



**Publication ethics,
research integrity, and
climbing mountains**

Chris Graf, October 2023
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What's your mountain?









What's your mountain?

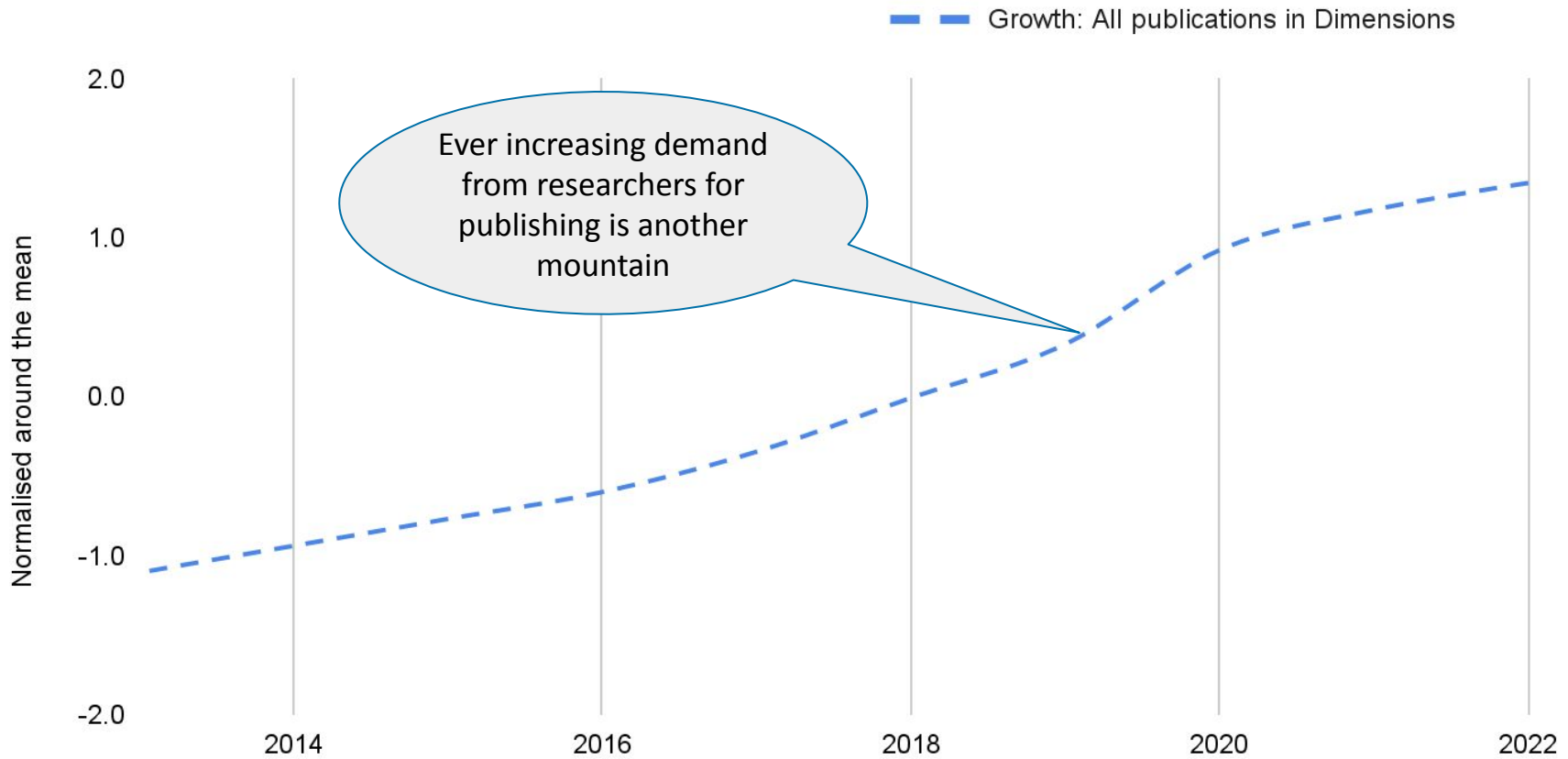
PUBLISHING: ADVANCING DISCOVERY

Open access (OA) publishing extends the reach of the research we publish to address the world's urgent challenges



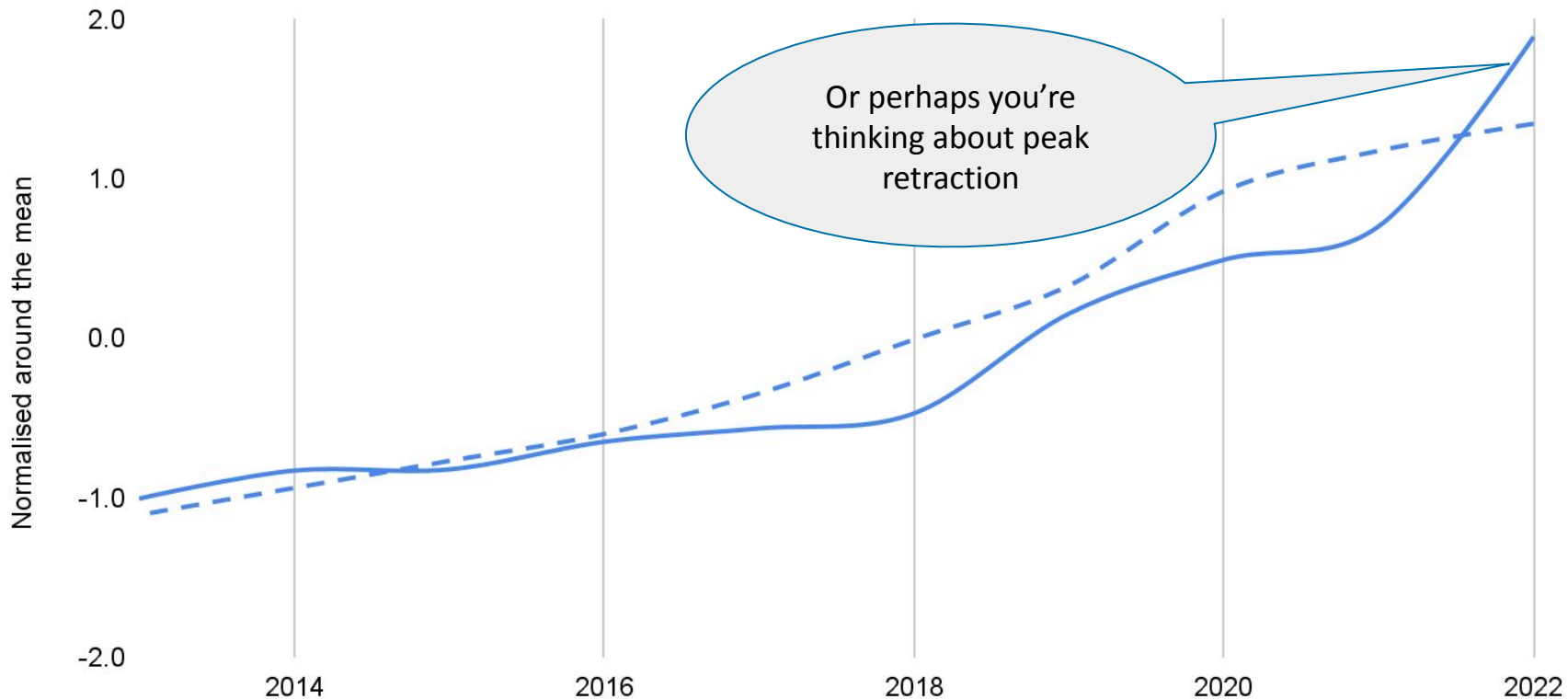
- Published over 800,000 pieces of SDG-related research since 2015.
- More than 1,400 SDG-related policy documents cited Springer Nature research in 2022.
- Global SDG Impact Festival in 2022 involved hundreds of colleagues taking collective steps to reduce personal carbon emissions.
- ...; and publish across all 17.

SDGs are mountains to climb



Ever increasing demand from researchers for publishing is another mountain

— Growth: Records in Retraction Watch Database — Growth: All publications in Dimensions



Or perhaps you're thinking about peak retraction

Publications in
Dimensions, 2022
7,000,000

Records in Retraction Watch
Database, 2022
6000

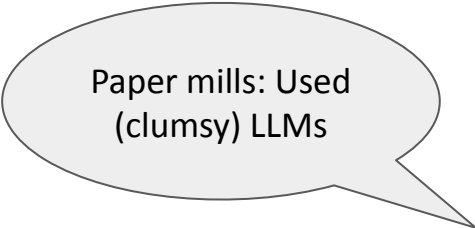
For context, growth rate
in retractions is steep
but here are overall
numbers from 2022

Found your mountain?



Paper mills: This is a fake article

Author 1 position for sale
Author 2 position for sale
Author 3 position for sale
Author 4 position for sale
Author 5 position for sale



Paper mills: Used
(clumsy) LLMs

The characteristics of **rainfall in coastal areas**
and the intelligent **library book push system**
oriented to the **Internet of Things**

AI intensifies fight against 'paper mills' that churn out fake research

Text- and image-generating tools present a new hurdle for editors as they seek to tackle the growing number of fake papers making their way into the academy.

Paper mills: LLMs are only getting better

[Loyal Liverpool](#)



A shared challenge
needs a shared
solution

C O P E

STM

Advancing
trusted research

UNITED 2 ACT

24 May | Virtual

SUMMIT

C O P E

STM

Advancing
trusted research

The UNITED2ACT SUMMIT is a virtual gathering of international stakeholders working collaboratively to address the collective challenge of paper mills in scholarly publishing.



140+ members

Academic publishers focused on science, technology, medicine, social sciences, and humanities



66% of articles

Our members collectively publish 66% of all journal articles



20 countries

STM spans the globe — made up of publishers of all shapes and sizes

About STM

STM is the standard bearer for the academic publishing industry, working with our members to **advance trusted research** worldwide. We are committed to ensuring that the great discoveries of our time are communicated with **pinpoint accuracy, clarity and integrity**. We champion **innovation** across academic research, stimulating the development of new technologies and **guidance** on universal standards.



Advancing
trusted research

STM Integrity Hub

“To equip the scholarly communication community with data, intelligence, and technology to protect research integrity”



ELSEVIER



Taylor & Francis

WILEY

SPRINGER
NATURE

IOP
Publishing

SAGE
Publishing

BMJ



JAMA Network



Rockefeller
University
Press

american
physiological
society



ACS Publications

OXFORD
UNIVERSITY PRESS

Aries
systems

Clarivate
Analytics



HighWire

frontiers

ROYAL SOCIETY
OF CHEMISTRY



IEEE

IOS Press



The Company of
Biologists

Karger



THE ROYAL
SOCIETY
PUBLISHING

EMBOpress

emerald
PUBLISHING



MDPI



PLOS



CAMBRIDGE
UNIVERSITY PRESS

CCC
Copyright Clearance Center



Advancing
Physics



Wolters Kluwer



Canadian
Science
Publishing

edp sciences



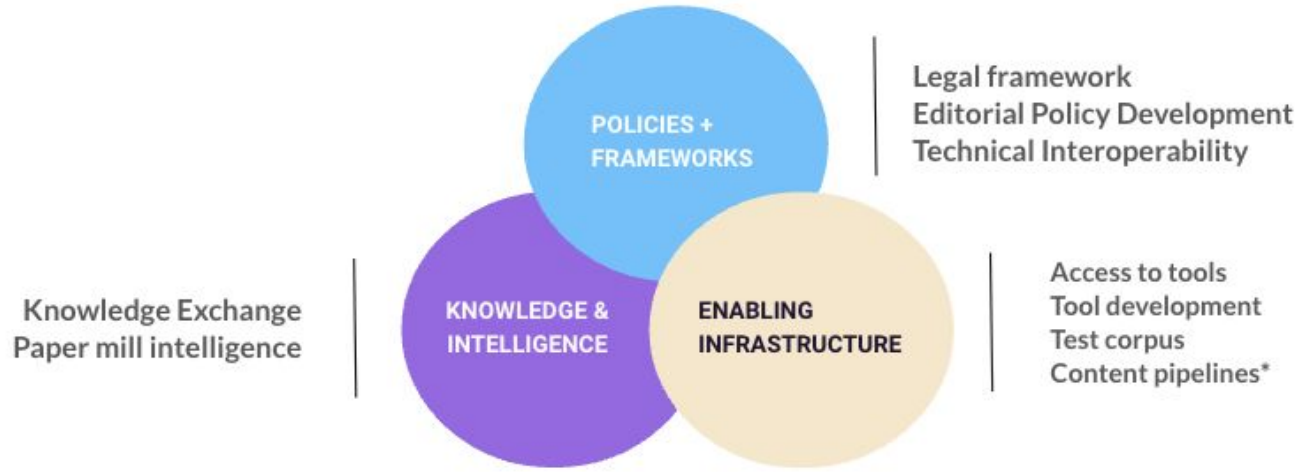
PeerJ



DE GRUYTER



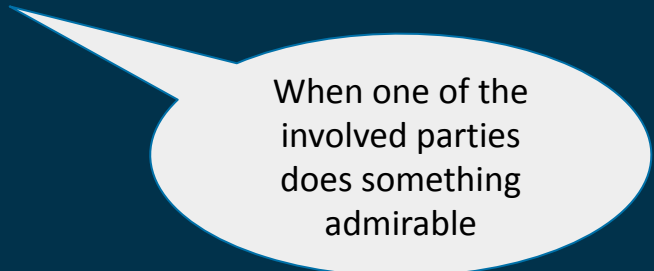
AIP



The Integrity Hub is organized in Working Groups,
Task Forces, and a Governance Board

Do The Right Thing

Courtesy of Retraction Watch



When one of the
involved parties
does something
admirable

All-time Retraction
Watch Database,
46,000

Maybe we can do
something to 'turn up
the volume' on Do The
Right Thing stories

All-time 'Do The Right Things'
141

Earlier this month, we reported on how Susanne Stoll, a graduate student in the Department of Experimental Psychology at the University College London, discovered an error that toppled a highly-cited 2014 article — and which might affect hundreds of other papers in the field of perception.



<https://retractionwatch.com/2020/12/23/i-thought-i-had-messed-up-my-experiment-how-a-grad-student-discovered-an-error-that-might-affect-hundreds-of-papers>

Nobel winner retracts paper from Science

A Caltech researcher who shared the 2018 Nobel Prize in Chemistry has retracted a 2019 paper after being unable to replicate the results.

Frances Arnold, who won half of the 2018 prize for her work on the evolution of enzymes, tweeted the news earlier today:



Frances Arnold

<https://retractionwatch.com/2020/01/02/nobel-winner-retracts-paper-from-science/>



Nicola Smith, credit Karl Welsch, Welsch Photography

She did the
right thing

In September 2019 Nicola Smith, a molecular pharmacologist in Australia, faced a brutal decision. She'd realized that she'd made a mistake — or rather, failed to catch a mistake in her group's research before the crippling error was published in two academic articles which were the culmination of years of work. And she could either tell the world, or pretend it never happened.

<https://retractionwatch.com/2021/01/12/the-most-horrific-time-of-my-career/>



Thank you!