Open Access and the challenge of Open Science

Arianna Bottinelli

Open Access Publishing in a nutshell

Research is freely accessible to/reusable by everyone at publication
Sustained by Article Pressing Charges (APCs)
Paid by authors of accepted papers
Authors keep the copyright

You may have heard of…

Open Science

Reproducibility

Credibility

Scientific misconduct

Accessibility

Reusability

Copyright

Research impact evaluation

cOAlitionS & Plan S

Open Source

Open Data

Open Notebook

Open Access

Transparent review process

open issues

You may have heard of… retractions and scandals

Vaccines causing autism!!! Wakefield et al., *The Lancet* (1997), retracted in 2010, antivaxxers still alive in 2020..

Bad practice, CoIs, ethical misconduct

You may have heard of… retractions and scandals

Vaccines causing autism!!! Wakefield et al., *The Lancet* (1997), retracted in 2010, antivaxxers still alive in 2020..

Bad practice, CoIs, ethical misconduct

Prof Arnold's retraction (Science 2019)

Results could not be reproduced

Key experiments missing, too busy to properly check the submission

You may have heard of… retractions and scandals

Vaccines causing autism!!! Wakefield et al., *The Lancet* (1997), retracted in 2010, antivaxxers still alive in 2020..

Bad practice, CoIs, ethical misconduct

Prof Arnold's retraction (Science 2019)

Results could not be reproduced

Key experiments missing, too busy to properly check the submission

"Schön scandal" Bell Labs (New Jersey, USA), 2001

Non-conducting molecules can be turned into semi-conductors.

Almost a Nobel prize.. Other labs couldn't reproduce the same results

Fabricated data, experimental evidence vanished...

Are we facing a “reproducibility crisis”?

nature

SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.

https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Are we facing a “reproducibility crisis”?

nature

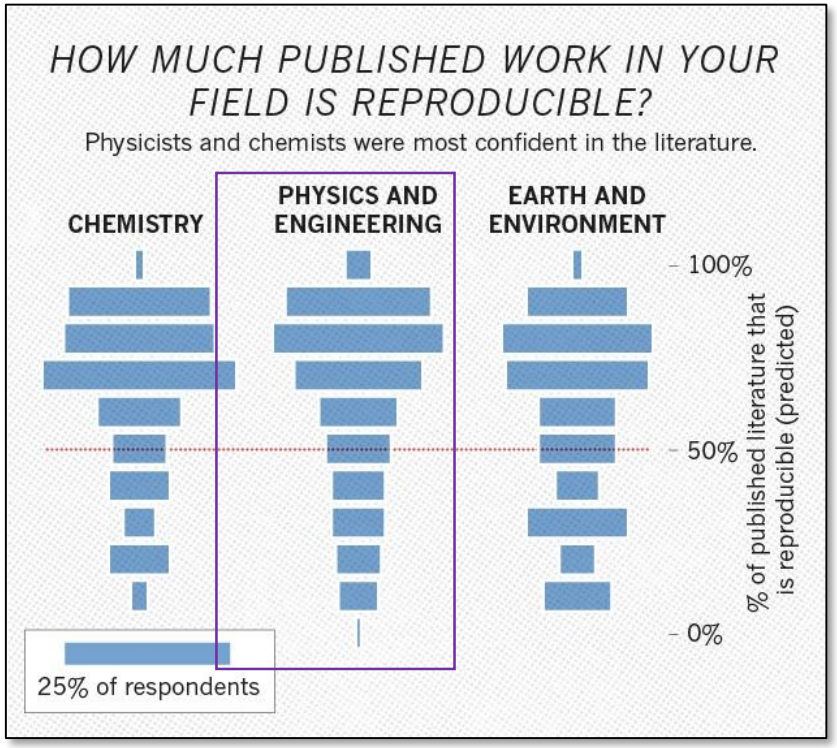
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Are we facing a “reproducibility crisis”?

nature

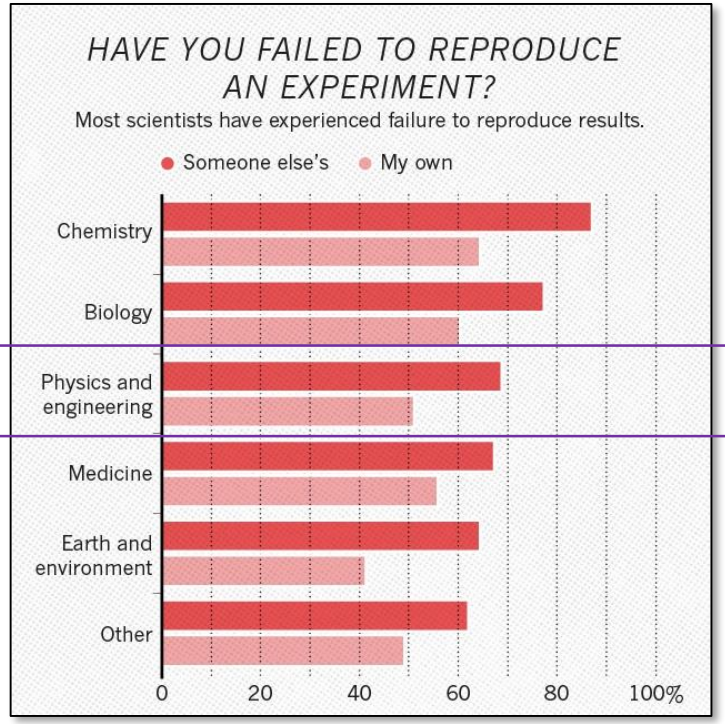
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



70% failed to reproduce other’s experiments

50% failed to reproduce their own!

https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Are we facing a “reproducibility crisis”?

nature

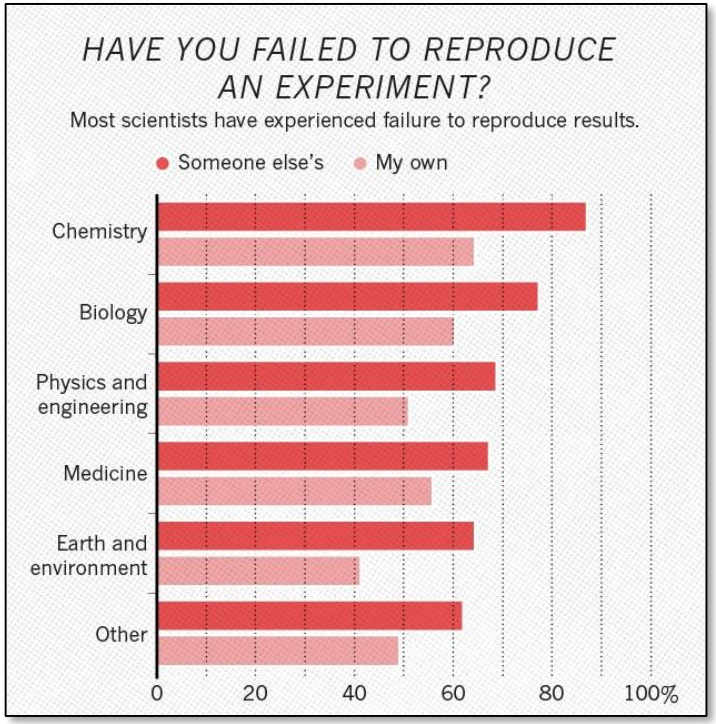
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Causes?

Pressure to publish, competition

Insufficient mentoring

Lack of transparency in methods

Are we facing a “reproducibility crisis”?

nature

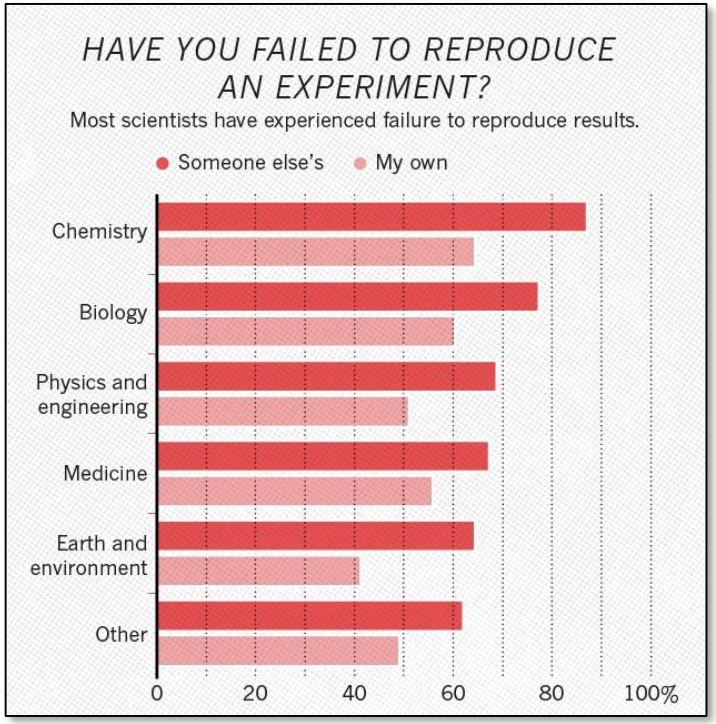
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Causes?

Increased awareness ?

Pressure to publish, competition

Insufficient mentoring

Lack of transparency in methods

Are we facing a “reproducibility crisis”?

nature

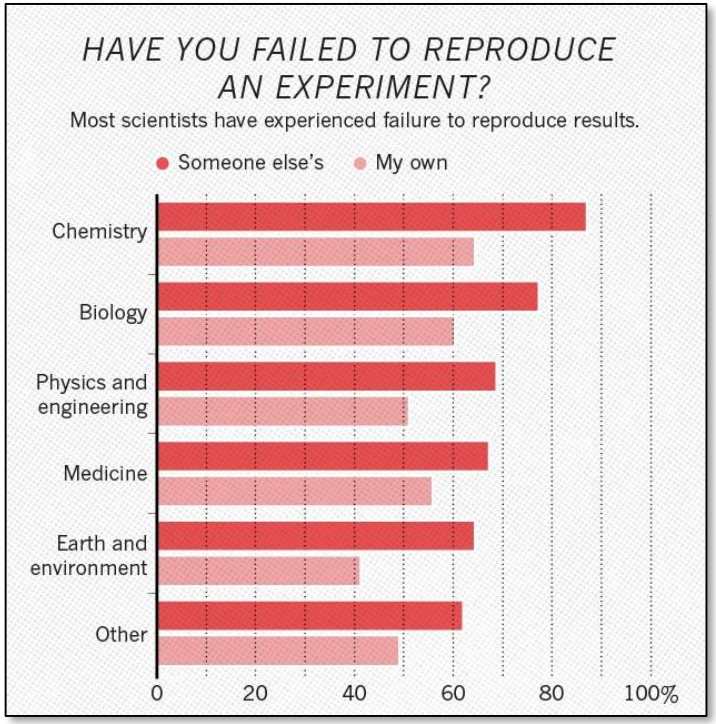
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Increased awareness ?

Causes?

Pressure to publish, competition

Insufficient mentoring

Lack of transparency in methods

Hot open questions

What is the role of reviewers?

Shall negative/positive attempts to reproduce be published?

Are we facing a “reproducibility crisis”?

nature

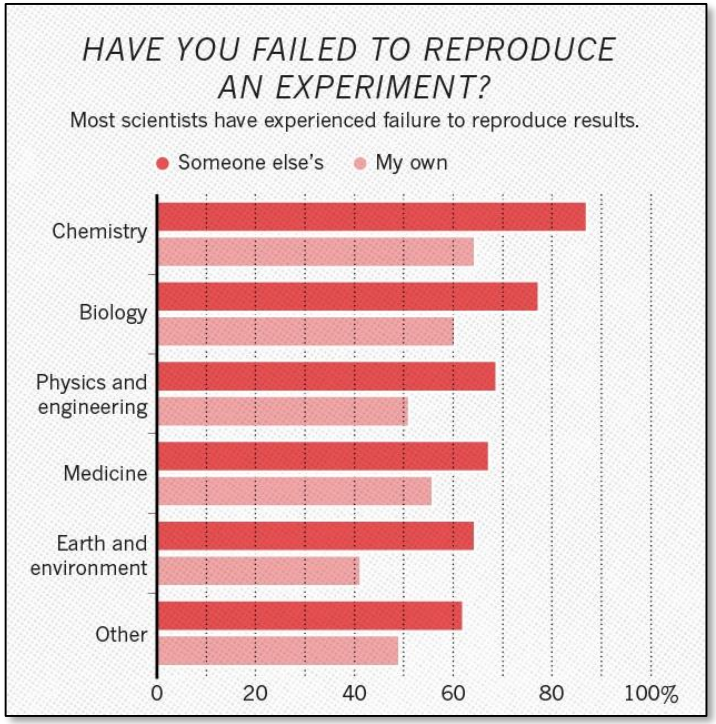
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Increased awareness ?

Causes?

Pressure to publish, competition

Insufficient mentoring

Lack of transparency in methods

Hot open questions

What is the role of reviewers?

Shall negative/positive attempts to reproduce be published?

Consequences?

Credibility crisis, antivax and climate change deniers

Are we facing a “reproducibility crisis”?

nature

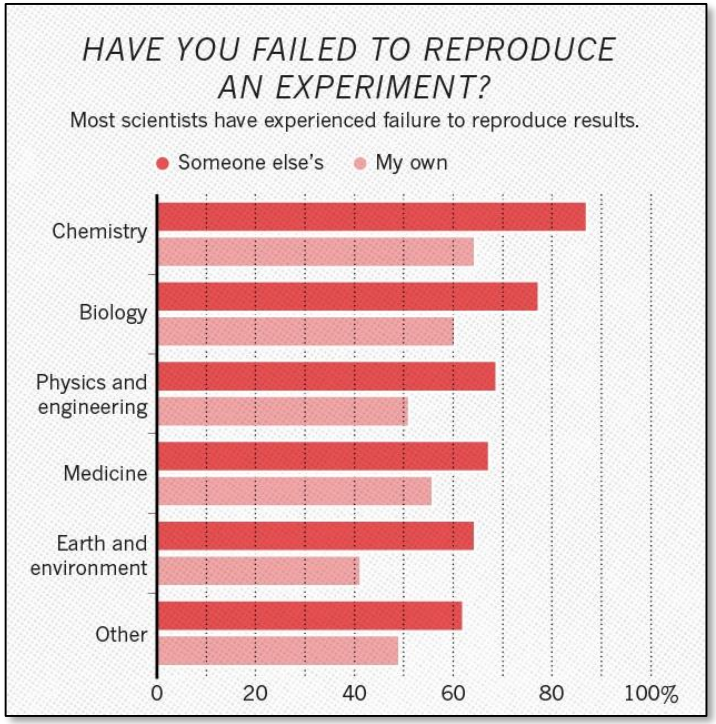
SPECIAL | 18 OCTOBER 2018

Challenges in irreproducible research

NATURE | NEWS FEATURE

1,500 scientists lift the lid on reproducibility

Survey sheds light on the ‘crisis’ rocking research.



Causes?

Increased awareness ?

Pressure to publish, competition

Insufficient mentoring

Lack of transparency in methods

Hot open questions

What is the role of reviewers?

Shall negative/positive attempts to reproduce be published?

Consequences?

Credibility crisis, antivax and climate change deniers

Solutions?

Results, data, methods, algorithms should be **available, accessible, reusable**

https://www.nature.com/news/1-500-scientists-lift-the-lid-on-reproducibility-1.19970

Open Data

Open Source

Open Science

Open Access

Open Notebook

"Make scientific research available, accessible, reusable"

- Improve quality and integrity

Open Data

Open Source

Open Science

Open Access

Open Notebook

"Make scientific research available, accessible, reusable"

- Improve quality and integrity
- Efficiency in data reuse
- Minimization of duplicate research efforts

Open Data

Open Source

Open Science

Open Access

Open Notebook

"Make scientific research available, accessible, reusable"

- Improve quality and integrity
- Efficiency in data reuse
- Minimization of duplicate research efforts
- Foster scientific collaborations
- Faster scientific advancement

Open Science

Open Data

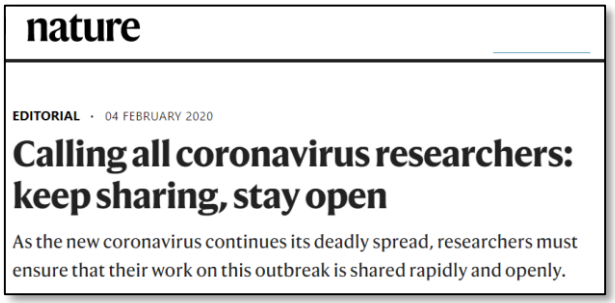
Open Source

Open Access

Open Notebook

"Make scientific research available, accessible, reusable"

- Improve quality and integrity
- Efficiency in data reuse
- Minimization of duplicate research efforts
- Foster scientific collaborations
- Faster scientific advancement

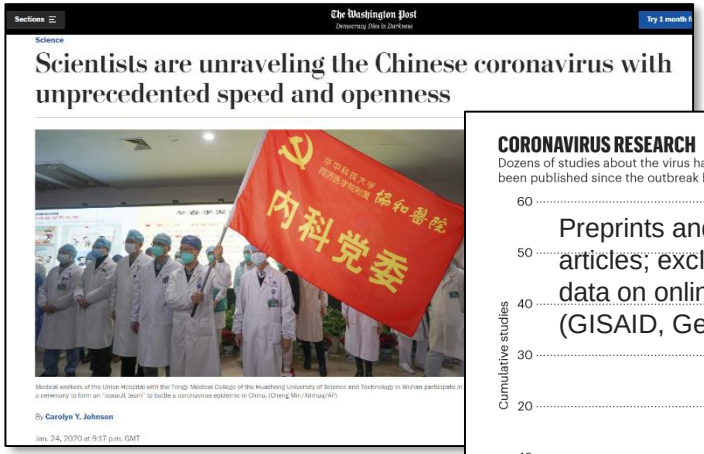

nature

EDITORIAL · 04 FEBRUARY 2020

Calling all coronavirus researchers: keep sharing, stay open

As the new coronavirus continues its deadly spread, researchers must ensure that their work on this outbreak is shared rapidly and openly.

https://www.nature.com/articles/d41586-020-00307-x

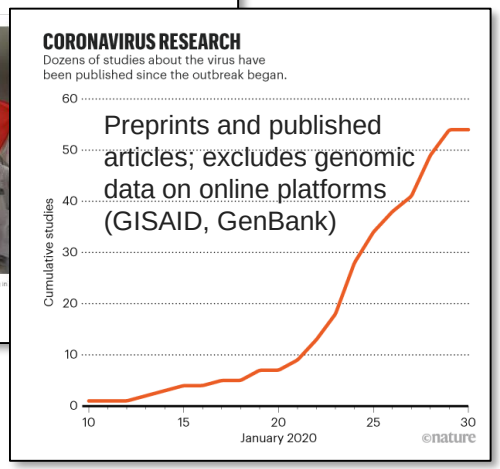

The Washington Post

Science

Scientists are unraveling the Chinese coronavirus with unprecedented speed and openness

By Carolyn Y. Johnson

Jan. 24, 2020 at 9:17 p.m. GMT



https://www.nature.com/articles/d41586-020-00253-8

Open Science

Open Data

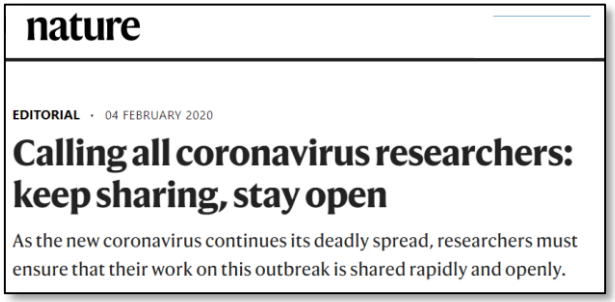
Open Source

Open Access

Open Notebook

"Make scientific research available, accessible, reusable"

- Improve quality and integrity
- Efficiency in data reuse
- Minimization of duplicate research efforts
- Foster scientific collaborations
- Faster scientific advancement

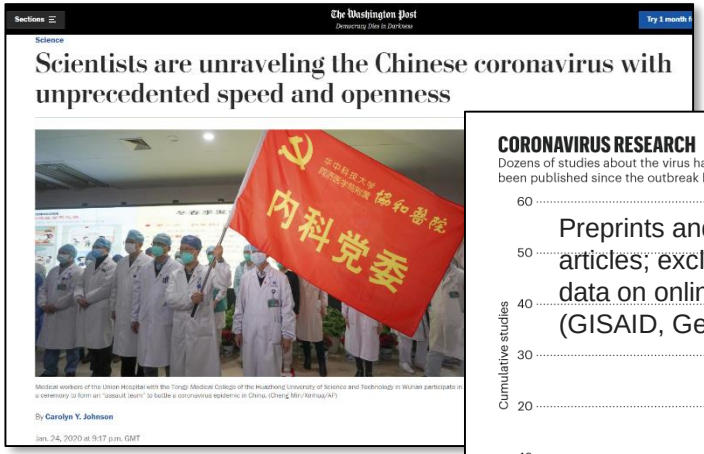

nature

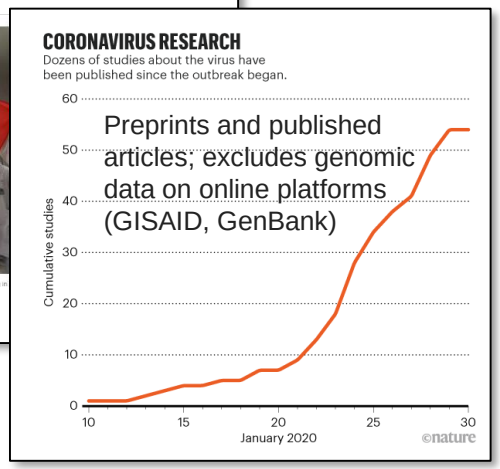
EDITORIAL · 04 FEBRUARY 2020

Calling all coronavirus researchers: keep sharing, stay open

As the new coronavirus continues its deadly spread, researchers must ensure that their work on this outbreak is shared rapidly and openly.

https://www.nature.com/articles/d41586-020-00307-x



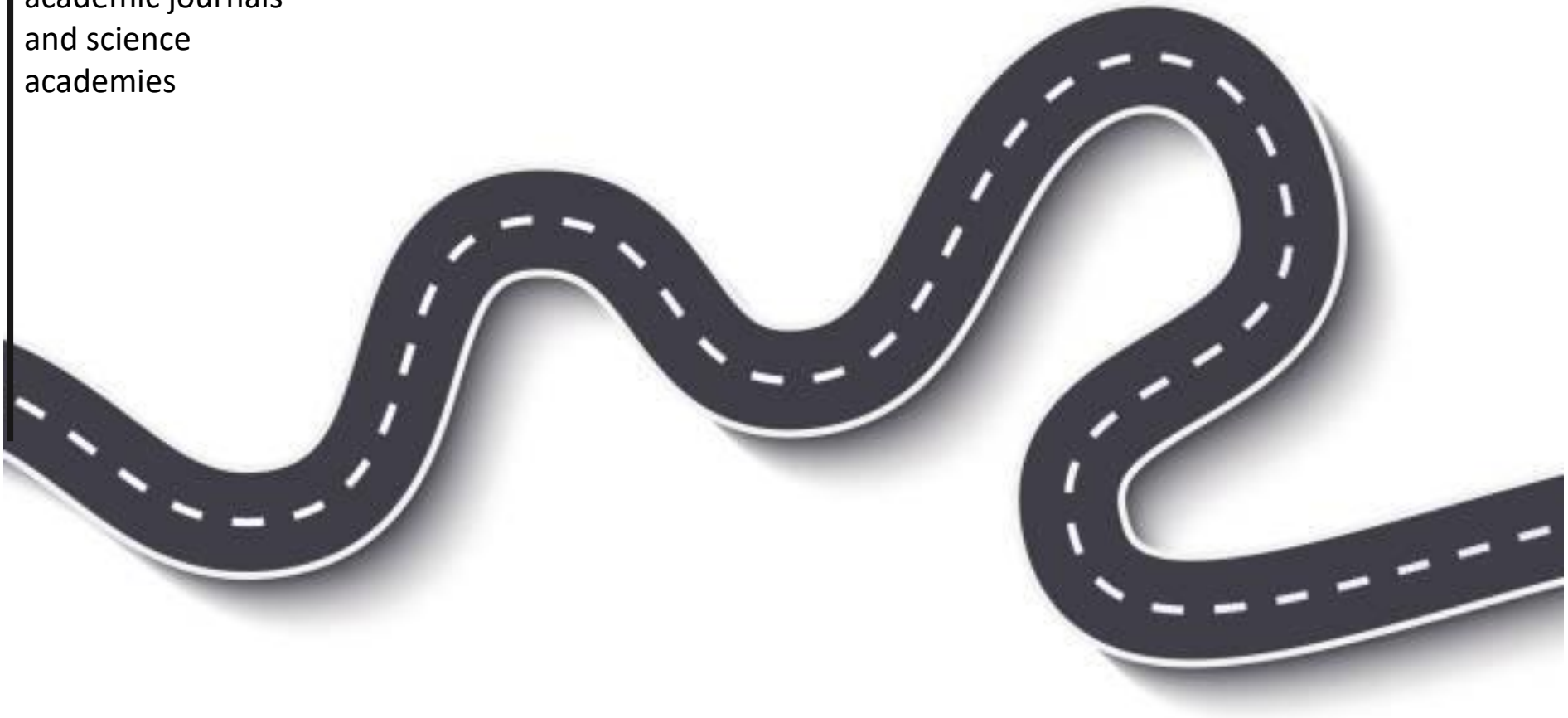


https://www.nature.com/articles/d41586-020-00253-8

- Boost innovation through knowledge transfer
- Support dissemination, public awareness

The road towards Open Science

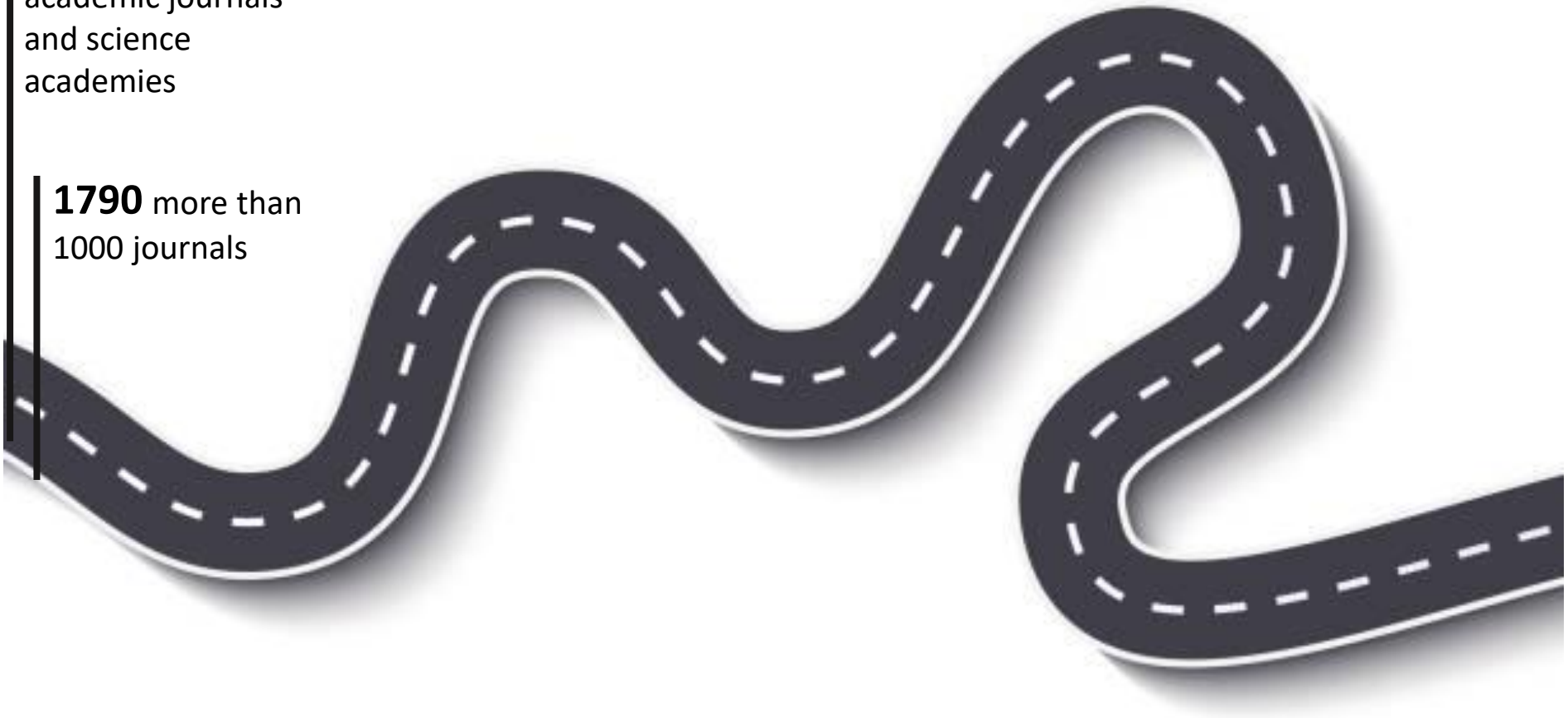
1660 Birth of academic journals and science academies



The road towards Open Science

1660 Birth of academic journals and science academies

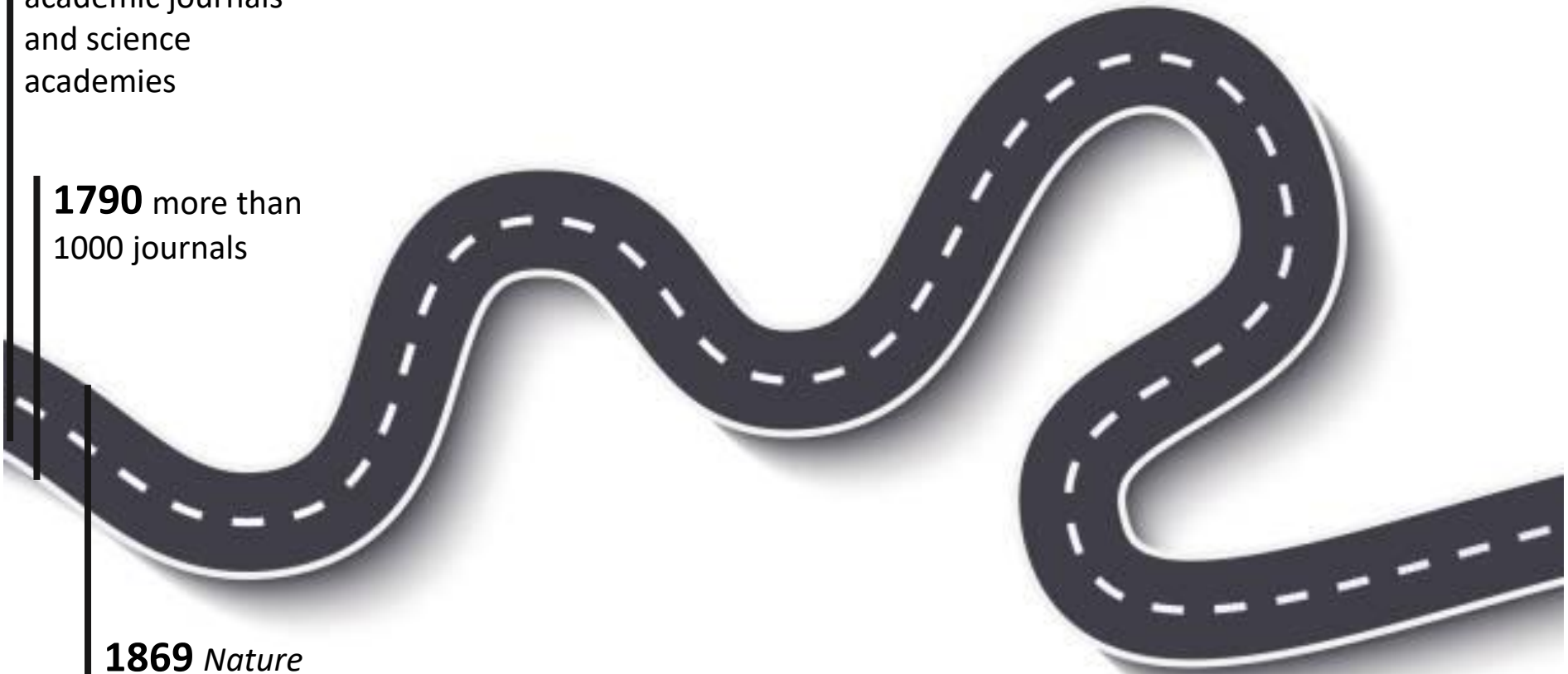
1790 more than 1000 journals



The road towards Open Science

1660 Birth of academic journals and science academies

1790 more than 1000 journals



1869 *Nature*

1872 *Popular Science*

1882 *Science*

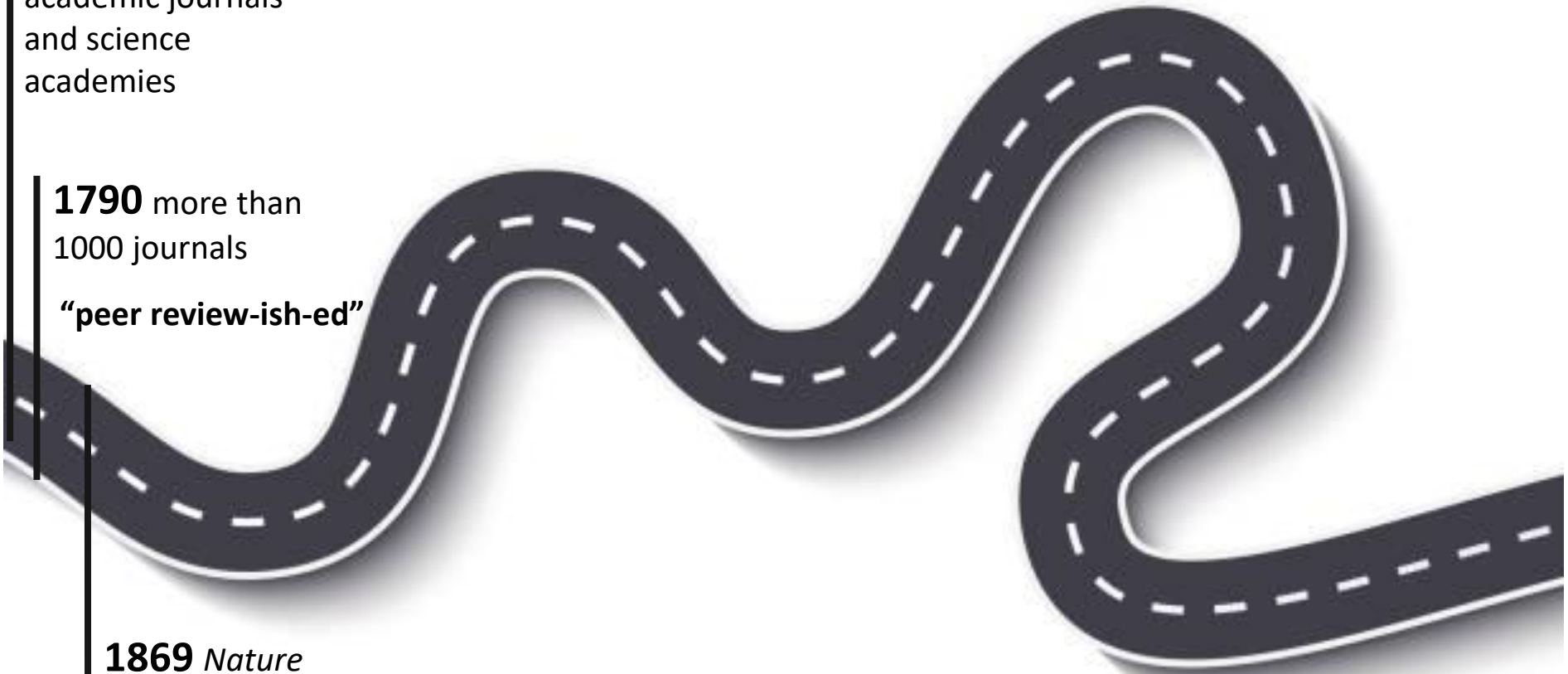
1899 *Physical Review*

The road towards Open Science

1660 Birth of academic journals and science academies

1790 more than 1000 journals

"peer review-ish-ed"



1869 *Nature*

1872 *Popular Science*

1882 *Science*

1899 *Physical Review*

Peer Review as we know it

Einsten’s first contact with peer review (Physical Review, 1935)

Peer Review as we know it

Einsten's first contact with peer review (Physical Review, 1935)

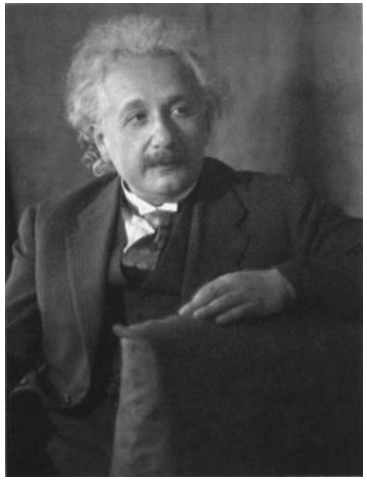
Dear Sir,

We (Mr. Rosen and I) had sent you our manuscript for publication and had not authorized you to show it to specialists before it is printed. I see no reason to address the — in any case erroneous — comments of your anonymous expert. On the basis of this incident I prefer to publish the paper elsewhere.

Respectfully,

Albert Einstein

https://theconversation.com/hate-the-peer-review-process-einstein-did-too-27405
https://journals.sagepub.com/doi/10.1177/107554709801900302



Peer Review as we know it

Einsten's first contact with peer review (Physical Review, 1935)

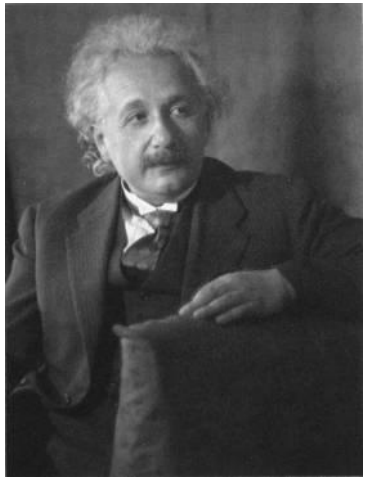
Dear Sir,

We (Mr. Rosen and I) had sent you our manuscript for publication and had not authorized you to show it to specialists before it is printed. I see no reason to address the — in any case erroneous — comments of your anonymous expert. On the basis of this incident I prefer to publish the paper elsewhere.

Respectfully,

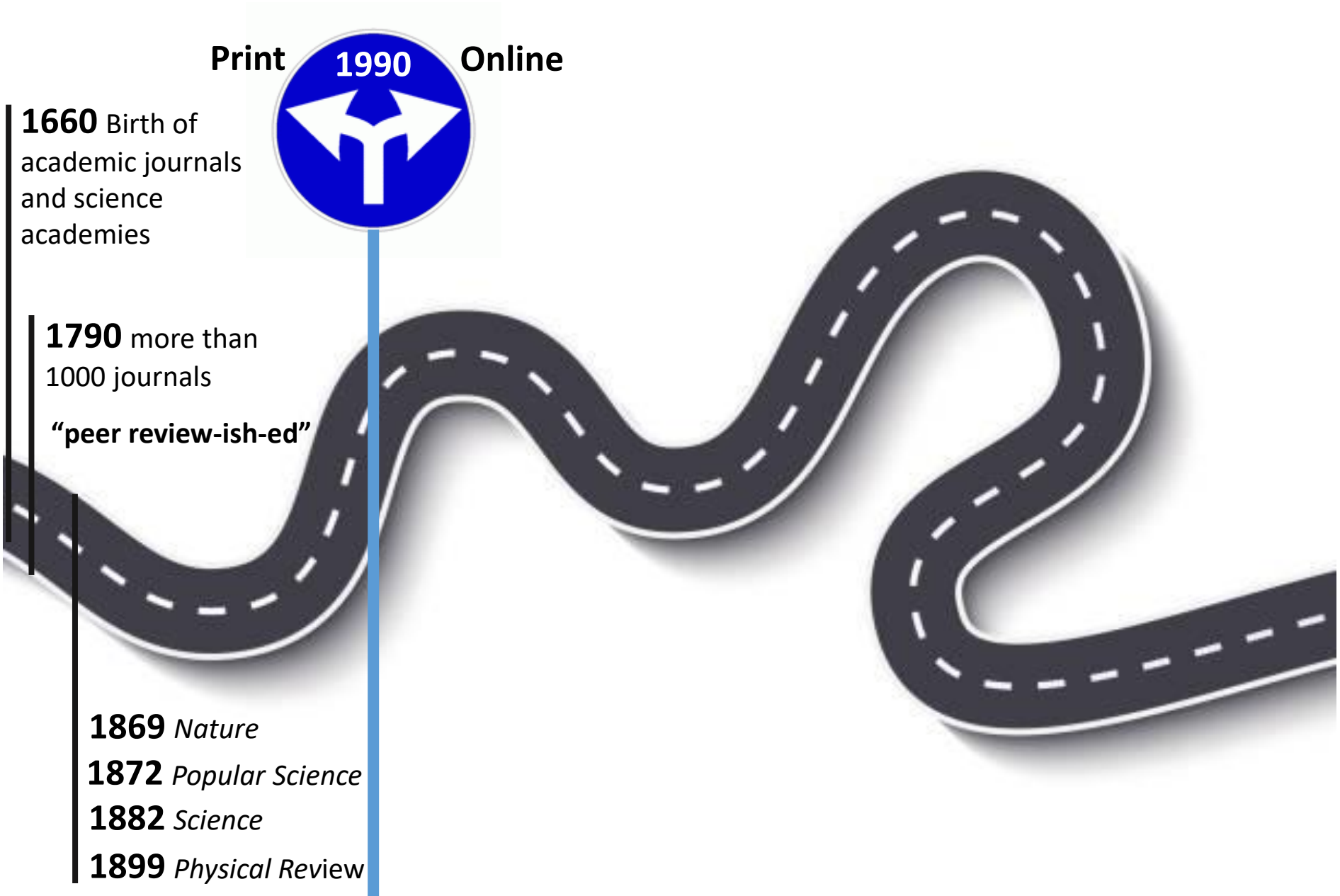
Albert Einstein

https://theconversation.com/hate-the-peer-review-process-einstein-did-too-27405
https://journals.sagepub.com/doi/10.1177/1075547098019003002

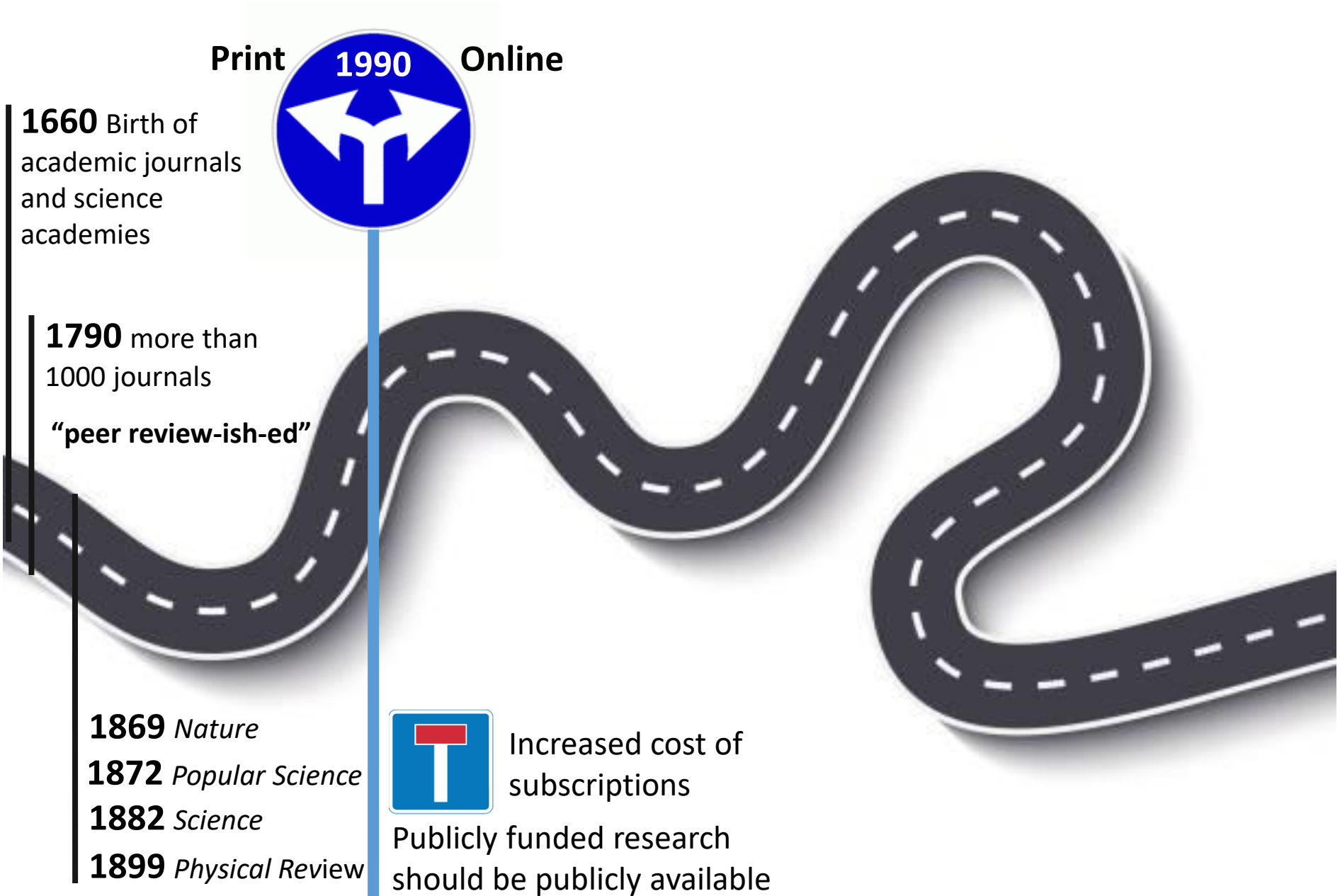


- Peer review is necessary to ensure scientific rigour, but…
- Open issues: reliability, accuracy, bias, favouritisms, self-interest…
- **How do we improve peer review?**
- Double blind, Transparent peer review, "Self-organized" peer-review?

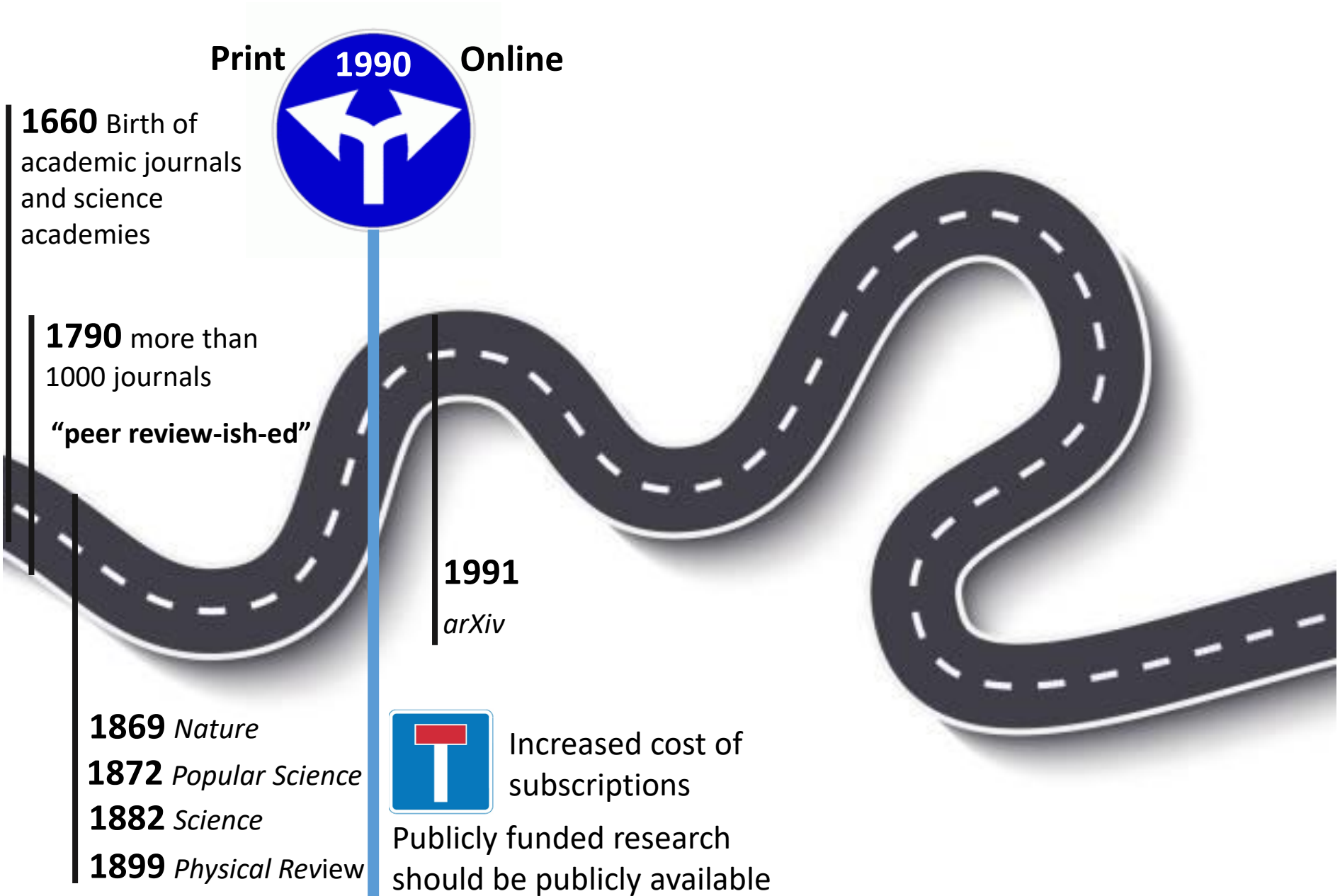
The road towards Open Science



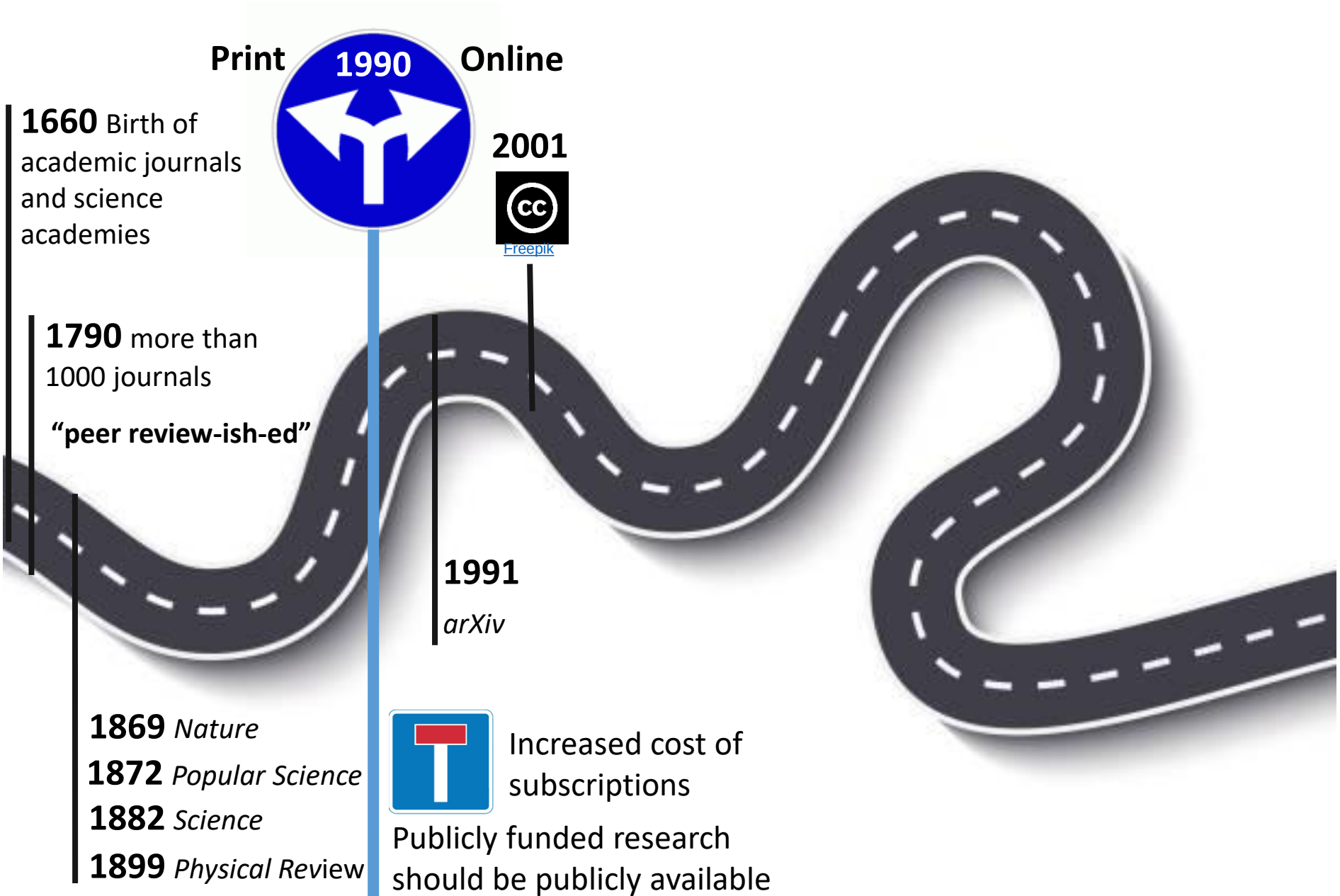
The road towards Open Science



The road towards Open Science



The road towards Open Science



The road towards Open Science

Unrestricted access, use, and reuse.
Copyright grants integrity is preserved.

Print **1990** **Online**

1660 Birth of academic journals and science academies

1790 more than 1000 journals

"peer review-ish-ed"

1869 *Nature*
1872 *Popular Science*
1882 *Science*
1899 *Physical Review*

2001

Freepik

2002

Budapest Open Access Initiative

1991

arXiv

Increased cost of subscriptions

Publicly funded research should be publicly available

The road towards Open Science

Unrestricted access, use, and reuse.
Copyright grants integrity is preserved.

Print **1990** **Online**

1660 Birth of academic journals and science academies

1790 more than 1000 journals

"peer review-ish-ed"

1869 *Nature*
1872 *Popular Science*
1882 *Science*
1899 *Physical Review*

1991
arXiv

2001
Freepik

2002
Budapest Open Access Initiative

SciRep

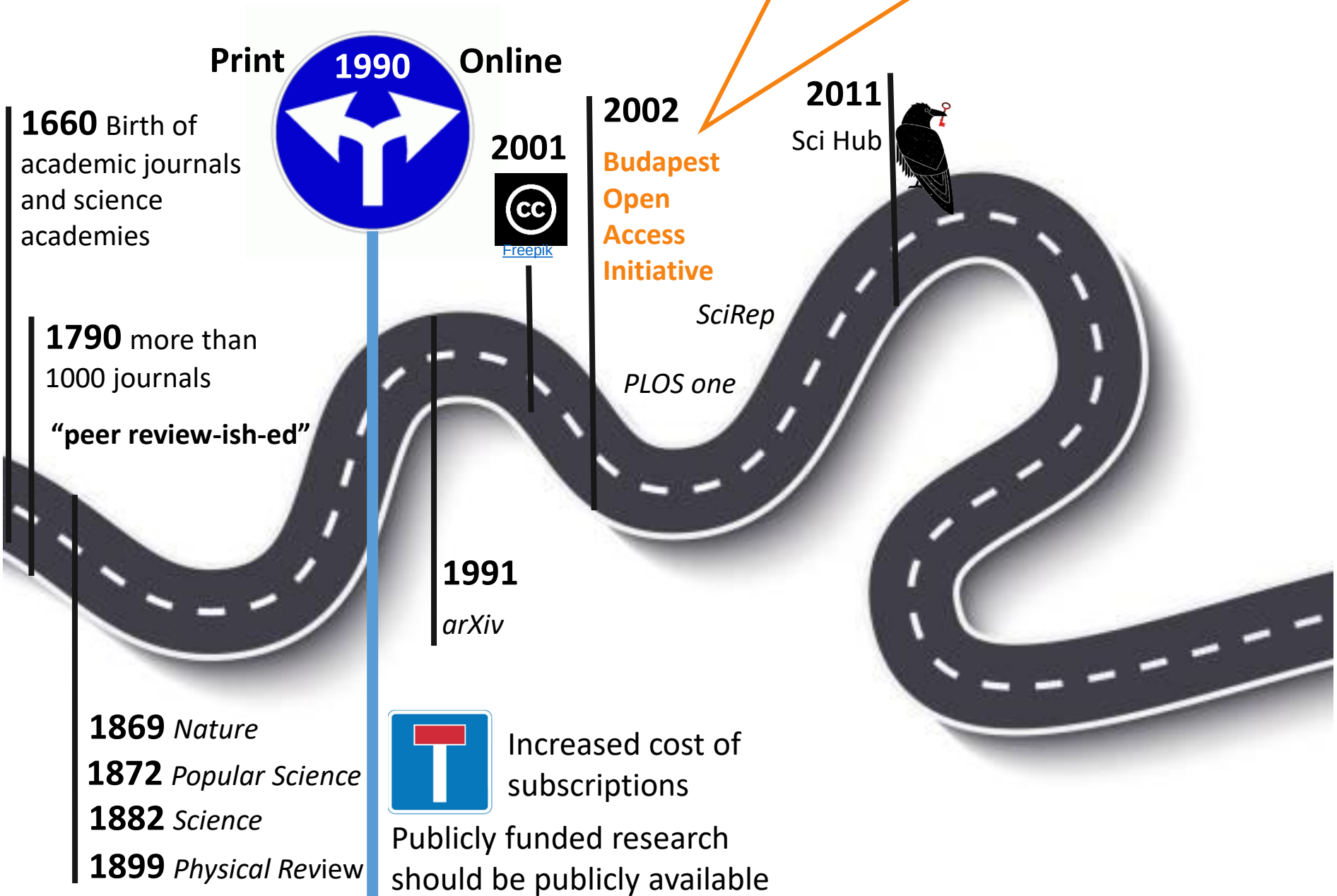
PLOS one

Increased cost of subscriptions

Publicly funded research should be publicly available

The road towards Open Science

Unrestricted access, use, and reuse.
Copyright grants integrity is preserved.



The road towards Open Science

Unrestricted access, use, and reuse.
Copyright grants integrity is preserved.

Accelerate the transition to OA

Print **1990** **Online**

1660 Birth of academic journals and science academies

1790 more than 1000 journals

"peer review-ish-ed"

1869 *Nature*
1872 *Popular Science*
1882 *Science*
1899 *Physical Review*

1991
arXiv

2001
Freepik

2002
Budapest Open Access Initiative

SciRep

PLOS one

2011
Sci Hub

2018
PlanS
cOAlitionS

Increased cost of subscriptions

Publicly funded research should be publicly available

cOAlition S and plan S

https://www.coalition-s.org/

2018; funding organizations supported by the European Commission and the European Research Council (ERC)

“From 2021 all publications funded by public or private grants must be published in Open Access Journals or made immediately available through Open Access Repositories without embargo.”

cOAlition S and plan S

https://www.coalition-s.org/

2018; funding organizations supported by the European Commission and the European Research Council (ERC)

“From 2021 all publications funded by public or private grants must be published in Open Access Journals or made immediately available through Open Access Repositories without embargo.”

Academics

- Authors should retain copyright of their publications
- Publications fee supported by funders and universities (not individuals)

cOAlition S and plan S

https://www.coalition-s.org/

2018; funding organizations supported by the European Commission and the European Research Council (ERC)

“From 2021 all publications funded by public or private grants must be published in Open Access Journals or made immediately available through Open Access Repositories without embargo.”

Academics

- Authors should retain copyright of their publications
- Publications fee supported by funders and universities (not individuals)

Publishers

- Subscription/hybrid $\xrightarrow{\quad}$ OA
  $t \longrightarrow t^*$
- Regulation of OA services (peer review, licenses)
- Transparency of publishing fees, capping

cOAlition S and plan S

https://www.coalition-s.org/

2018; funding organizations supported by the European Commission and the European Research Council (ERC)

"From 2021 all publications funded by public or private grants must be published in Open Access Journals or made immediately available through Open Access Repositories without embargo."

Academics

- Authors should retain copyright of their publications
- Publications fee supported by funders and universities (not individuals)

Publishers

- Subscription/hybrid $\xrightarrow{\quad}$ OA
  t $\longrightarrow$ t*
- Regulation of OA services (peer review, licenses)
- Transparency of publishing fees, capping

Response:

Academics: OA 2020 Initiative
(academic research network)
"joint statement" (2018): work together to accelerate the transition to OA

https://oa2020.org/

Publishers:
open negotiations on "transformative agreements"

https://scholarlykitchen.sspnet.org/2019/04/23/transformative-agreements/

cOAlition S and plan S

https://www.coalition-s.org/

2018; funding organizations supported by the European Commission and the European Research Council (ERC)

"From 2021 all publications funded by public or private grants must be published in Open Access Journals or made immediately available through Open Access Repositories without embargo."

Academics

- Authors should retain copyright of their publications
- Publications fee supported by funders and universities (not individuals)

Publishers

- Subscription/hybrid $\xrightarrow{\quad}$ OA
  t $\longrightarrow$ t*
- Regulation of OA services (peer review, licenses)
- Transparency of publishing fees, capping

Response:

Academics: OA 2020 Initiative (academic research network) "joint statement" (2018): work together to accelerate the transition to OA

https://oa2020.org/

Publishers: open negotiations on "transformative agreements"

https://scholarlykitchen.sspnet.org/2019/04/23/transformative-agreements/

nature physics

Perspective | Open Access | Published: 15 November 2018

Open is not enough

OS needs active effort towards new research practices. Reusability must be planned.

https://www.nature.com/articles/s41567-018-0342-2

The road towards Open Science

Unrestricted access, use, and reuse.
Copyright grants integrity is preserved.

Accelerate the transition to OA

Print **1990** **Online**

1660 Birth of academic journals and science academies

1790 more than 1000 journals

"peer review-ish-ed"

1869 *Nature*
1872 *Popular Science*
1882 *Science*
1899 *Physical Review*

1991
arXiv

2001
Freepik

2002
Budapest Open Access Initiative

SciRep

PLOS one

2011
Sci Hub

2018
PlanS
cOAlitionS

2019
UNESCO:
define a global framework for OS by 2021

Increased cost of subscriptions

Publicly funded research should be publicly available

OS is key to achieve the Sustainable Development Goals

Open Access publishing

Open Access publishing

Green OA: self archiving, no peer-review

- Fast dissemination
- Record - establishing who did the work and when
- Potential community feedback
- “No” cost for authors

Open Access publishing

arXiv.org

bioRχiv beta
THE PREPRINT SERVER FOR BIOLOGY

SOCARXIV
open archive of the social sciences

ChemRxiv™

ENGINEERING engrχiv ARCHIVE

Green OA: self archiving, no peer-review

- Fast dissemination
- Record - establishing who did the work and when
- Potential community feedback
- “No” cost for authors

Gold OA: peer reviewed journals

- freely, permanently, immediately accessible for everyone under CC-BY (as for PlanS)
- Copyright is YOURS (not the journal’s)

Open Access publishing: more than just “free”

arXiv.org

bioRχiv beta THE PREPRINT SERVER FOR BIOLOGY

SOCARXIV open archive of the social sciences

ChemRxiv™

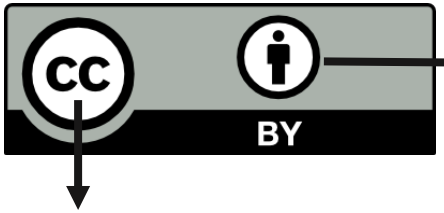
ENGINEERING engrχiv ARCHIVE

Green OA: self archiving, no peer-review

- Fast dissemination
- Record - establishing who did the work and when
- Potential community feedback
- “No” cost for authors

Gold OA: peer reviewed journals

- freely, permanently, immediately accessible for everyone under CC-BY (as for PlanS)
- Copyright is YOURS (not the journal’s)



Author(s) must be attributed and changes indicated.

Content can be copied, redistributed and adapted for any purpose: your thesis, but also a book…

Open Access publishing: more than just “free”

arXiv.org

bioRχiv beta THE PREPRINT SERVER FOR BIOLOGY

SOCARXIV open archive of the social sciences

ChemRxiv™

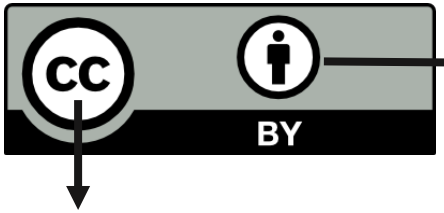
ENGINEERING engrχiv ARCHIVE

Green OA: self archiving, no peer-review

- Fast dissemination
- Record - establishing who did the work and when
- Potential community feedback
- “No” cost for authors

Gold OA: peer reviewed journals

- freely, permanently, immediately accessible for everyone under CC-BY (as for PlanS)
- Copyright is YOURS (not the journal’s)



Author(s) must be attributed and changes indicated.

Content can be copied, redistributed and adapted for any purpose: your thesis, but also a book…

Higher Visibility

- Official indexing services (Scopus/PubMed..)
- Metadata in the XML file
- Links to main-stream press

Open Access publishing: more than just “free”

arXiv.org

bioRχiv beta THE PREPRINT SERVER FOR BIOLOGY

SOCARXIV open archive of the social sciences

ChemRxiv™

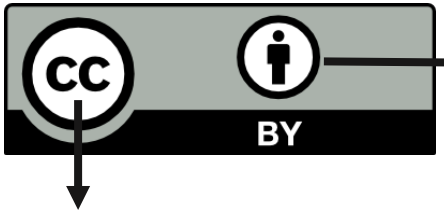
ENGINEERING engrχiv ARCHIVE

Green OA: self archiving, no peer-review

- Fast dissemination
- Record - establishing who did the work and when
- Potential community feedback
- “No” cost for authors

Gold OA: peer reviewed journals

- freely, permanently, immediately accessible for everyone under CC-BY (as for PlanS)
- Copyright is YOURS (not the journal’s)



Author(s) must be attributed and changes indicated.

Content can be copied, redistributed and adapted for any purpose: your thesis, but also a book…

Higher Visibility

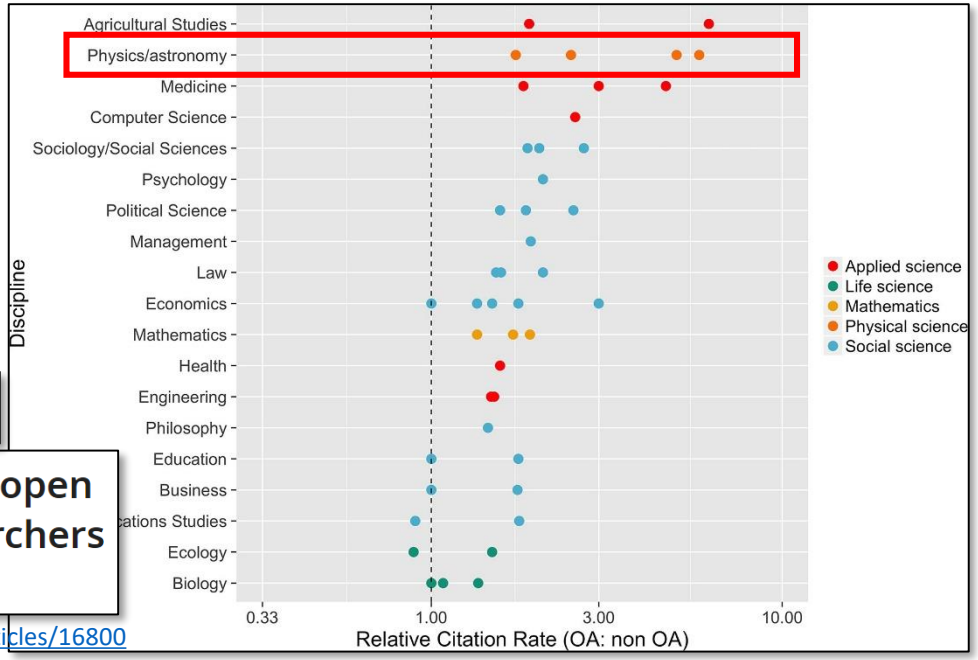
- Official indexing services (Scopus/PubMed..)
- Metadata in the XML file
- Links to main-stream press

Advantage over subscription: more citations and media coverage

eLIFE

Point of View: How open science helps researchers succeed

https://elifesciences.org/articles/16800



Open Access publishing: more than just "free"

arXiv.org

bioRχiv beta — THE PREPRINT SERVER FOR BIOLOGY

SOCARXIV — open archive of the social sciences

ChemRxiv™

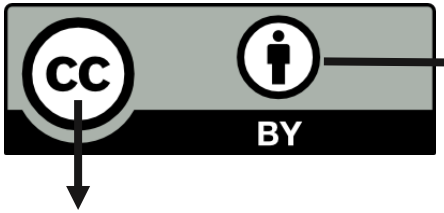
ENGINEERING engrχiv ARCHIVE

Green OA: self archiving, no peer-review

- Fast dissemination
- Record - establishing who did the work and when
- Potential community feedback
- "No" cost for authors

Gold OA: peer reviewed journals

- freely, permanently, immediately accessible for everyone under CC-BY (as for PlanS)
- Copyright is YOURS (not the journal's)



Author(s) must be attributed and changes indicated.

Content can be copied, redistributed and adapted for any purpose: your thesis, but also a book…

Higher Visibility

- Official indexing services (Scopus/PubMed..)
- Metadata in the XML file
- Links to main-stream press

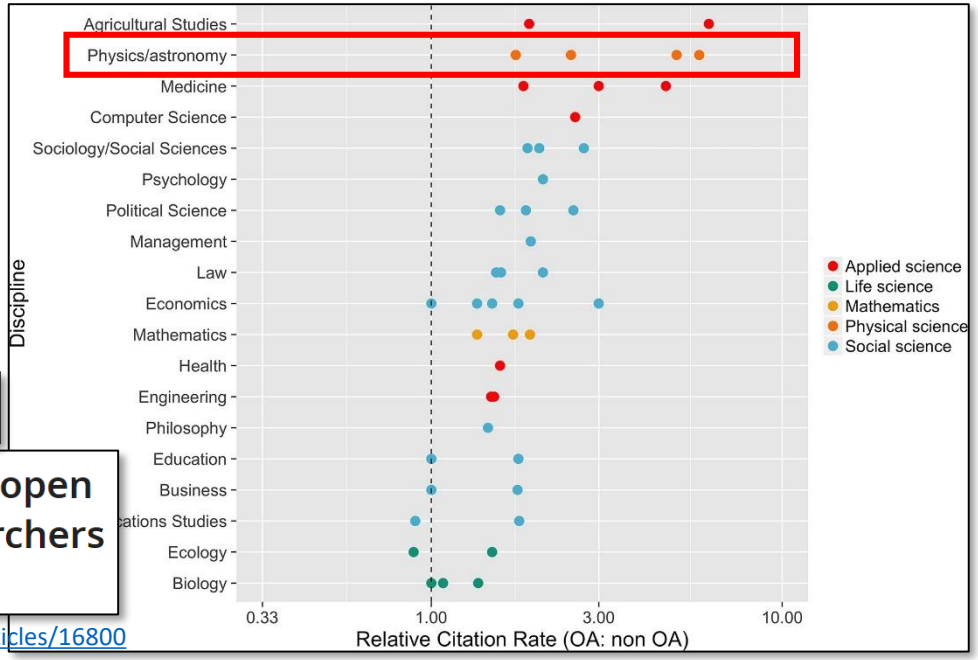
Advantage over subscription: more citations and media coverage

eLIFE

Must pay Article Pressing Charges (APC)

Point of View: How open science helps researchers succeed

https://elifesciences.org/articles/16800



The cost of publishing

eLife: OA non-profit journal supported by Wellcome Trust, Max Planck Society and Howard Hughes Medical Institute.

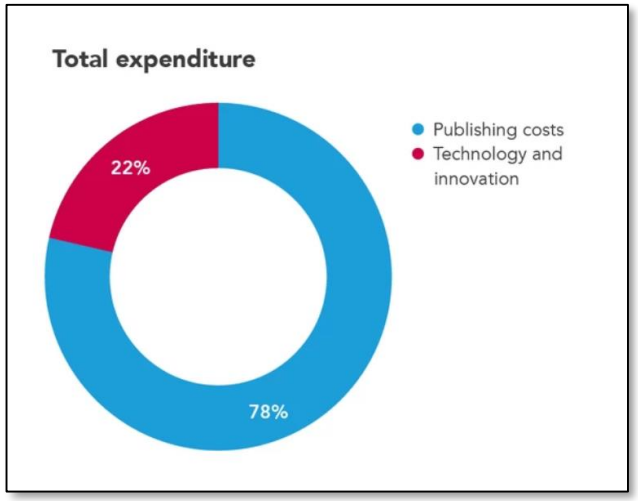
Setting a fee for publication

eLife announces a fee for publication of $2,500 to take effect on January 1, 2017.

https://elifesciences.org/inside-elife/b6365b76/setting-a-fee-for-publication

The cost of publishing

eLife: OA non-profit journal supported by Wellcome Trust, Max Planck Society and Howard Hughes Medical Institute.



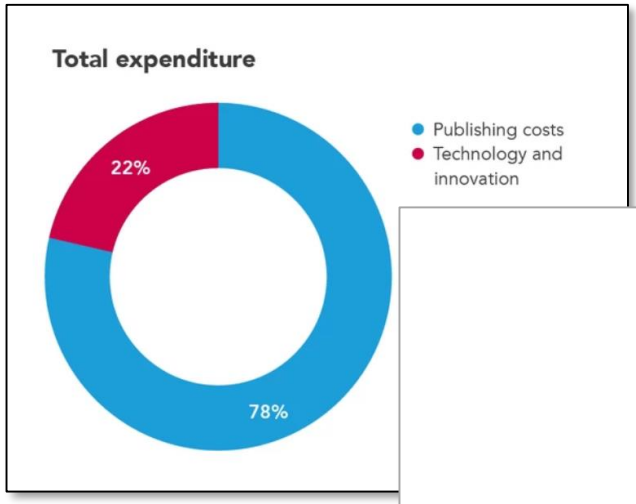
Setting a fee for publication

eLife announces a fee for publication of $2,500 to take effect on January 1, 2017.

https://elifesciences.org/inside-elife/b6365b76/setting-a-fee-for-publication

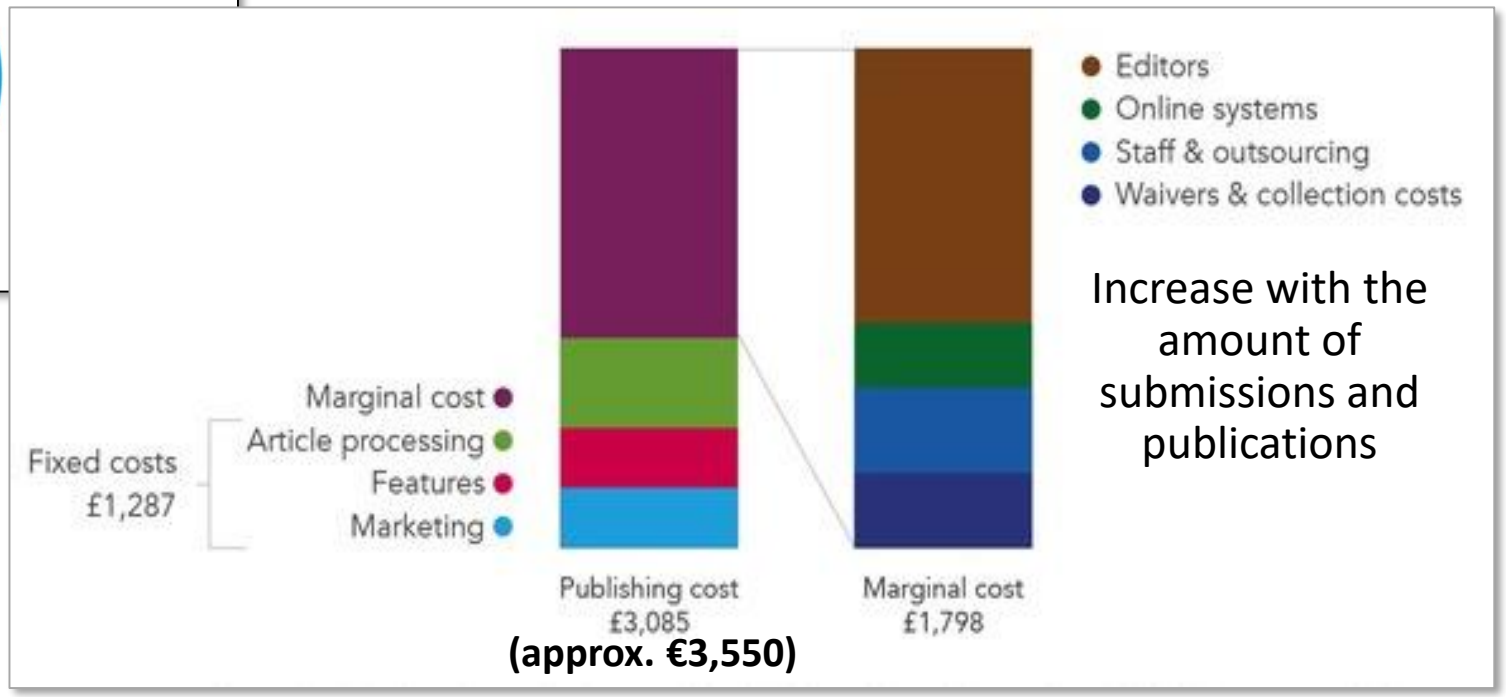
The cost of publishing

eLife: OA non-profit journal supported by Wellcome Trust, Max Planck Society and Howard Hughes Medical Institute.



Setting a fee for publication

eLife announces a fee for publication of $2,500 to take effect on January 1, 2017.



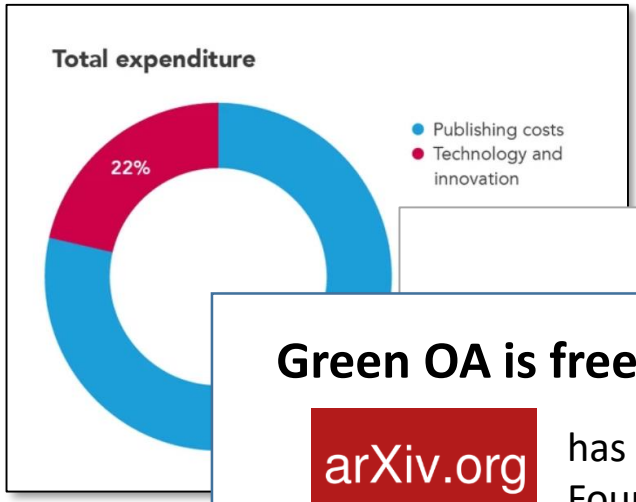
(approx. €3,550)

Increase with the amount of submissions and publications

https://elifesciences.org/inside-elife/b6365b76/setting-a-fee-for-publication

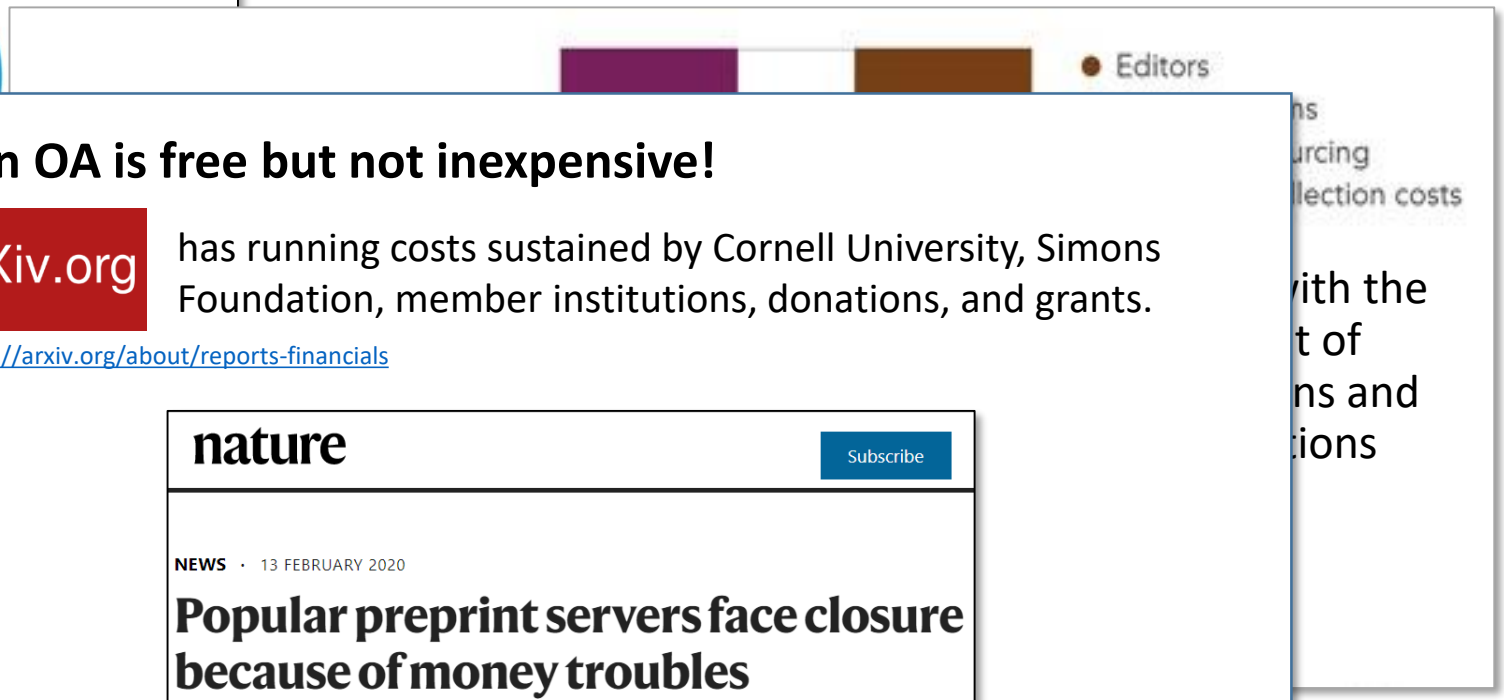
The cost of publishing

eLife: OA non-profit journal supported by Wellcome Trust, Max Planck Society and Howard Hughes Medical Institute.



Setting a fee for publication

eLife announces a fee for publication of $2,500 to take effect on January 1, 2017.



Green OA is free but not inexpensive!

arXiv.org has running costs sustained by Cornell University, Simons Foundation, member institutions, donations, and grants.

https://arxiv.org/about/reports-financials

nature Subscribe

NEWS · 13 FEBRUARY 2020

Popular preprint servers face closure because of money troubles

Repositories like INA-Rxiv and IndiaRxiv boost regional science, but finding cash to run them is proving difficult.

https://elifesciences.org/inside-elife/b6365b76/setting-a-fee-for-publication

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

Self-sustained, selective OA is more expensive

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

Self-sustained, selective OA is more expensive

The example of the Nature family

Impact, selectivity

Nature

Around 1000 papers/year

Nature research journals

eg NPhysics 373 papers in 2019

Nature Communications

5,800 papers in 2019

Communications journals

(too early to tell)

Scientific reports

20,400 papers in 2019

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

Self-sustained, selective OA is more expensive

The example of the Nature family

Impact, selectivity

Nature Around 1000 papers/year	?
Nature research journals eg NPhysics 373 papers in 2019	?
Nature Communications 5,800 papers in 2019	€4,380
Communications journals (too early to tell)	€2,680
Scientific reports 20,400 papers in 2019	€1,570

APC

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

The cost of open access vs selectivity

Open Access journals should be fully supported by APC paid by authors of accepted papers.

AND

Marginal costs increase with submission and publication volume

Self-sustained, selective OA is more expensive

The example of the Nature family

Impact, selectivity

Nature Around 1000 papers/year	?
Nature research journals eg NPhysics 373 papers in 2019	?
Nature Communications 5,800 papers in 2019	€4,380
Communications journals (too early to tell)	€2,680
Scientific reports 20,400 papers in 2019	€1,570

APC

How can we lower APCs?

- Other company's revenues
- External funding
- PlanS: Transparency and capping
- *Pay for submitting?*
- *Do we need selective journals?*
- *Should we change the way research is assessed?*

https://sfdora.org/

https://www.sciencemag.org/news/2020/01/eight-publishers-volunteer-pricing-info-pilot-study

https://www.informationpower.co.uk/recommendations-for-transparent-communication-of-open-access-prices-and-services/

Good news to finish with!

Subscription journals *are* expensive: how much is one paper?

1,000 euros?

5,000 euros?

10,000 euros?

Good news to finish with!

Subscription journals *are* expensive: how much is one paper?

An analysis by the Max Planck Digital Library in 2014 showed that

- *Total journal subscriptions: €7.6 billion*
- *Total articles published : 1.5 million*
- *(as listed on Web of Science)*
- *Cost per article (rounded):* **€5,000**

Disrupting the subscription journals' business model for the necessary large-scale transformation to open access

A Max Planck Digital Library Open Access Policy White Paper

https://pure.mpg.de/pubman/faces/ViewItemOverviewPage.jsp?itemId=item_2148961

Good news to finish with!

Subscription journals *are* expensive: how much is one paper?

An analysis by the Max Planck Digital Library in 2014 showed that

- *Total journal subscriptions: €7.6 billion*
- *Total articles published : 1.5 million*
- *(as listed on Web of Science)*
- *Cost per article (rounded):* **€5,000**

Disrupting the subscription journals' business model for the necessary large-scale transformation to open access

A Max Planck Digital Library Open Access Policy White Paper

https://pure.mpg.de/pubman/faces/ViewItemOverviewPage.jsp?itemId=item_2148961

PlanS: funds should be moved from subscriptions to support APCs
-> OA agreements at national/institutional levels

Open access agreement for Germany

If you are a corresponding author* affiliated with a German university or research institution, you are entitled to publish open access in our journals with fees covered by the German DEAL agreement.

https://www.springernature.com/gp/open-research/institutional-agreements/oaforgermany

Good news to finish with!

Subscription journals *are* expensive: how much is one paper?

An analysis by the Max Planck Digital Library in 2014 showed that

- *Total journal subscriptions: €7.6 billion*
- *Total articles published : 1.5 million*
- *(as listed on Web of Science)*
- *Cost per article (rounded):* **€5,000**

Disrupting the subscription journals' business model for the necessary large-scale transformation to open access

A Max Planck Digital Library Open Access Policy White Paper

https://pure.mpg.de/pubman/faces/ViewItemOverviewPage.jsp?itemId=item_2148961

PlanS: funds should be moved from subscriptions to support APCs
-> OA agreements at national/institutional levels

Open access agreement for Germany

If you are a corresponding author* affiliated with a German university or research institution, you are entitled to publish open access in our journals with fees covered by the German DEAL agreement.

https://www.springernature.com/gp/open-research/institutional-agreements/oaforgermany

In the meantime: waivers!

Full/partial automatic waiver for world's lowest income countries as defined by the World Bank

But anyone can ask for waivers (apcwaivers@springernature.com) , or for funding advices (http://www.springernature.com/gp/open-research/funding)

Good news to finish with?

Subscription journals *are* expensive: how much is one paper?

From the Impact blog of the London School of Economics:

OA deals as for PlanS are not sustainable for developing countries, waivers are not enough to support all publications → PlanS is benefitting only Western countries

https://blogs.lse.ac.uk/impactofsocialsciences/2020/02/21/read-and-publish-open-access-deals-are-heightening-global-inequalities-in-access-to-publication/

But anyone can ask for waivers (apcwaivers@springernature.com) , or for funding advices (http://www.springernature.com/gp/open-research/funding)

Keep reading, keep thinking, keep discussing

Is open access widening the gap between rich and poor countries?

What is the best way to evaluate a researcher's career?

Shall negative/positive attempts to reproduce be published?

Is CC-BY the best license or it would be better to reserve some rights?

Are OA deals sustainable for developing countries?

How can we improve peer review?

What is responsibility of reviewers and what is not?

Does impact factor matter?

Are we facing a "reproducibility crisis"?

Thank you for listening!

ariannabottinelli@gmail.com

@ArihBoh