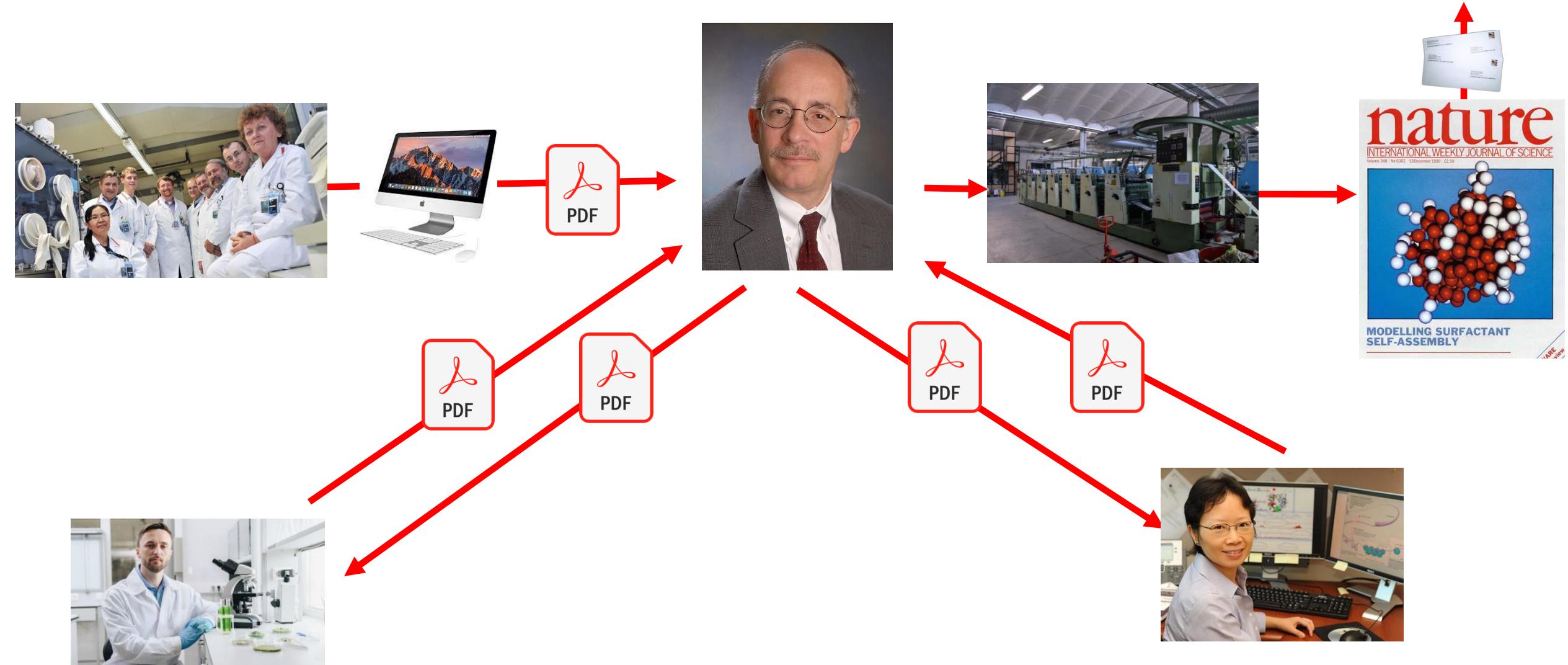
The Evolution of Scientific Publishing

1970 - 1993 Photocopies, Peer Review, and PC's



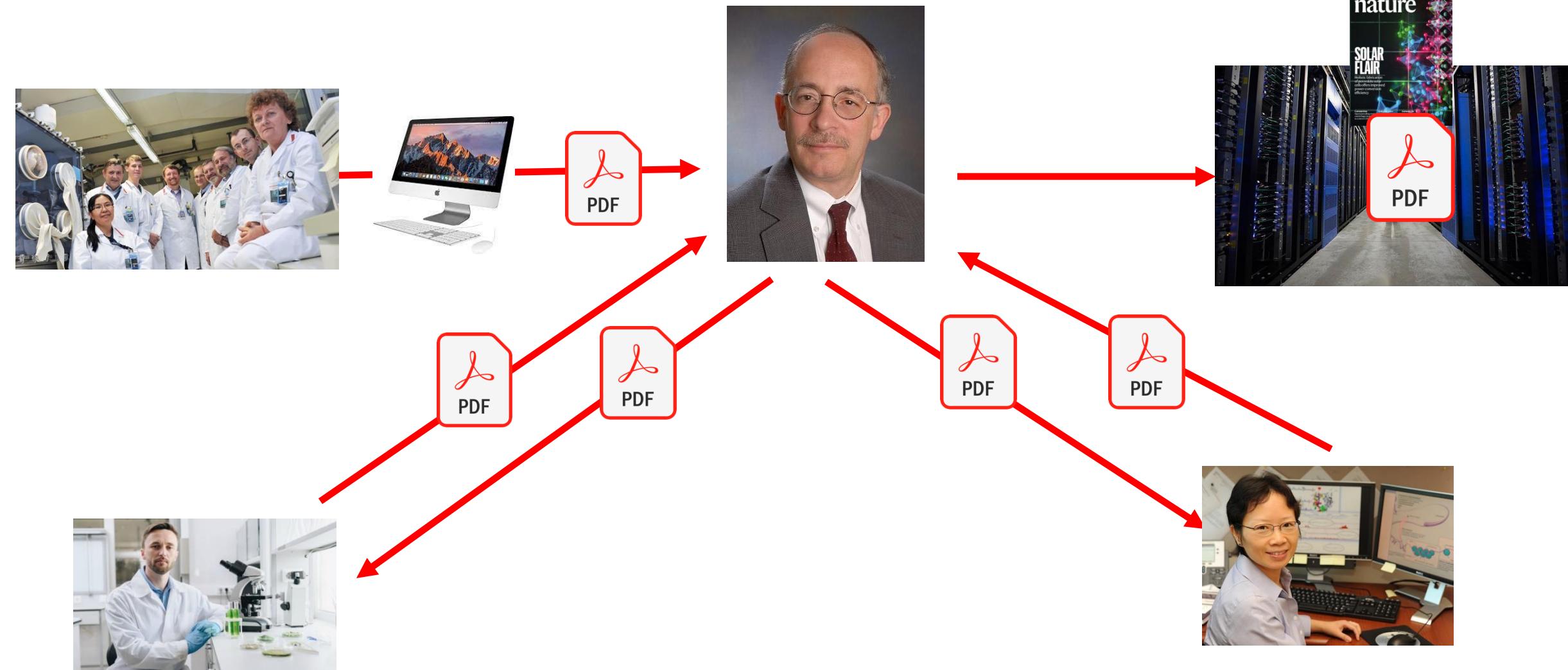
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1993 PDFs and the Internet

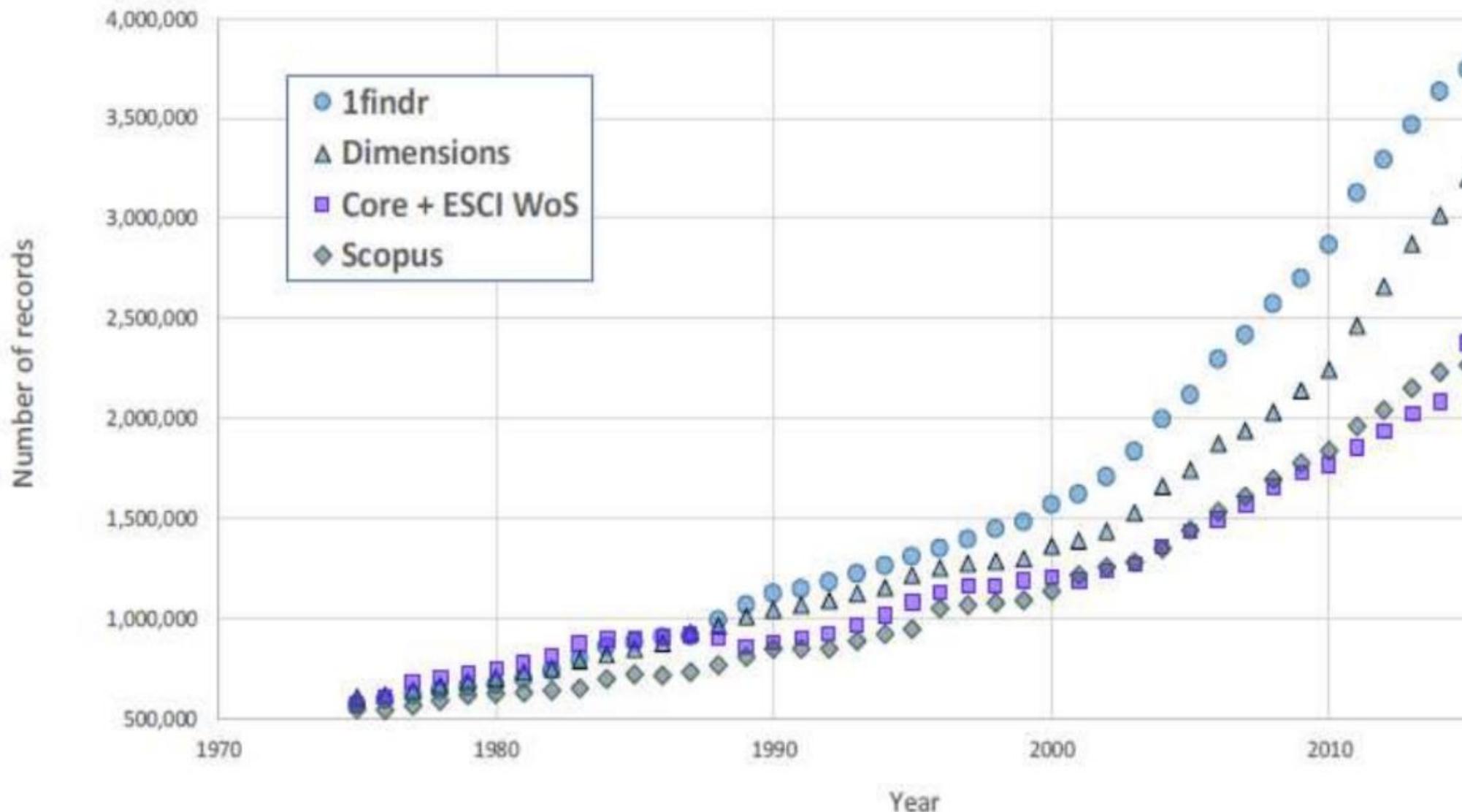


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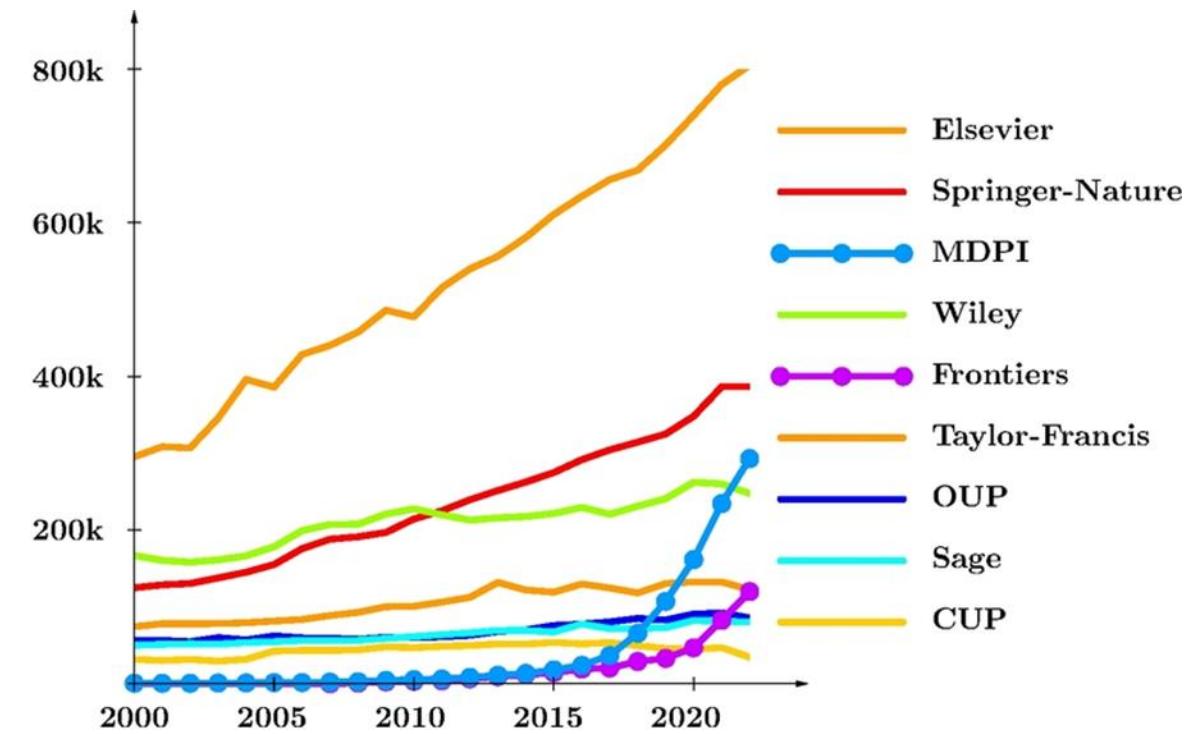
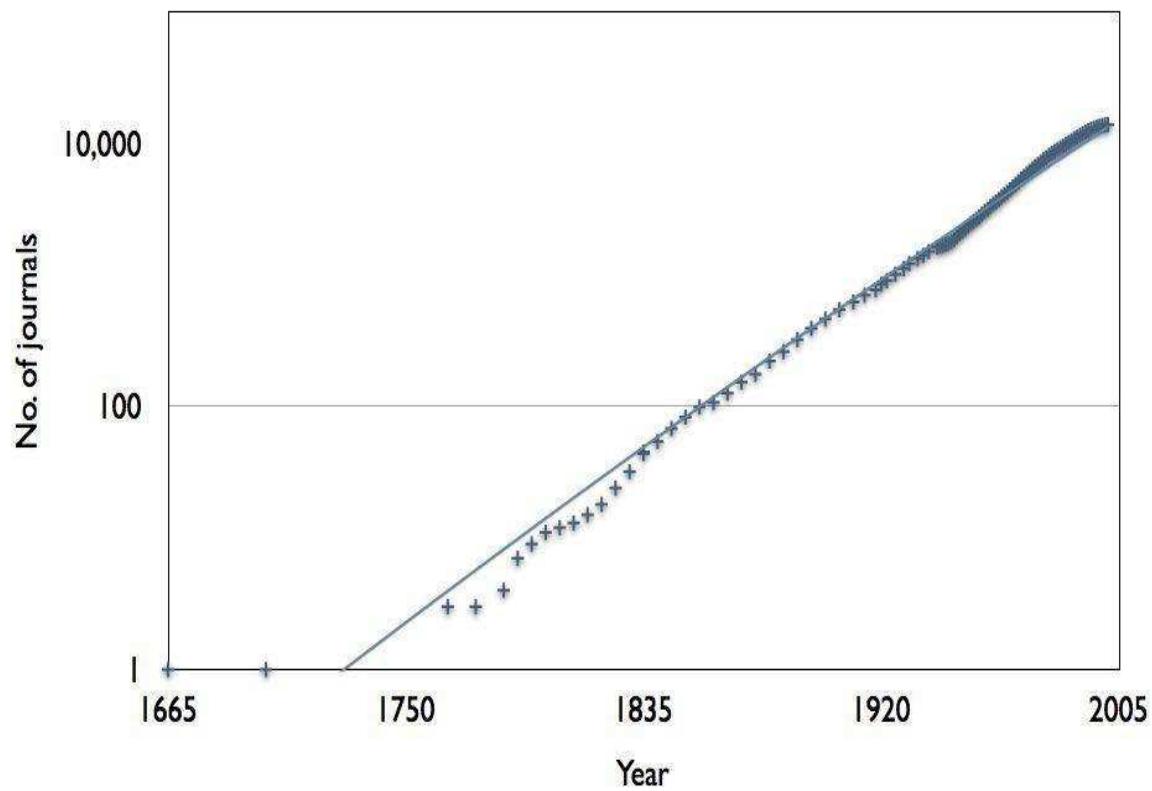
1993 - 2010 The Internet and Online Publishing



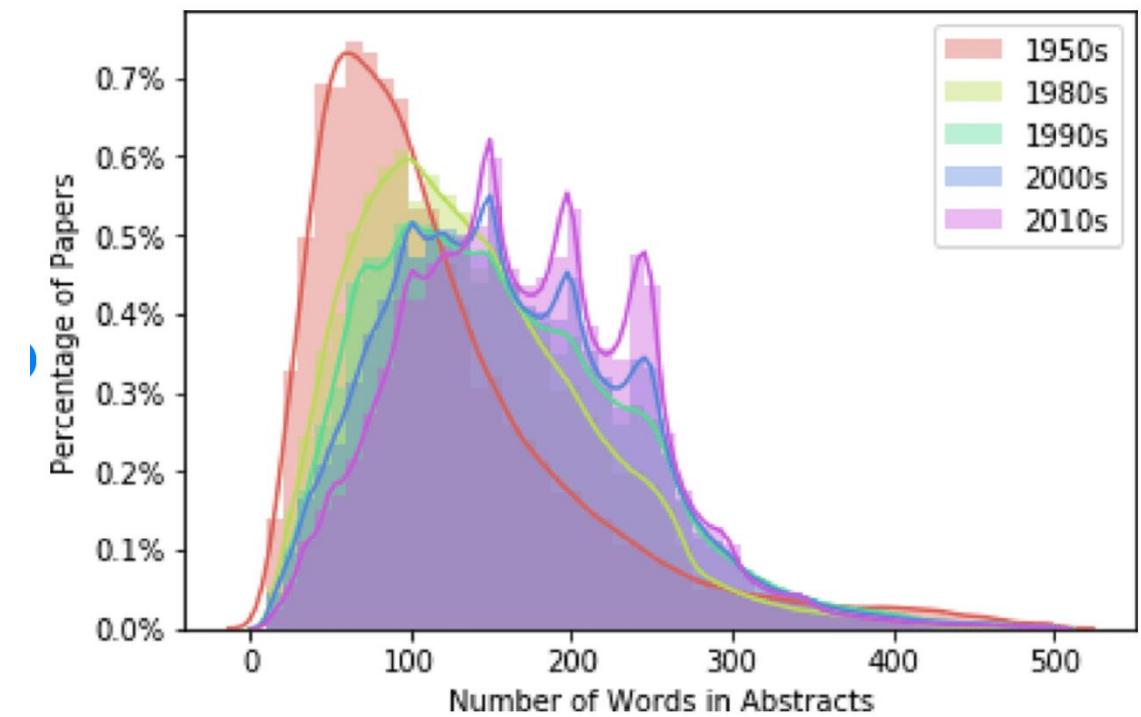
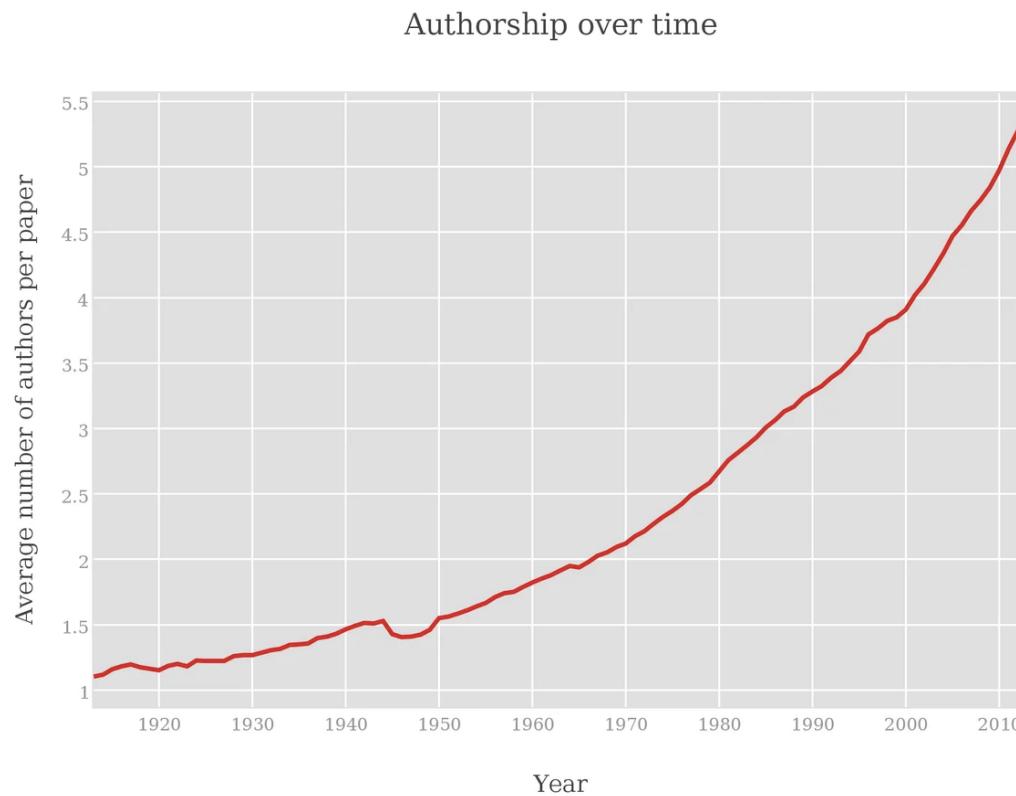
Trends in Number of Scientific Papers



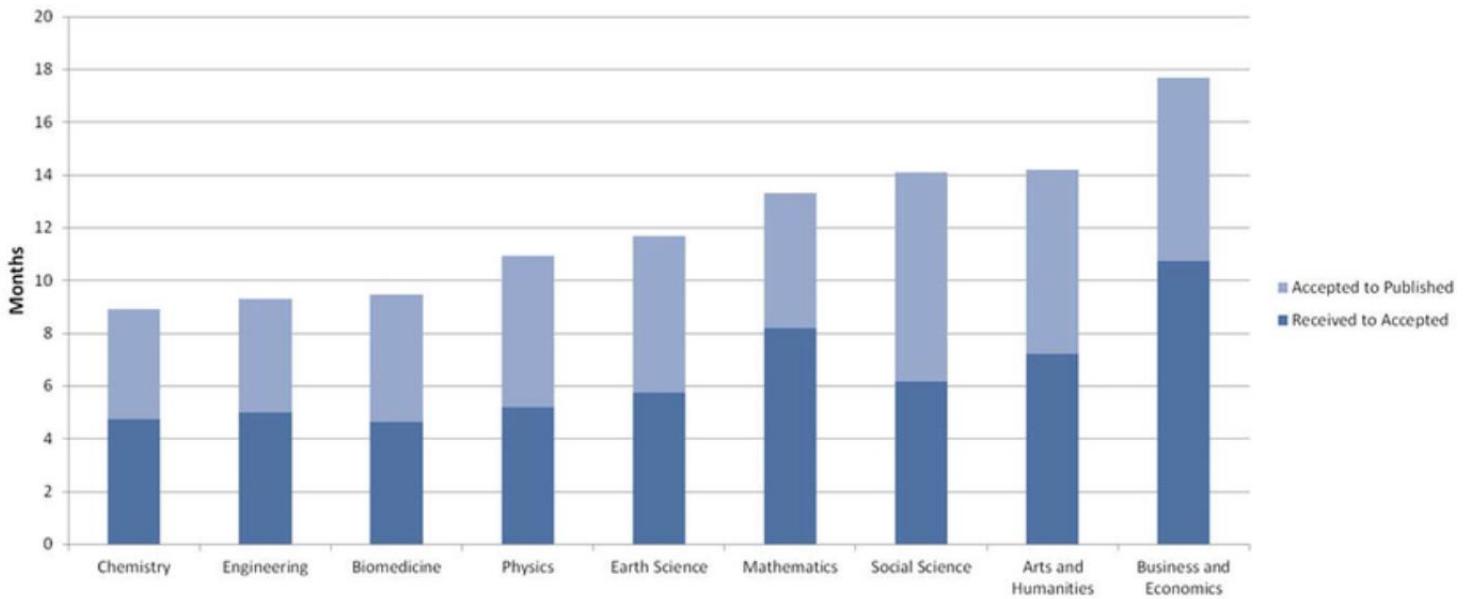
Trends in Numbers of Scientific Journals



Trends in Complexity of Papers



Conventional
Publishing is
Slow
~9 months to
publication



1990:
Physicists Create
World Wide Web



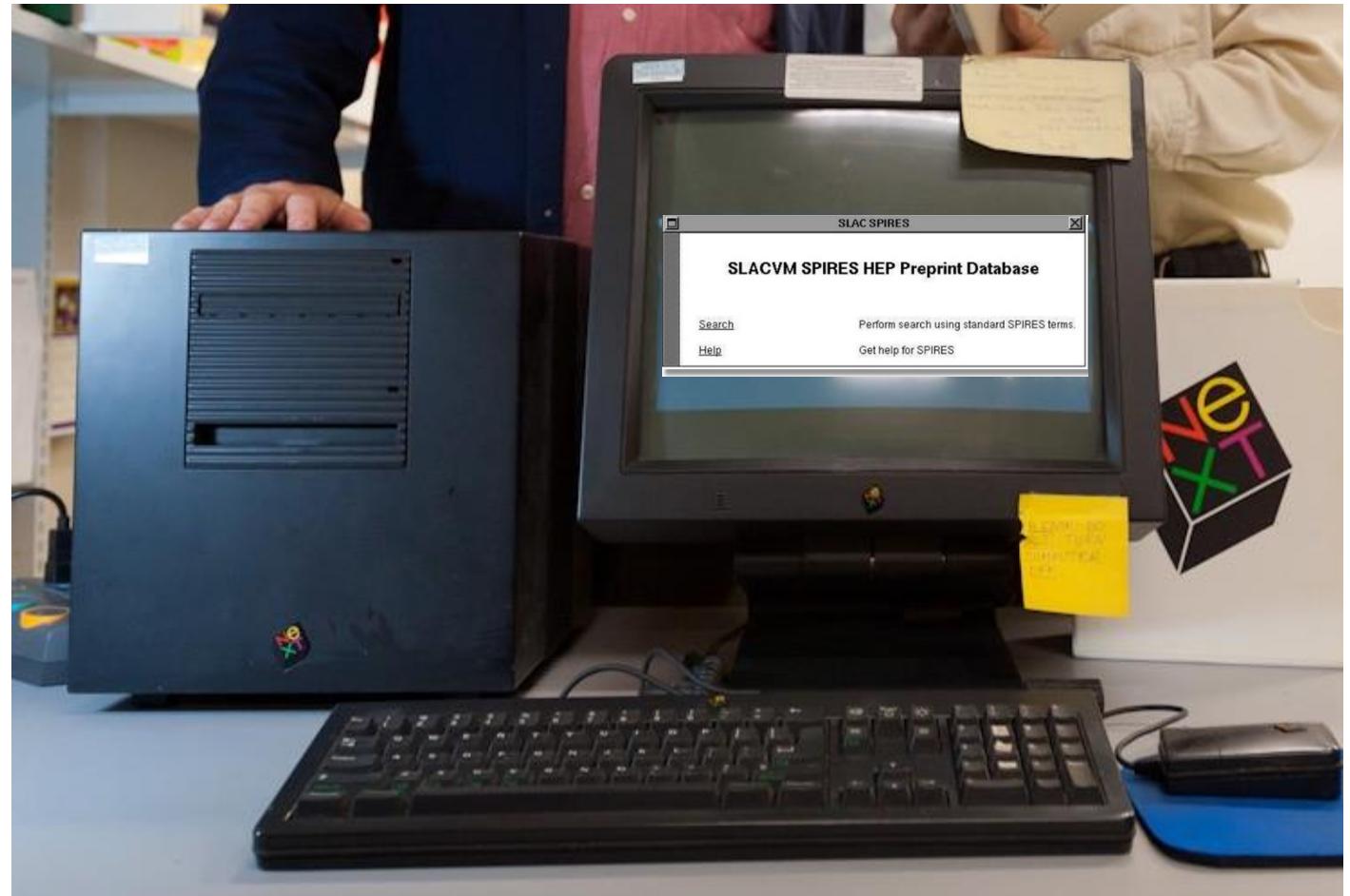
A Visionary Perspective



Sharing Knowledge..

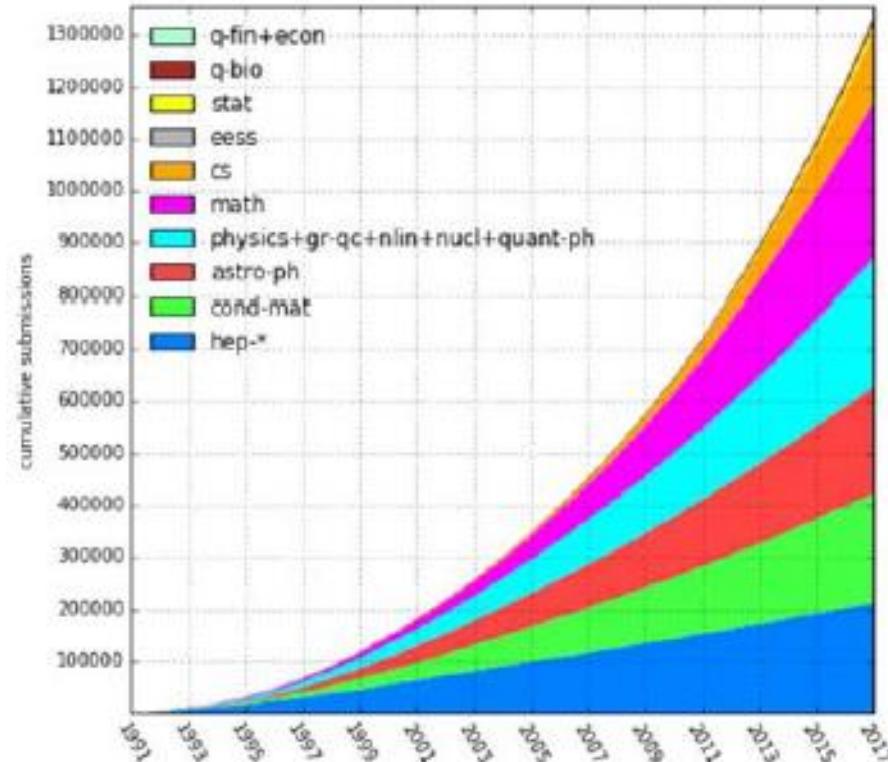
- ..to accelerate Science
- ..to foster Collaboration
- ..to enrich the World

The First US Web Server is a Preprint Server

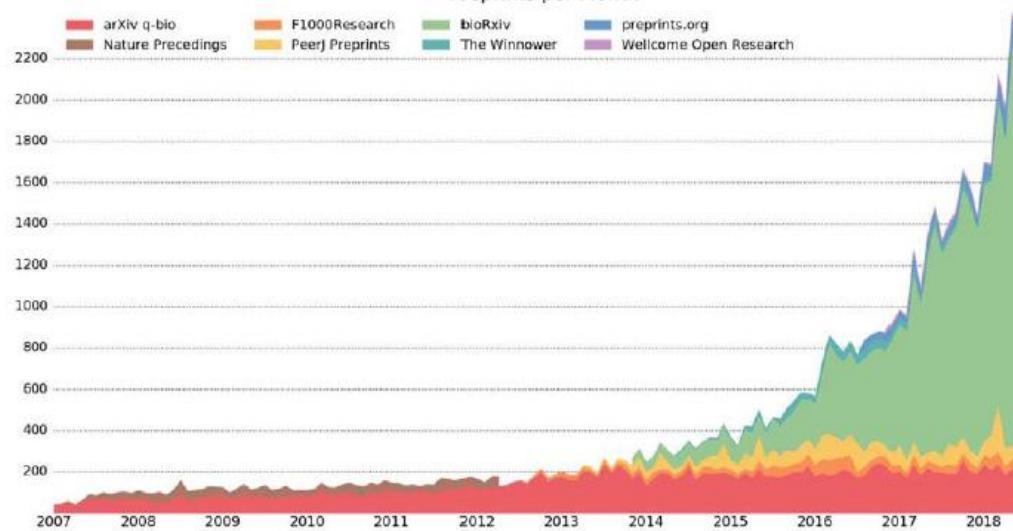


The Preprint Explosion

- **1991 ArXiv.org**
 - Created by the physics research community to release manuscripts as soon as they are completed
 - Now the starting point for essentially all publications in physics and mathematics
- **2013 BiorXiv.org – Biology**
- **2017 ChemrXiv.org - Chemistry**
- **2019 MedrXiv.org – Medical Science**

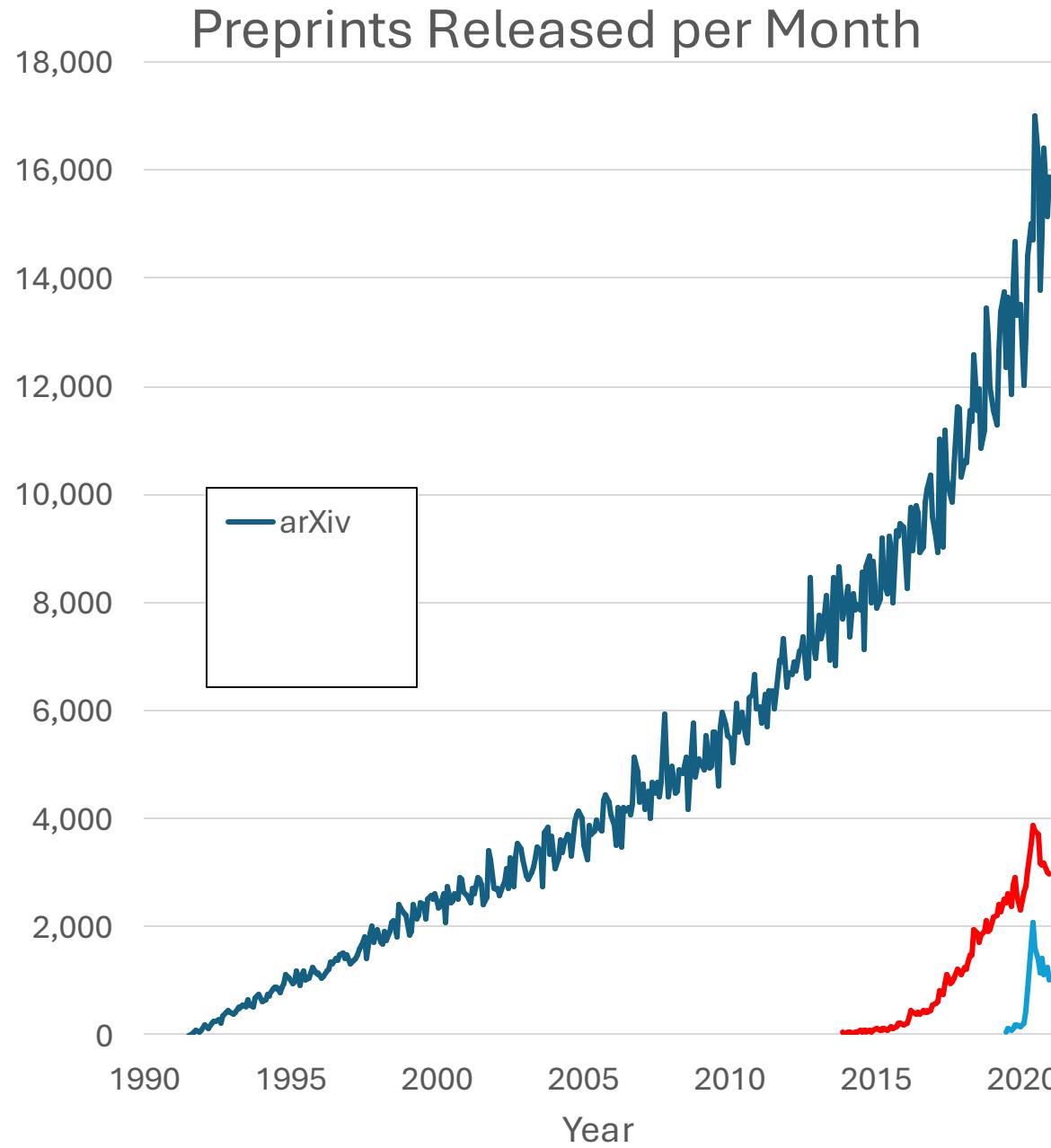


ArXiv.org



BiorXiv.org

What is different about physics?



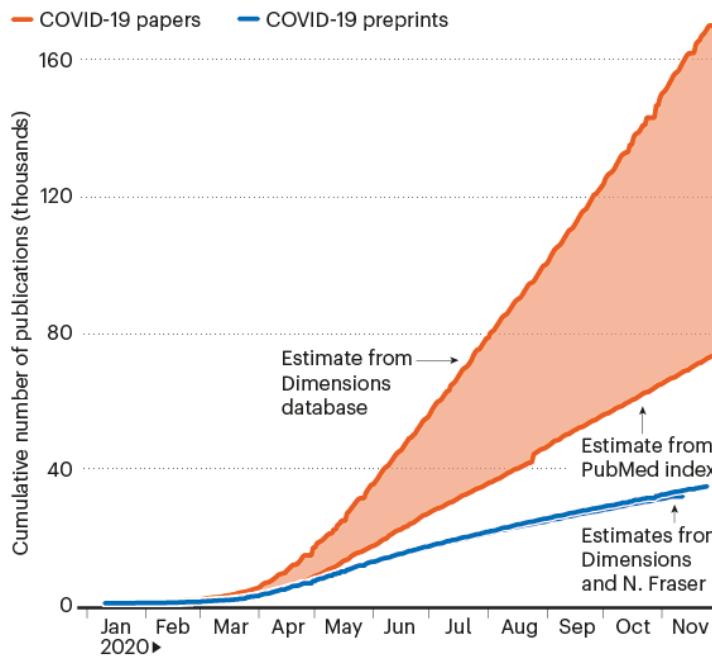
Science Will
Never Be the
Same



Speed and Extent of Scientific Inquiry Was Unprecedented

CORONAVIRUS CASCADE

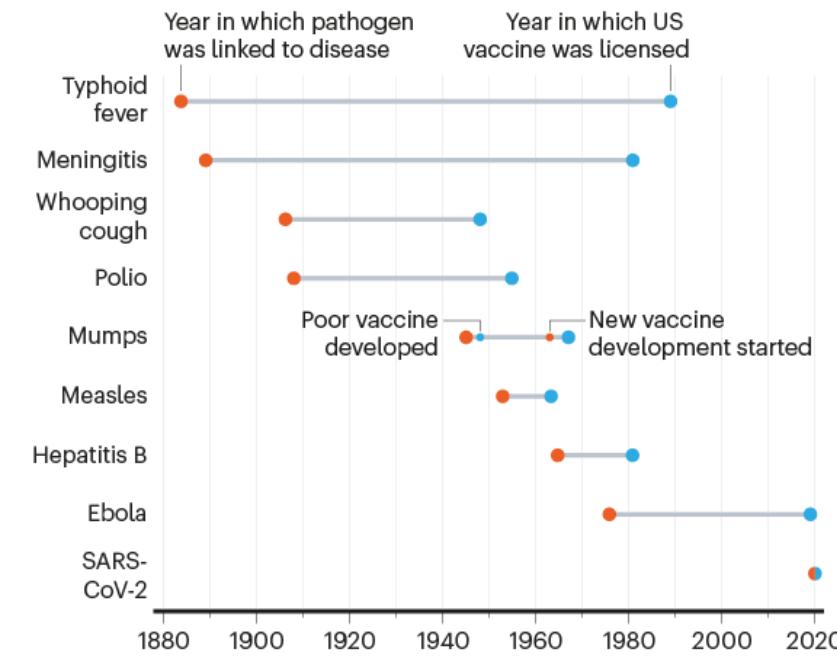
One estimate suggests that more than 200,000 coronavirus-related journal articles and preprints had been published by early December.



©nature

VACCINE INNOVATION

Most vaccines take years to develop, but scientists created multiple vaccines for SARS-CoV-2 within a year.



©nature

But We Utterly Failed at Science Communication

Those Failures Cost Almost as Many Lives as the Vaccines Saved

Journals



- Exploitative
- Restrictive
- Slow

Preprints

This screenshot shows a preprint article from medRxiv titled "Possible future waves of SARS-CoV-2 infection generated by variants of concern with a range of characteristics". The article is authored by Lukas Dyer, Edward M. Hsu, Sun Moon, Jacob Curran-Sullivan, Michael J. Tildesley, Karina A. Lythgoe, Thomas House, Lorenzo Pellis, and Matt J. Keeling. It was posted on August 25, 2021. The page includes standard preprint features like an abstract, full text, and metrics, along with social sharing options. The right sidebar lists other COVID-19 preprints from medRxiv and bioRxiv, and categories like Epidemiology, Addiction Medicine, and Allergy and Immunology.

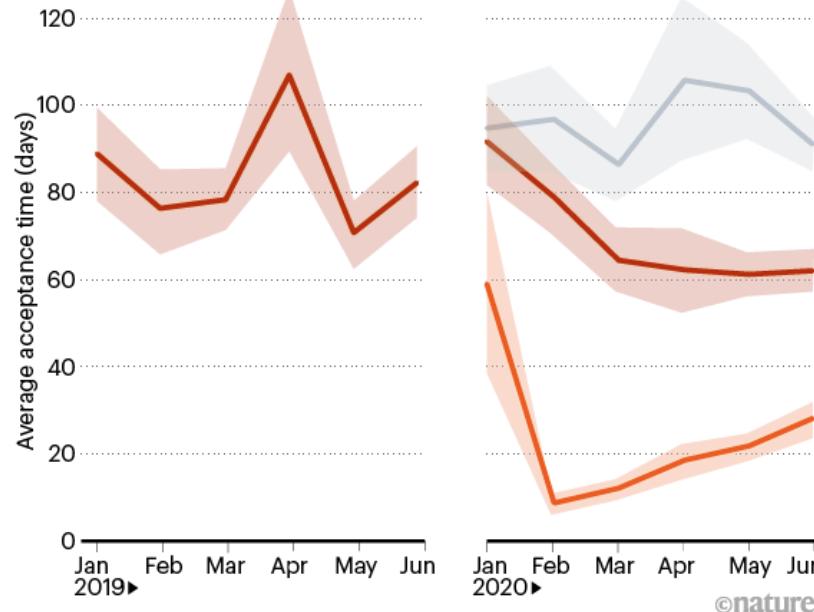
- Open
- Free
- Fast
- No Explicit Quality Control

Journals Tried to Adapt, but Failed

FASTER REVIEW AT MEDICAL JOURNALS

COVID-related publications were peer reviewed quickly at 11 medical journals — but other research took longer than usual to be published.

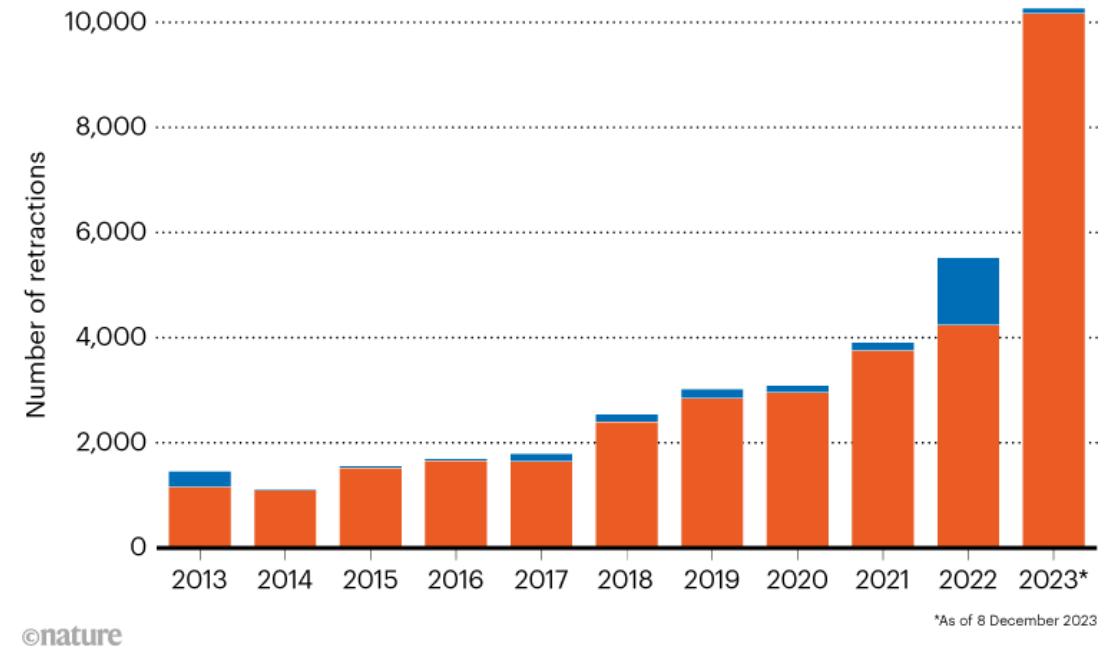
Publications:
— Total — COVID-19 — Non-COVID-19



A BUMPER YEAR FOR RETRACTIONS

Retraction notices in 2023 have passed 10,000, largely because of more than 8,000 retractions by Hindawi.

■ Journal articles ■ Conference papers



*As of 8 December 2023

Preprints and the Birth of a Bad Idea

DONALD TRUMP

Fresh out of Walter Reed, Trump compares Covid to the flu. Experts say he's flat wrong.

Facebook removed a similar post on Trump's page for having spread misinformation.



The Birth of Misinformation

COVID-19 Antibody Seroprevalence in Santa Clara County, California

Eran Bendavid, Bianca Mulaney, Neeraj Sood, Soleil Shah, Emilia Ling, Rebecca Bromley-Dulfano, Cara Lai, Zoe Weissberg, Rodrigo Saavedra-Walker, Jim Tedrow, Dona Tversky, Andrew Bogan, Thomas Kupiec,

This article is a preprint and has not been certified by peer review [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.

[Abstract](#)[Full Text](#)[Info/History](#)[Metrics](#)[Preview PDF](#)

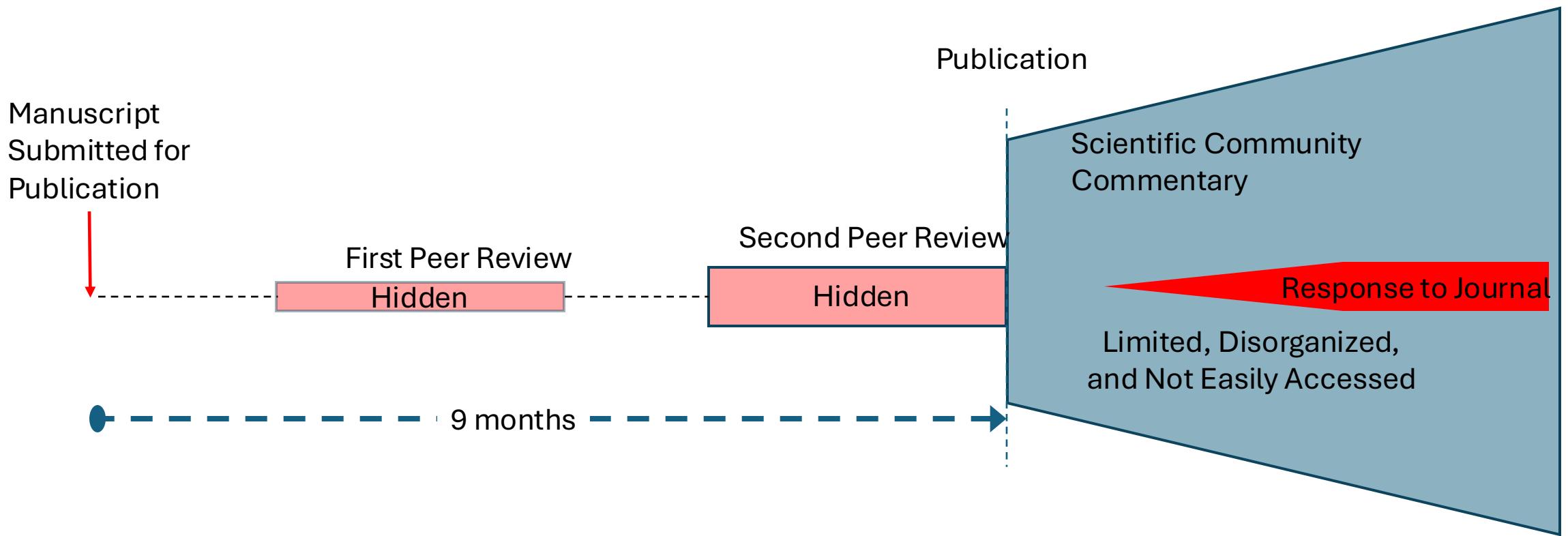
Abstract

Background Addressing COVID-19 is a pressing health and social concern. To date, many epidemic projections and policies addressing COVID-19 have been designed without seroprevalence data to inform epidemic parameters. We measured the seroprevalence of antibodies to SARS-CoV-2 in a community sample drawn from Santa Clara County.

Methods On April 3-4, 2020, we tested county residents for antibodies to SARS-CoV-2 using a

- Stanford group tests for SARS-COV2 Antibodies
- Stanford group tests for SARS-COV2 Antibodies
- Suggesting disease is far less severe than believed
- Authors inexperienced
- Funding is suspect
- Science is completely wrong

Historical Model for Vetting Research

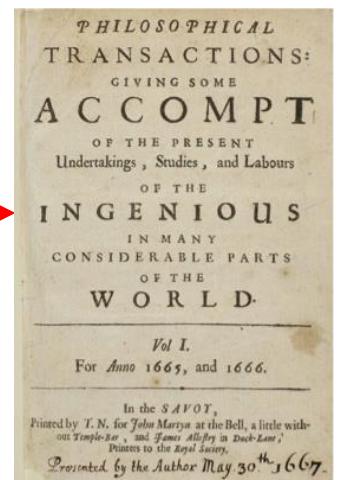
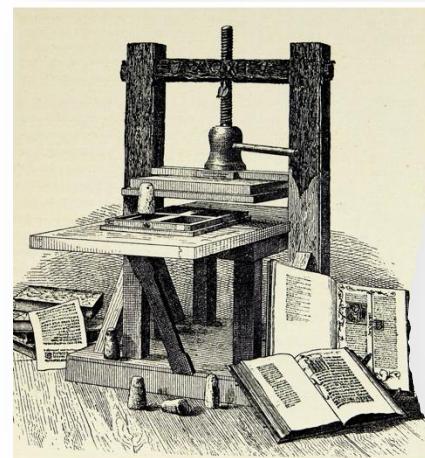


How do we
make a journal
that is
dysfunctional for
spreading
scientific
misinformation?



Many new models for scientific journals are just better dinosaurs

The Printing Press Model is Unidirectional



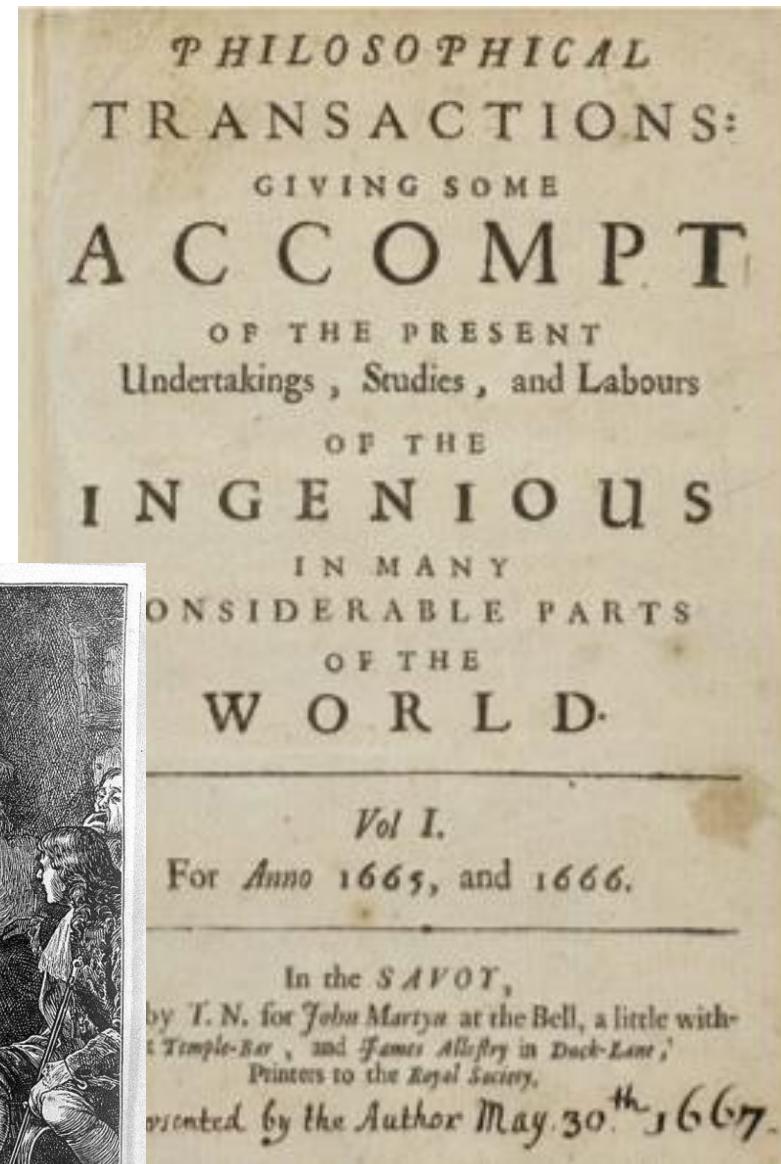
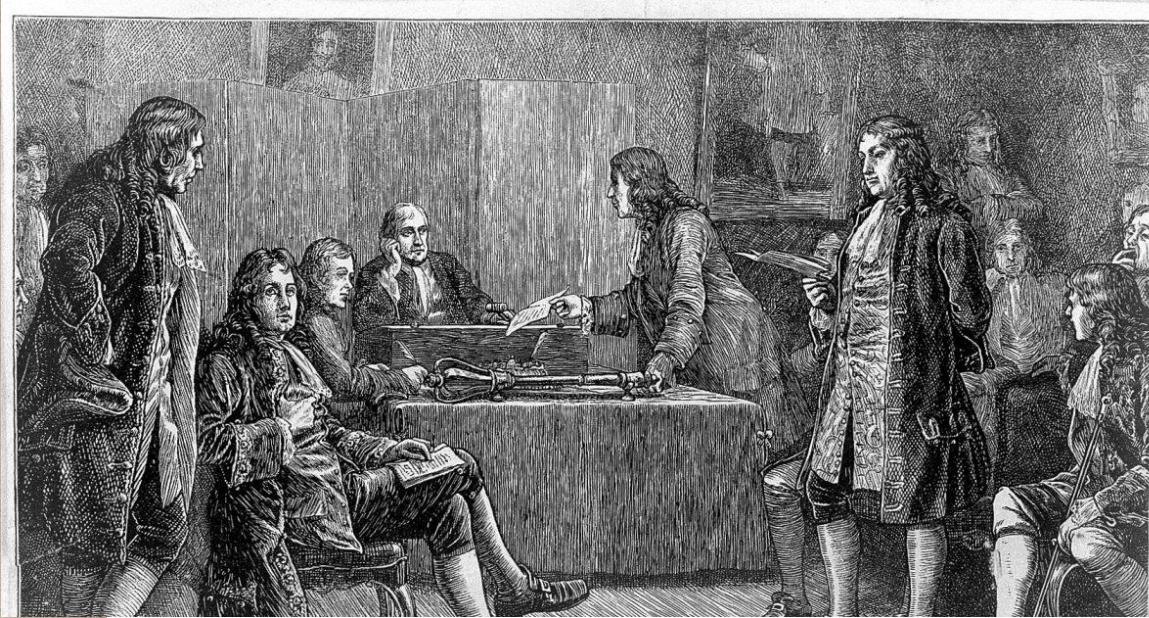
We Are Using the Internet as a Printing Press, Photocopier, and Postage Stamps



The Point is Not the Paper



The Point is the
Conversation it Provokes

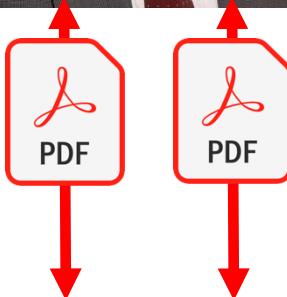
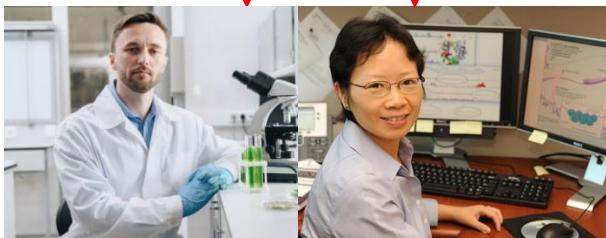
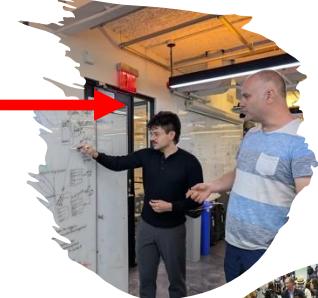
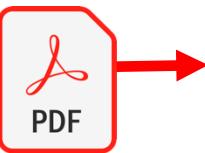


The Real Vetting of Science Happens in Conversations Before and After Publication

- Conference Q and A
- Poster Sessions
- Journal Clubs
- Conversations with colleagues



Peer Review is Just a Poor Surrogate for Scientific Community Response



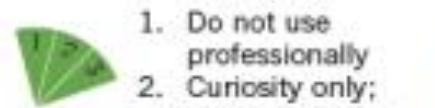
Wouldn't it be great if there were a technology that allowed large groups of people to interact and discuss important emerging issues of common interest?



IDLE, BROWSE OR CHAT?

Nature asked a subset of regular visitors to social networks how they used the sites professionally. (Each person was asked to tick all activities that applied.) The results suggest that Facebook is not widely used professionally; that researchers on Twitter are very active and social; and that many users of Academia.edu and ResearchGate signed up in case someone wants to contact them — but are not chatty themselves. Full results are available at go.nature.com/jvx7pl.

Each wedge in the circular charts corresponds to a question on the right. The answers are grouped by the intensity of user engagement they imply: low (green), medium (yellow) and high (blue).



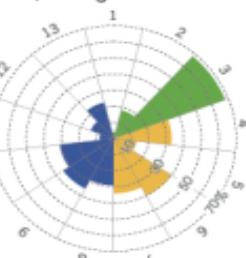
1. Do not use professionally
2. Curiosity only; not maintaining profile
3. In case contacted

4. Track metrics
5. Discover jobs
6. Discover peers
7. Discover recommended papers

8. Contact peers
9. Post (work) content
10. Share links to authored content
11. Actively discuss research
12. Comment on research
13. Follow discussions

RESEARCHGATE

1,589 regular visitors



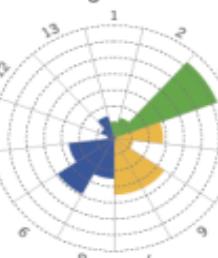
How do you use this site professionally?

Approximately how often do you visit this site in a professional capacity?

How long have you had a profile on this site?

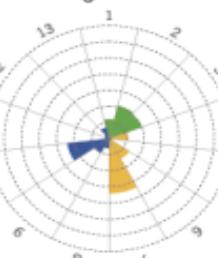
ACADEMIA.EDU

283 regular visitors



MENDELEY

198 regular visitors



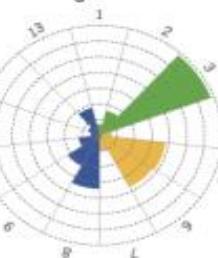
TWITTER

330 regular visitors



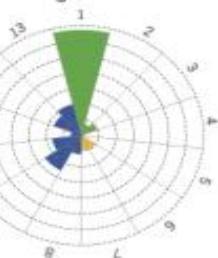
LINKEDIN

389 regular visitors



FACEBOOK

340 regular visitors



Once a day
Once a week
Once a month

Less than 1 year
Between 1 and 2 years
Longer than 2 years

"Mainly, a source of stress every time an e-mail pops in showing that my colleagues/ competitors are publishing more than myself."
AGE 35–44, PROFESSOR, BRAZIL

"It is the only useful community website for research purposes."
AGE 55–64, PROFESSOR, HUNGARY

"Has led to invites to referee papers/external assessments."
AGE 45–54, POSTDOCTORAL FELLOW, UNITED KINGDOM

"I have been able to post old papers which otherwise would be inaccessible to people."
AGE 55–64, PROFESSOR, UNITED STATES

"Primarily still a reference manager for me. The social component is less important."
AGE 35–44, RESEARCH SCIENTIST, CANADA

"Fairly useful as a documents clearinghouse for lab group."
AGE 25–34, POSTDOCTORAL FELLOW, UNITED STATES

"Extremely useful in conference settings."
AGE 35–44, RESEARCH SCIENTIST, UNITED STATES

"Great way to keep up-to-date on what is happening NOW in the research community."
AGE 45–54, HEAD OF ACADEMIC DEPARTMENT, UNITED STATES

"Mainly useful for job hunting."
AGE 25–34, PHD STUDENT, UNITED STATES

"It is too much like Facebook — fluffy forwards and such that are not scientific or related to professionalism."
AGE 45–54, ASSOCIATE PROFESSOR, UNITED STATES

"Facebook has zero credibility in my professional life."
AGE 35–44, STAFF SCIENTIST, UNITED STATES

"The (invitation-only) groups for professional astronomers and pulsar astronomers have become vibrant discussion fora."
35–44, RESEARCH SCIENTISTS, UNITED STATES

Attention on X is a Key First Measure of Interest in a Paper



BMJ Yale

Article Metrics

? What is this page?

Embed badge

Share

COVID-19 Antibody Seroprevalence in Santa Clara County, California

Overview of attention for article published in medRxiv



SUMMARY

News

Blogs

Policy documents

X

Facebook

Wikipedia

Reddit

Video

More...

Title COVID-19 Antibody Seroprevalence in Santa Clara County, California

Published in medRxiv

DOI 10.1101/2020.04.14.20062463 [\[open\]](#)

Authors Bendavid, Eran, Mulaney, Bianca, Sood, Neeraj, Shah, Soleil, Ling, Emilia, Bromley-Dulfano, Rebecca... [\[show\]](#)

View on publisher site

Alert me about new mentions

X Demographics

Mendeley readers

Attention Score in Context

About this Attention Score

In the top 5% of all research outputs scored by Altmetric

MORE...

Mentioned by

- 444 news outlets
- 66 blogs
- 2 policy sources
- 20046 X users
- 22 Facebook pages
- 1 Wikipedia page
- 1 Redditor
- 3 video uploaders

ALL RESEARCH OUTPUTS

#63

of 24,797,973 outputs

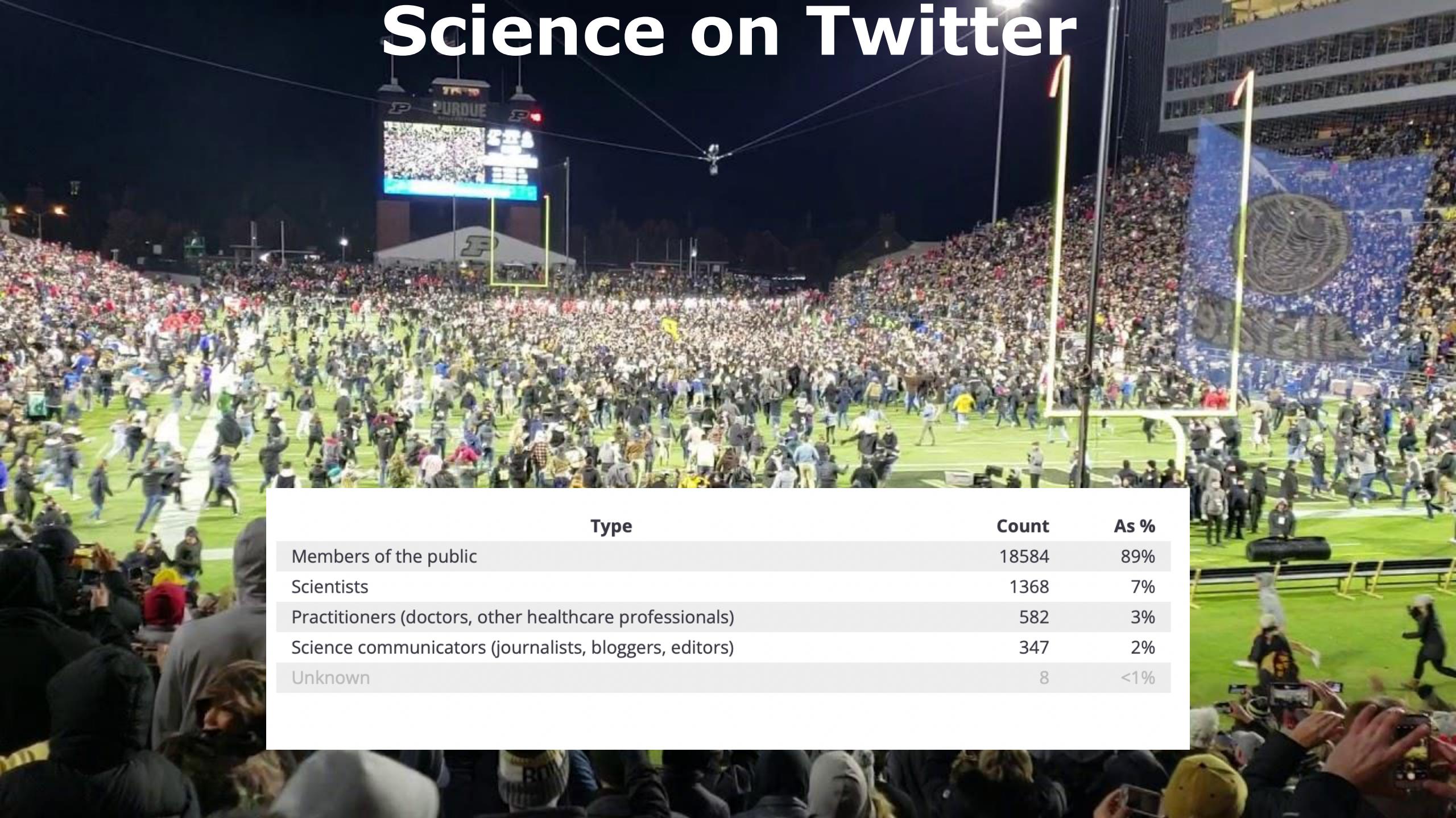
OUTPUTS FROM MEDRXIV

#5

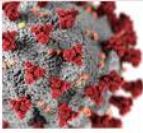
of 47,430 outputs

Altmetric has tracked 24,797,973 research outputs across all sources so far. Compared to these this one has done particularly well and is in the 99th percentile: it's in the top 5% of all research outputs ever tracked by Altmetric.

Science on Twitter



Type	Count	As %
Members of the public	18584	89%
Scientists	1368	7%
Practitioners (doctors, other healthcare professionals)	582	3%
Science communicators (journalists, bloggers, editors)	347	2%
Unknown	8	<1%



COVID-19 Report

Ahead of the Curve

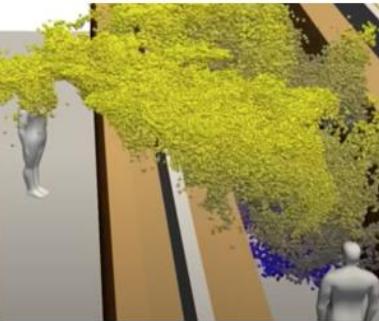
Powered by
PinHawk

MEDICAL NEWS | Coronavirus Research Resources | US NEWS | INTERNATIONAL NEWS | GOVERNMENT RESOURCES |
Business and Economic News | Law Firm Memos | Other Law News

Wednesday, April 15, 2020 - Volume 1 No. 30

The Count

Region	Cases	Deaths
World	2,073,459	134,011
US	641,315	28,387



- [Seeing is Believing, but Know What You're](#)

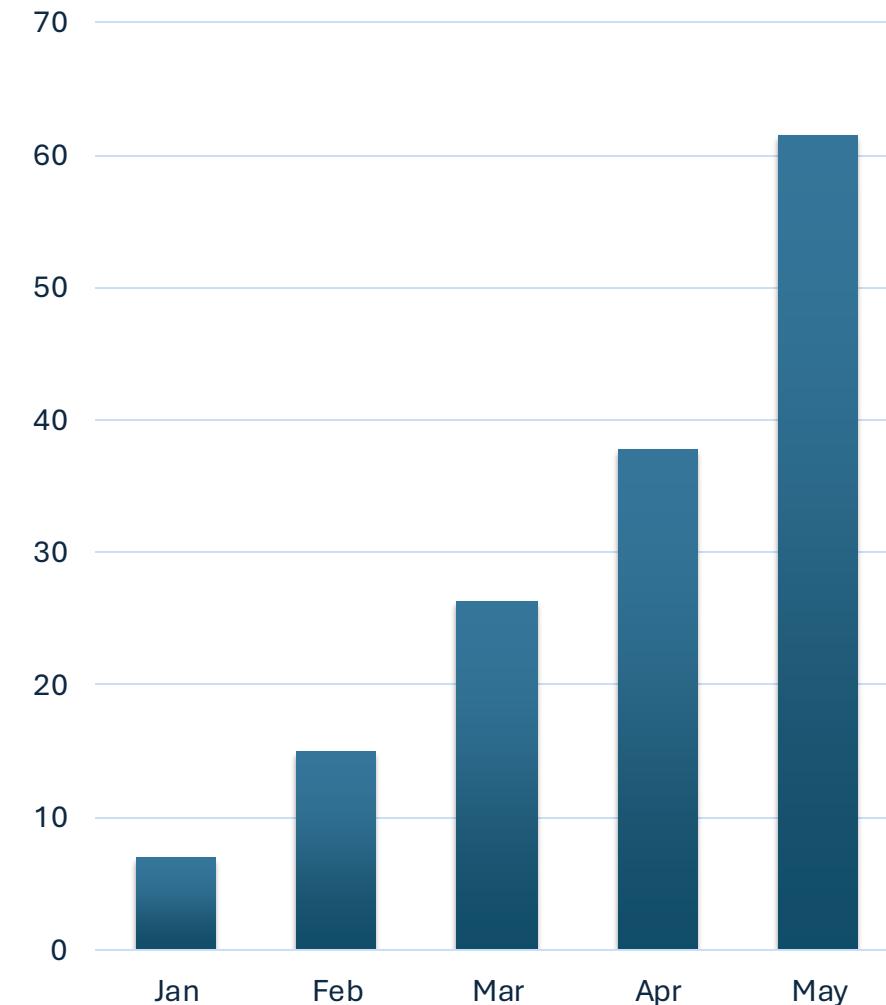
[Seeing](#) You've probably seen this video. It seems to show death, floating across grocery aisles in brilliant shades of yellow and blue, rendered in exquisite detail as it lingers in the air, waiting for unsuspecting shoppers. This tour de force demonstrates the level of training and technology that the scientific community is focusing on this one adversary, but, in addition to digital droplets, it may also be spreading more anxiety than information.

Research News

The results of Iceland's aggressive testing program are now available, a detailed analysis of the targets of the virus will prove invaluable to clinical research, three studies suggest that shedding of virus may be shed by asymptomatic cases and by symptomatic cases after recovery.

- [Detailed data from sampling in Iceland](#) gives the most complete picture yet on the spread of the disease and suggests a substantial proportion is from outside immediate contacts.
- [German researchers](#) analyzed cells throughout the respiratory tract for the presence the ACE2 receptor and found it is primarily expressed in bronchial transient secretory cells, which may explain the pathogenesis of disease and will provide a useful tool for further research.
- [Spread from an asymptomatic case in a family cluster, SARS-CoV-2 in the stool of a patient after discharge with negative tests*, and a patient shedding the virus for 32 days after negative tests**](#) raises concerns about the duration and risk of viral spread by patients who have tested negative.
- [An analysis of data from an influenza surveillance program**](#) estimates that 4% of all physician in Oregon during March were influenza like illnesses that tested negative for the flu

Average Number of Preprints/Day on MedrXiv



DropCite Open Notes

DropCite

Home

Search DropCite

Robert Morris

Title

Abstract

Background

Methods

Results

Discussion

Conclusion

References

Authors and Institutions

Figures and tables

Figure 1:

Figure 2:

medRxiv: April 10, 2021

A CROSS-SECTIONAL SURVEY OF THE PREVALENCE AND THE RISK FACTORS OF TOBACCO USE AMONGST CONSTRUCTION ARTISANS IN EKITI STATE, NIGERIA

Abstract

Background Construction artisans are those who perform skilled work relating to the erection or assembly of a large structure. These artisans are prone to tobacco use. This study aims to assess the prevalence and the associated risk factors of tobacco use amongst construction artisans in Ekiti State, Nigeria.

They are not recognizing the important work of Dockery et al. @ddockery →

keep comment private #praise #issue #query

Materials and Methods This cross-sectional study employed a multi-stage sampling technique to select participants (carpenters and bricklayers) artisans, journeymen, and their apprentices who were working in Ekiti State. Chi-square and logistic regression were used to test for association in bivariate and multivariate analyses respectively.

Results The prevalence of ever-smoke amongst respondents was 19.2%. Multivariate analysis showed that artisans who were aged between 31-40 years were four times more likely to use tobacco ($OR=3.410$; $CI=1.476-7.878$). Similarly, being in school and divorced/separated were associated with tobacco use.

Conclusion Noting the increased prevalence of tobacco use among construction artisans when compared to the general population, and few self-reported cases of addiction amongst users demands action from communities and government at all levels.

Background

The construction industry plays a major and significant role in the employment creation and economic growth of many nations. As high as eighty percent of people work in the informal sector (not employed by the government) in Nigeria.¹ and construction workers constitute a major chunk of this population.¹ The construction industry in Nigeria also

← Hit

Robert Morris

#issue

June 18, 2021

issue

Reply ↗ hide 1 reply

Andrii Valentiuk

June 18, 2021

ada

Reply ↗

Andrii Valentiuk

June 18, 2021

qwe

Reply ↗ hide 1 reply

Robert Morris

a few seconds ago

I don't agree

Reply ↗



decisions.

Methods

We conducted serologic testing for SARS-CoV-2 antibodies in 3,330 adults and children in Santa Clara County using capillary blood draws and a lateral flow immunoassay. In this section we describe our

3



19 of 19 comments, 1 of 1 replies

Filter ▾

13

7

medRxiv preprint doi: <https://doi.org/10.1101/2020.04.14.20062463>; this version posted April 30, 2020. The copyright holder for this preprint (which was not certified by peer review) is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. It is made available under a CC-BY-NC-ND 4.0 International license.

sampling and recruitment approaches, specimen collection methods, antibody testing procedure, test kit validation, and statistical methods. Our protocol was informed by a World Health Organization protocol for population-level COVID-19 antibody testing.¹⁴ We conducted our study with the cooperation of the Santa Clara County Department of Public Health. The Institutional Review Board at Stanford University approved the study prior to recruitment.

Study Participants and Sample Recruitment

We recruited participants by placing targeted advertisements on Facebook aimed at residents of Santa Clara County. We used Facebook to quickly reach a large number of county residents and because it allows for granular targeting by zip code and sociodemographic characteristics.¹⁵ We posted our advertisements targeting two populations: ads aimed at a representative population of the county by zip code, and specially targeted ads to balance our sample for under-represented zip codes. In addition, we capped registrations from overrepresented areas after our registration slots filled up quickly with participants from wealthier zip codes. Individuals who clicked on the advertisement were directed to a survey hosted by the Stanford REDCap platform, which provided information about the study.¹⁶ The survey asked for six data elements: zip code of residence, age, sex, race/ethnicity, underlying comorbidities, and prior clinical symptoms. Over 24 hours, we registered 3,285 adults, and each adult was allowed to bring one child from the same household with them (889 children registered). Additional details of the participant selection process are provided below (Additional Data and Response to Comments section below).

Specimen Collection and Testing Methods

We established drive-through test sites in three locations spaced across Santa Clara County: two county parks in Los Gatos and San Jose, and a church in Mountain View. Only individuals with a participant ID were allowed into the testing area. Verbal informed consent was obtained to minimize participant and staff exposure. With participants in their vehicles, sample collectors in personal protective equipment drew 50–200 μ L of capillary blood into an EDTA-coated microtainer. Tubes were barcoded and linked with the participant ID. Samples were couriered from the collection sites to a test reading facility with

- TU Trevor Bedford breaks down issues with the test kit and its potential impact on conclusions in this thread:
<https://twitter.com/trvrb/status/1251332447691628545>
0 #issue February 28, 2024
- BM No effort was made to account for selection bias. People who were willing to drive across Santa Clara County to give a blood sample are not a random sample and may well overrepresent people who had respiratory infections and are interested in knowing if they have had COVID.
0 #issue February 25, 2024
- TU A detailed critique of issues with sampling can be found in this thread by Natalie Dean .
<https://twitter.com/natalieydean/status/1251309217215942656>
0 #issue February 28, 2024
- BM Clustered in Northwest part of county
0 #issue January 27, 2025

Model for Scientific Community Review of Preprints

Manuscript
Released
on Preprint
Server

Threaded, Contextual Commentary from the Scientific Community

Public Health Collaborative Journal Project

- **Open** : All content will be freely accessible
- **Fast**: Will use preprints as a source of content, selecting and disseminating selected recent preprints with integrated annotation
- **Transparent**: comments are posted with content
- **Interactive**: both content and reviews will be designed to be fully interactive with scientific readers
- **Connected**: comments can be easily shared with others who can, in turn, react to those comments, either within a network of journal readers or in the larger ecosystem of social networks.