

Responsible Research Impact Assessment

A Researcher's Perspective

J. Britt Holbrook

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[@jbrittholbrook](#)

Assessing Impact of Science: Methods and Instruments

AESIS Network International Course

Virtually in London

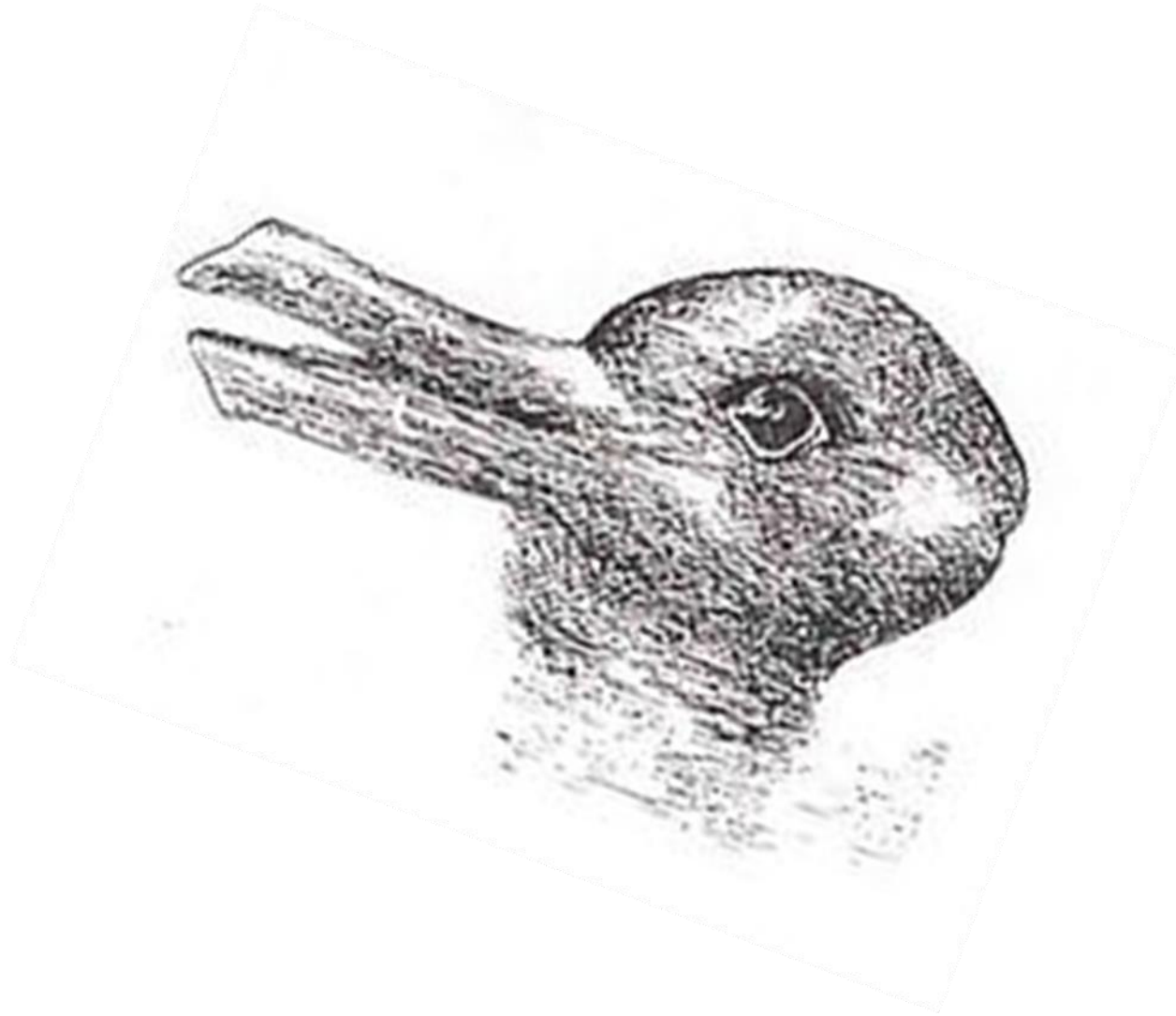
November 5, 2021

Perfection

"You realise that the state we should be in is perfection, that we're not in it, and the reason we're here is to find it."

– Marianne Faithfull





NJIT

New Jersey Institute of Technology

COLLEGE OF SCIENCE & LIBERAL ARTS

Presentation

- Mode: conjectures and refutations
- Standardization
- Evaluation
- Transformation
- Transvaluation
- Academic flourishing-ation
- Designing Research Impact Assessment to Encourage Serendipity

Standardization

- Enforces standards
- Tends to make everything the same (replication)
- Resists change
- Encourages conservatism
- Uses peer review

Evaluation

- Relies on standards
- Requires individuals to meet standards *and* exhibit originality
- Rarely changes
- Punishes risk taking
- Relies on peer review

Transformation

- Defies standards
- Intends to shake everything up
- Requires (sometimes radical) change
- Encourages risk taking
- Uses modified peer review

Transvaluation

- Redefines standards
- Tends to begin with – and value – individuals
- Embodies change
- Exemplifies risk taking
- Challenges established methods of evaluation

Academic Flourishing

- Seeks new standards
- Individuals seek to meet standards *and* exhibit originality
- Judged relative to individuals and changes as individuals become who they are
- Requires risk taking
- Extends peer review

Evaluating Academic Flourishing

- Recognizes new/different/developing standards
- Encourages individuals to meet standards *and* exhibit originality
- Changes in response to good arguments (non-dogmatic)
- Rewards risk taking
- Uses peer review along with other means

56 Indicators of Impact

H-index
G-index
Universal H-index
HM-index (standardizes
co-authorship)
Peer review
Place of publication
of pubs
of citations
Book sales
Article Product downloads
Website hits
Media mentions
Quotes in media
Quotes in policy
Developing a metric
that people use
Rabble rousing
Muckraking
Lawsuits
Arrests
Cited in testimonials
Town hall meetings

Social networking contacts
Increased diversity
Degree of ID/TD
Degree of transformativity
ID/TD rigor
CSID advisors
Special problem requests
with CSID faculty
Internationalization
Grant \$
Audience size @ CSID
events
Success of faculty fellows
Esteem of senior fellows
Success of graduate / UG
presentations & grants
Posters?
Impact factor of journals
in which CSID publishes
Number of Angry letters
from important people
Mention by policy makers

Meetings with important
ppl
Invitations to present
Invitations to consult
Invitations to evaluate
Protests/demonstrations/
sit-ins
Coining/debunking phrase
or buzzword
Trending in social media
Esteem surveys
Trust/reputation
Rankings
Blog mentions
Student surveys
Student testimonials
Faculty recommendations
Faculty award/prize
Textbooks
Influencing curriculum
creation
Participating in public
education programs

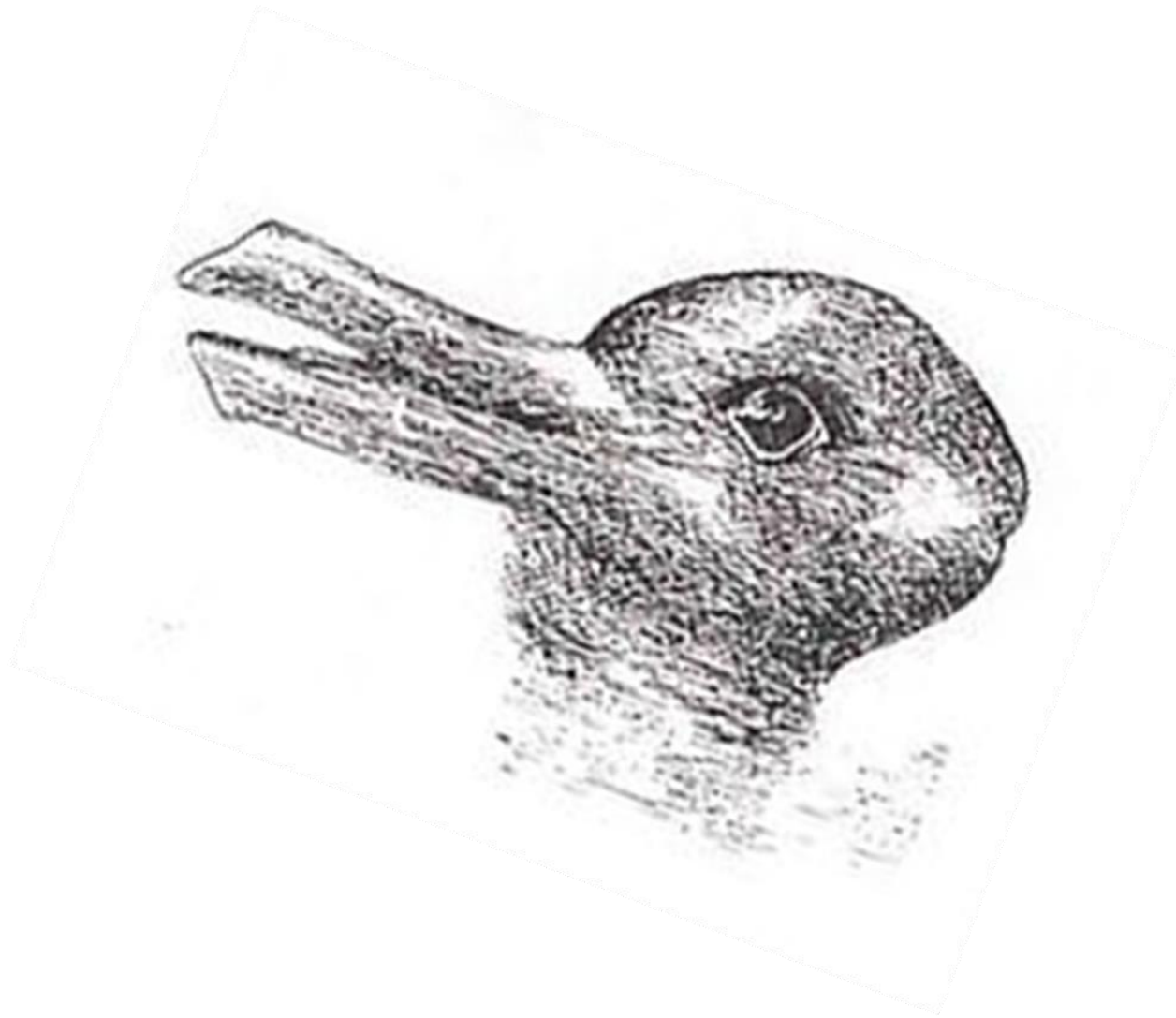


Table 1 Other possible indicators of impact

From: [We need negative metrics too](#)

Public engagement	Academic community	Media
Protests, demonstrations or arrests	Invitations to present, consult or review	Article downloads
Provoking lawsuits	Interdisciplinary achievements	Website hits
Angry letters from important people	Adviser appointments	Media mentions
Meetings with important people	Reputation of close collaborators	Quotes in media
Participation in public education	Reputation as a team member	Coining of a phrase
Mention by policy-makers	Textbooks authored	Trending in social media
Public research discussions	Citation in testimonials and surveys	Blog mentions
Muckraking	Audience size at talks and meetings	Book sales
Quotes in policy documents	Developing a useful metric	Buzzword invention
Rabble rousing	Curriculum input	Social-network contacts
Engagement with citizens abroad	Faculty recommendations, prizes	Television and radio interviews



Score in context

Puts article in the top 5% of all articles ranked by attention

Good compared to other articles of same age & journal (73rd percentile)

Very good compared to articles of the same age (98th percentile)

Mentioned by

- 1 news outlet
- 6 blogs
- 81 tweeters
- 6 Facebook users
- 1 Wikipedia page
- 2 Google+ users

Readers on

- 39 Mendeley
- 7 CiteULike

Track this article

- Get email updates when this article is shared

Research impact: We need negative metrics too

News Blogs Twitter Facebook Wikipedia Google+ **Score** Demographics Help

The Altmetric score is one measure of the quality and quantity of online attention that this article has received. You can read about [how Altmetric scores are calculated](#) here.

This article scored **99.87**

The context below was calculated when this article was last mentioned on **1st May 2014**

Compared to all articles in Nature

So far Altmetric has tracked 33,837 articles from this journal. They typically receive a lot more attention than average, with a mean score of 40.1 vs the global average of 4.9. This article **has done particularly well**, scoring higher than 90% of its peers.

In the
90%ile

All articles of a similar age

Older articles will score higher simply because they've had more time to accumulate mentions. To account for age we can compare this score to the 84,736 tracked articles that were published within six weeks on either side of this one in any journal. This article has done particularly well, scoring **higher than 98% of its contemporaries**.

In the
98%ile

Ranks
913th

Other articles of a similar age in Nature

We're also able to compare this article to 981 articles from the same journal and published within six weeks on either side of this one. This article **has gotten more attention than average**, scoring higher than 73% of its contemporaries.

In the
73%ile

Ranks
259th

All articles

More generally, Altmetric has tracked 3,423,012 articles across all journals so far. Compared to these this article has done particularly well and is in the 99th percentile: it's **in the top 5% of all articles ever tracked** by Altmetric.

In the
99%ile



Score in context

Puts article in the top 5% of all articles ranked by attention

[show more...](#)

Mentioned by

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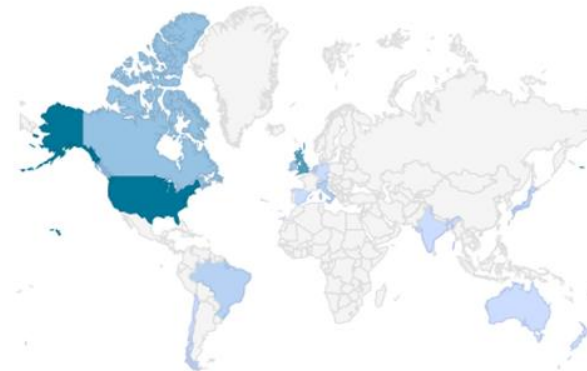
Research impact: We need negative metrics too

News Blogs Twitter Facebook Wikipedia Google+ Score **Demographics** Help

Twitter attention

The data shown below were collected from the profiles of tweeters who shared this article. Click [here](#) to find out more about how the information was compiled.

Geographical breakdown



#	Country	As %
1	US	24%
2	GB	14%
3	CA	7%
4	IE	4%
5	IT	3%
5	BR	3%
7	NL	2%
7	JP	2%
7	BE	2%
–	Other	8%
–	Unknown	24%

Tweeter demographics

Type	Count	As %
Members of the public	40	49%
Scientists	30	37%
Science communicators (journalists, bloggers, editors)	9	11%
Practitioners (doctors, other healthcare professionals)	2	2%

Mendeley readership

The data shown below were compiled from readership statistics for 39 Mendeley readers of this article. Click [here](#) to see the article's page on the Mendeley website.

Geographical breakdown

Expert Group on Indicators

Indicators for Researchers' Engagement with Open Science and its Impacts

[Home](#)[Open Access](#)[European Open Science Cloud](#) ▼[Open Science Policy Platform](#) ▼[Groups](#) ▼[Open Science Monitor](#)

How can the responsible engagement of the scientific communities with open knowledge practices be stimulated? In what way may current evaluation protocols hinder the development of open science and scholarship? Which new indicators can be developed to ensure that the



Plan S

Accelerating the transition to full and immediate Open Access to scientific publications

The key principle is as follows:

“After 1 January 2020 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms.”

IN ADDITION:

- Authors retain copyright of their publication with no
- When Open Access publication fees are applied,



datory publishing?
both welcome new
ACADEMIC PUBLISHING GUEST POST OPEN LETTER
olarly communication
opportunities!

Open Access

Response to Plan S from Academic Researchers: Unethical, Too Risky!

This is Appeal by several European scientists protesting against Plan S, recently revealed by the EU and a coalition of European research funders. Lynn Kamerlin and her coauthors worry that Plan S will deprive them of quality journal venues and of international collaborative opportunities, while disadvantaging scientists whose research budgets preclude paying and playing in this OA league. They offer instead their own suggestions how to implement Open Science.

Robert-Jan SMITS

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Robert-Jan SMITS is the Open Access Envoy of the European Commission, based at the European political Strategy Centre (EPSC) of the European Commission. In this capacity, Robert-Jan has to propose concrete [policy recommendations](#) to ensure that by 2020 all publicly funded scientific publications are available in Open Access.

Prior to joining the EPSC, he was from 2010-2018 the Director-General of DG Research and Innovation (RTD) at the European Commission. In this capacity, he was responsible for defining and implementing the EU policy and programmes in the field of research and innovation (average annual budget 8 billion euro).

What's 'unethical' about Plan S?

Posted on [September 18, 2018](#) by [jbrittholbrook](#)

In a recent [blog post](#), my co-authors and I refer to Plan S as 'unethical'. Doing so has upset Marc Schiltz, President of Science Europe.



J Britt Holbrook @jbrittholbrook · Sep 17, 2018



Replying to @marcschiltz1

[@MsPhelps](#) and [@jeroenbosman](#) do a great job of addressing the four proposed 'solutions' in our original piece. Their target was not so much our critique of Plan S, which you call "unsubstantiated." May I ask what you mean by that and what would count as a *substantiated* critique?



Marc Schiltz

@marcschiltz1

1/3 Well, it starts with the title, where Plan S is bluntly termed "unethical". This is a very strong qualifier for a plan that was, after all, endorsed by Research Councils from 11 countries and the European Union.

5:47 PM - Sep 17, 2018



See Marc Schiltz's other Tweets



Academic freedom **Alt-ac**

altmetrics

Autonomy and

Accountability

Impact Justice

Open Access Peer Review

Philosophy and Technology

philosophy of/as

interdisciplinarity **PhyloPic**



[Home](#) [About Stephen](#)

[← Ten Years a Blogger](#)

Academic freedom and responsibility: why Plan S is not unethical

Posted on [October 1, 2018](#) by [Stephen](#)

Since its [announcement](#) on 4th September the European Commission's plan to make a radical shift towards open access (OA) has caused [quite a stir](#). Backed by eleven* national funding agencies, the plan aims to make the research that they support free to read as soon as it is published. This is a major challenge to the status quo, since the funders are effectively placing subscription journals off limits for their researchers, even if the journals allow green OA (publication of the author-accepted manuscript)

Recent Posts

- [Academic freedom and responsibility: why Plan S is not unethical](#)
- [Ten Years a Blogger](#)
- [DORA, the Leiden Manifesto & a university's right to choose: a comment](#)
- [Ready-made citation distributions](#)

On Academic Freedom and Responsibility

Posted on [October 1, 2018](#) by [jbrittholbrook](#)

Today, Stephen Curry published a piece on his [blog](#) on “[Academic freedom and responsibility: why Plan S is not unethical](#),” and I want to offer a response to some of his arguments here.

The first thing to say is that I think Curry and I agree on quite a few points. We especially agree that to speak of academic freedom means we should also to speak of academic responsibility. For six years (2012-2018), I was a member of the American Association for the Advancement of Science (AAAS) Committee on Scientific Freedom and Responsibility. I fully support the [AAAS Statement on Scientific Freedom and Responsibility](#), which the Committee co-authored:

“ *Scientific freedom and scientific responsibility are essential to the advancement of human knowledge for the benefit of all. Scientific freedom is the freedom to engage in scientific inquiry, pursue and apply knowledge, and communicate openly. This freedom is inextricably linked to and must be exercised in accordance with scientific responsibility. Scientific responsibility is the duty to conduct*

Academic freedom [Alt-ac](#)

[altmetrics](#)

[Autonomy and](#)

[Accountability](#)

[Impact](#) [Justice](#)

[Open Access](#) [Peer Review](#)

[Philosophy and Technology](#)

[philosophy of/as](#)

[interdisciplinarity](#) [PhyloPic](#)

[Postmodern Research](#)

Academic freedom

Since the plan's launch, an argument has also flared up over whether funders should be able to restrict where academics can publish. Britt Holbrook, a philosopher at the New Jersey Institute of Technology in Newark, co-wrote a [blog post](#) arguing that the plan is unethical because mandating where researchers publish impinges on academic freedom. His co-authors include some European scientists, such as biochemist Lynn Kamerlin at Uppsala University in Sweden.

But other researchers disagree. Peter Suber, director of the Harvard Open Access Project and the Harvard Office for Scholarly Communication in Cambridge, Massachusetts, says that it is entirely reasonable for funders to put restrictions on how their money is used. Suber, who is meeting with Smits on 4 October, says that taxpayer-funded public research agencies have a duty to spend their money in the public interest.

For his part, Smits says it is a “pity” that the academic-freedom argument is being used, “because it stifles a lot of debate”.

Debate on academic freedom and open access is healthy

J. Britt Holbrook✉, Stephen Curry & Shina C. L. Kamerlin



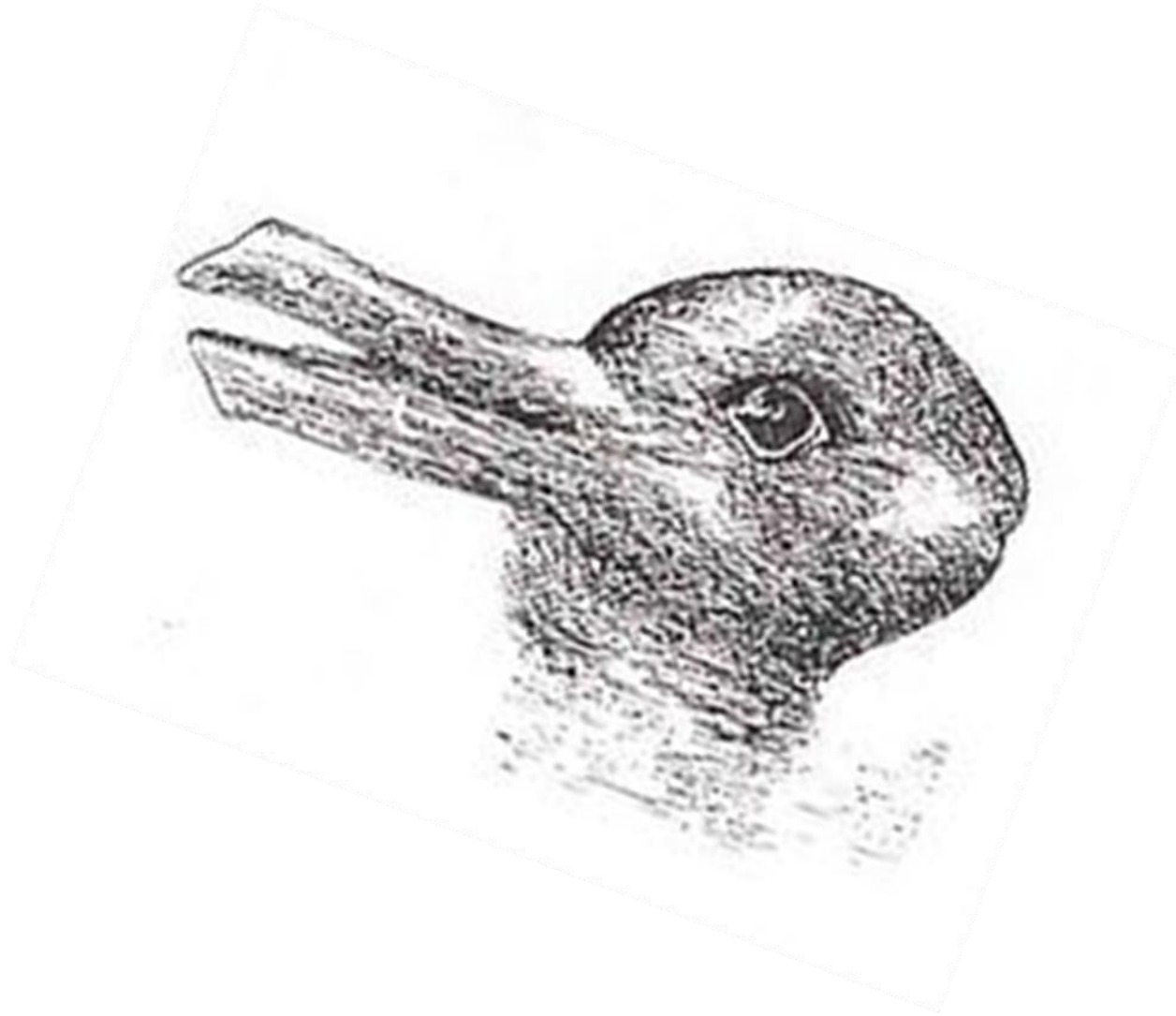
Robert-Jan Smits declares it a “pity” that arguments about academic freedom are stifling debate on his ‘Plan S’, which promotes a radical shift towards open-access publishing (see [Nature 562, 174; 2018](#)). In fact, the opposite is happening.

Spirited debates on the topic are ongoing among researchers, publishers, librarians, journalists, funders and members of the public (see, for example, go.nature.com/2qtusrb; go.nature.com/2coxgrx; go.nature.com/2nm2dmq; go.nature.com/2ckhnrc; go.nature.com/2qw2hv6). We have yet to reach agreement on what to make of the major European funders’ radical shift to compulsory open-access publishing by 2020, but we continue to explore this important issue in good faith.

 [PDF version](#)

SUBJECTS

[Ethics](#)[Publishing](#)



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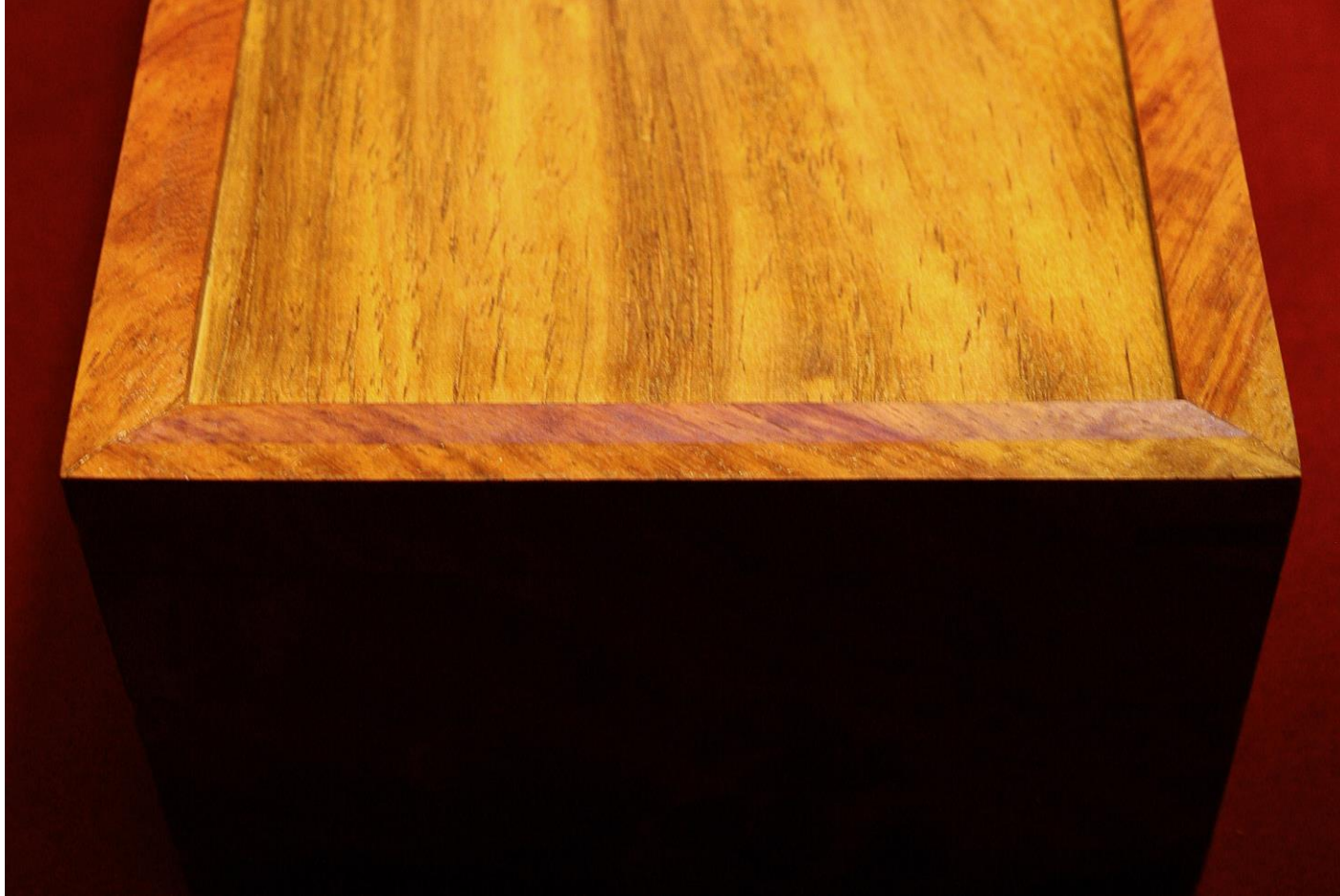
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Evaluating Academic Flourishing

- Designing Research Impact Assessment to Encourage Serendipity
- Serendipity: sagacity regarding opportunity

Boxes



Boxes

- Black Boxes
- Impact Boxes
- <https://www.metmuseum.org/art/collection/search/689665>
- <https://vimeo.com/261904449>

References

Frodeman, Robert & Holbrook, J. Britt. The Promise and Perils of Transformative Research, report, March 2012; (digital.library.unt.edu/ark:/67531/metadc84363/:accessed August 30, 2018), University of North Texas Libraries, Digital Library, digital.library.unt.edu; crediting UNT College of Arts and Sciences.

Holbrook, J. Britt, Kelli R. Barr, and Keith Wayne Brown (2013). “Research Impact: We Need Negative Metrics Too.” *Nature* **497**, 439 [doi:10.1038/497439a](https://doi.org/10.1038/497439a).

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Humboldt, Wilhelm von (1970 [1810]). “On the Spirit and the Organisational Framework of Intellectual Institutions in Berlin,” *Minerva* **8** (1): 242-250.

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