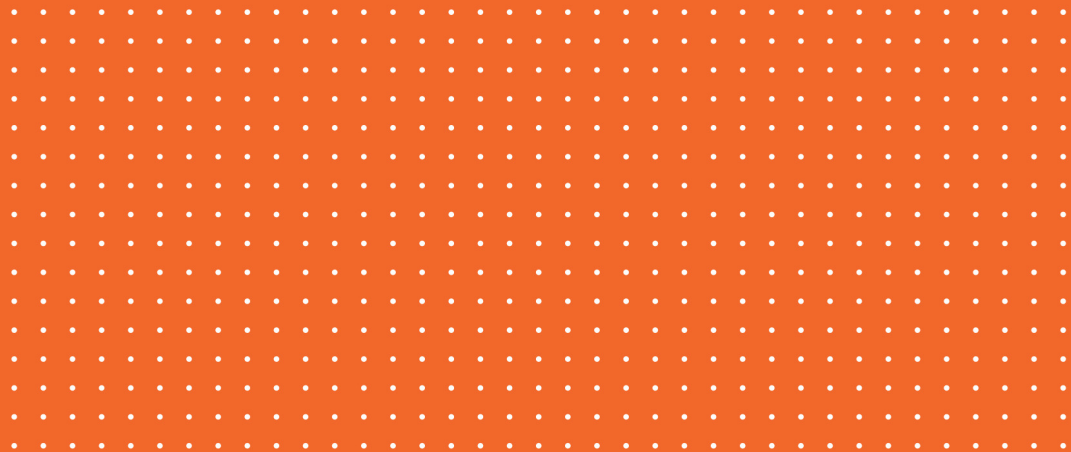
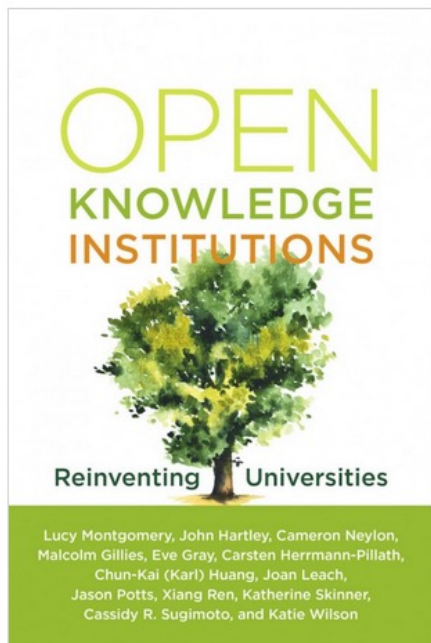


BEYOND JUST COUNTING THE BEANS

REIMAGINING RESEARCH INDICATORS TO FAVOUR DIVERSITY

TWO PRIORS AND A PROVOCATION



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Open Knowledge Institutions

Reinventing Universities

By [Lucy Montgomery](#), [John Hartley](#), [Cameron Neylon](#), [Malcolm Gillies](#), [Eve Gray](#), [Carsten Herrmann-Pillath](#), [Chun-Kai \(Karl\) Huang](#), [Joan Leach](#), [Jason Potts](#), [Xiang Ren](#), [Katherine Skinner](#), [Cassidy R. Sugimoto](#) and [Katie Wilson](#)

The future of the university as an open knowledge institution that institutionalizes diversity and contributes to a common resource of knowledge: a manifesto.

Endorsements

“Can the contemporary university be reinvented with openness at its core, developing and sharing knowledge in service to the global public interest? The authors of *Open Knowledge Institutions* argue compellingly that such reinvention is not just possible but necessary, and they provide a crucial map of the work required to make it so.”

Kathleen Fitzpatrick, Director of Digital Humanities and Professor of English, Michigan State University; author of *Generous Thinking: A Radical Approach to Saving the University*

“This book provides nuanced discussion around the moral, logistical, and practical challenges associated with embedding open science principles in public research organizations. With every syllable, I was nodding in agreement.”

Gemma Derrick, Senior Lecturer in Higher Education, Lancaster University

“Laced with incisive case studies, this welcomed manifesto amounts to a fearless application of practical wisdom to revitalize the university by having it serve as a knowledge commons.”

John Willinsky, Khosla Family Professor of Education, Stanford University

“Science is like a parachute: if it is not open, it is not going to help you. This book makes the case that universities need to be parachutes of knowledge to address the challenges of today and into the future.”

Eva Méndez, Universidad Carlos III de Madrid

“This book situates the long-game agenda of open scholarship alongside the challenges and opportunities facing universities. I see clearly in these pages the next decade of open advocacy, theory, philosophy, and hands-on labor.”

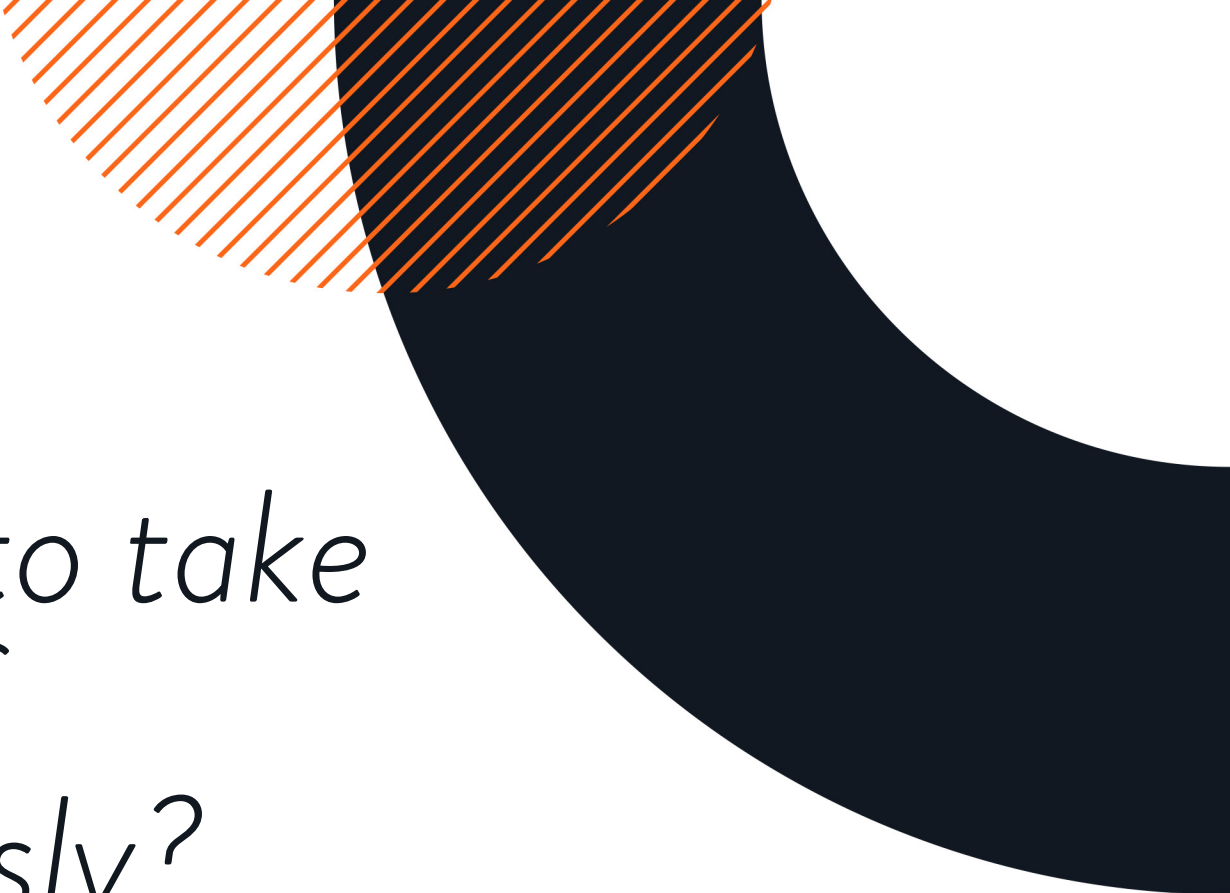
Micah Vandegrift, Open Knowledge Librarian, North Carolina State University; 2018–2019 Fulbright-Schuman Research Fellow for Open Science Policy and Infrastructure



Diversity is a foundational requirement
of social knowledge-making



Our institutions matter and offer
platforms for progressive change, even
as they are deeply problematic...



*What would it mean to take
the null hypothesis of
scientometrics seriously?*



H_0

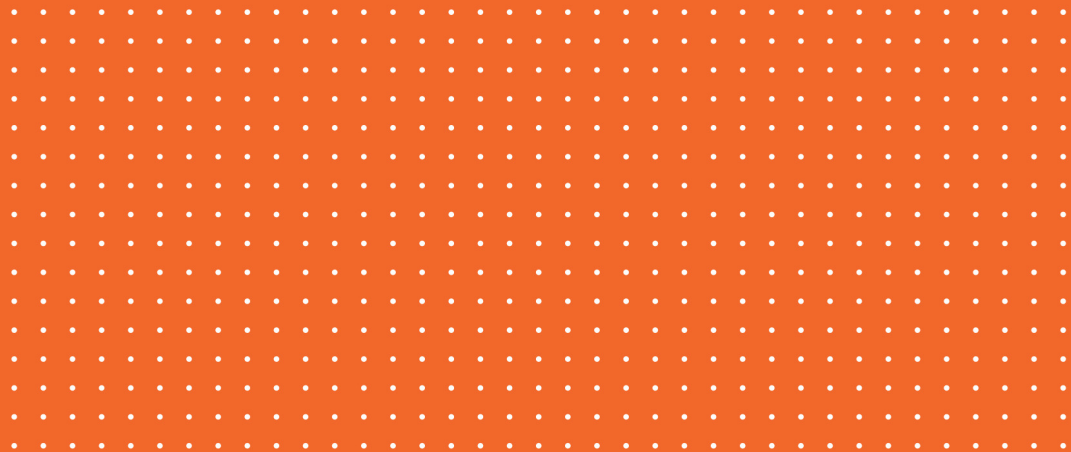
Absent confounders, there are no important differences between institutions or researchers



[Interactive Graph Link](#)



DIVERSIFYING INDICATORS





altmetrics: a manifesto

NO ONE CAN READ EVERYTHING. We rely on filters to make sense of the scholarly literature, but the narrow, traditional filters are being swamped. However, the growth of new, online scholarly tools allows us to make new filters; these altmetrics reflect the broad, rapid impact of scholarship in this burgeoning ecosystem. We call for more tools and research based on altmetrics.

As the volume of academic literature explodes, scholars rely on filters to select the most relevant and significant sources from the rest. Unfortunately, scholarship's three main filters for importance are failing:

<http://altmetrics.org/manifesto/>

altmetrics

altmetrics: a manifesto



Impactstory



Cameron Neylon @cneylon
Curtin University Professor of Research Communications

share

OVERVIEW ACHIEVEMENTS TIMELINE PUBLICATIONS

ACHIEVEMENTS

view all



Open Access Top 10%
93% of your research is free to read online. This level of availability puts you in the top 1% of researchers.



Wikistatic Top 10%
Your research is mentioned in 22 Wikipedia articles! Only 1% of researchers are this highly cited in Wikipedia.



Greatest Hit Top 25%
Your top publication has been saved and shared 54 times. Only 20% of researchers get this much attention on a publication.

TIMELINE

view all

378 Online mentions over 5 years

141 71 63 44 29 22 8

PUBLICATIONS

view all

"Excellence R Us": university research and the fetishisation of excellence
2017 Palgrave Communications
54

Science publishing: Open access must enable open use
2012 Nature
33

Excellence R Us: University Research and the Fetishisation of Excellence
2016
28

rely on filters to make sense of the
v, traditional filters are being swamped.
ie scholarly tools allows us to make new
broad, rapid impact of scholarship in this
more tools and research based on

total Impact

Total Impact

Uncover the invisible impact of research.

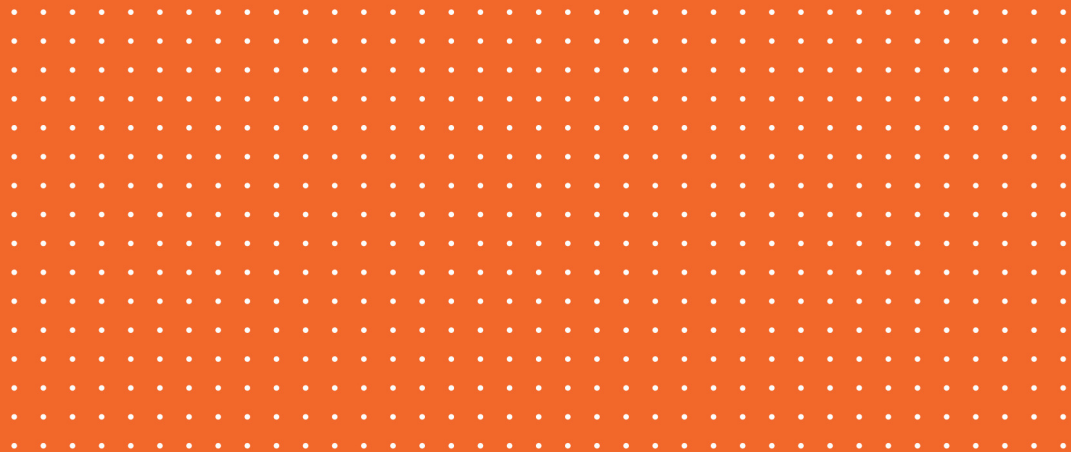
Create a collection of research objects you want to track. We'll provide you a report of the total impact of this collection. You can peruse a sample report or check out the most **recently shared reports**.

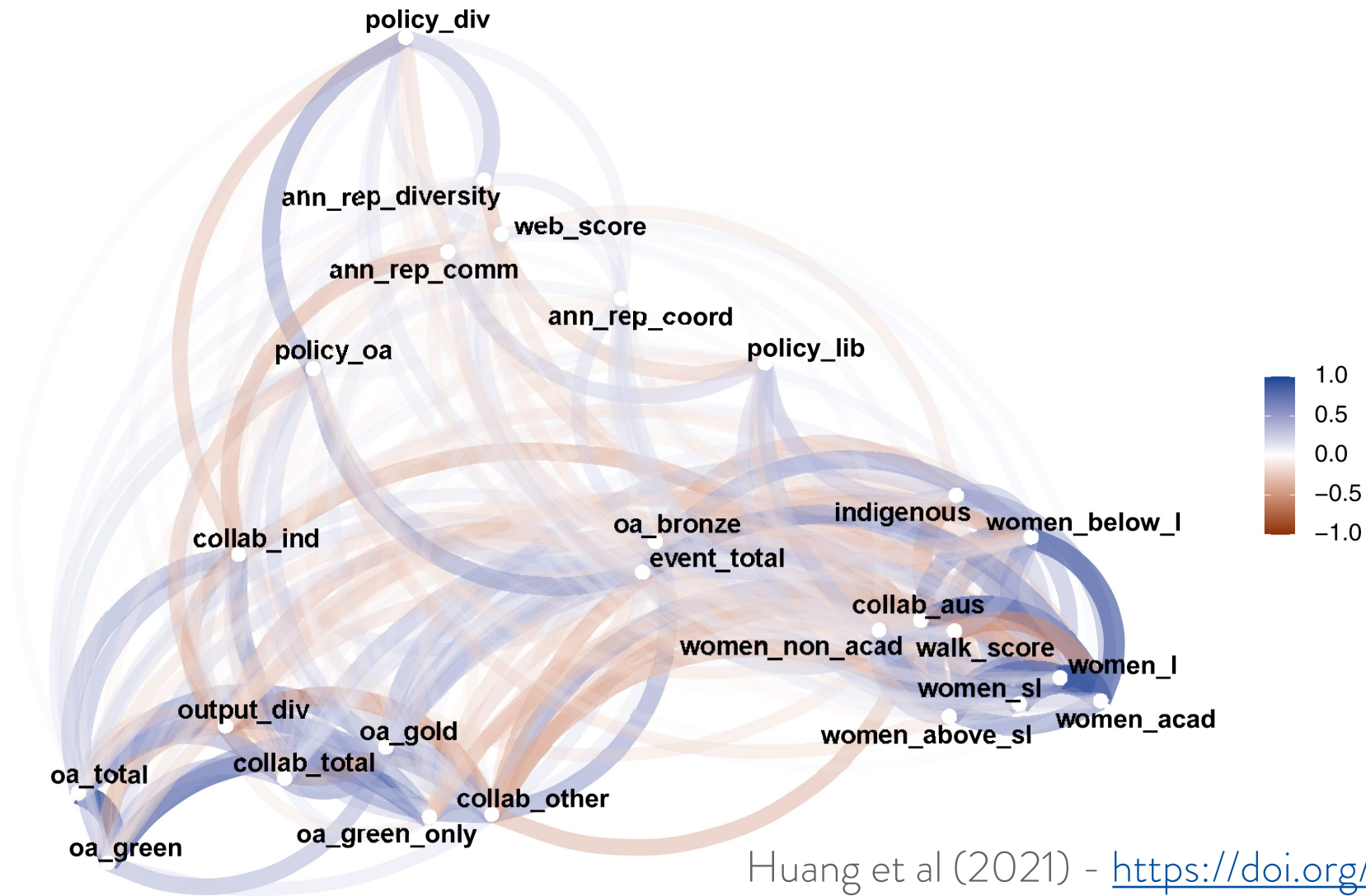


A DIVERSITY OF MEASURES

- Was intended to support different stories, and different kinds of work...
- ...became more of a replacement single number, often a single score
- High scores dominated by the same scholars and institutions, the same network effects now on web-powered steroids

INDICATING DIVERSITY

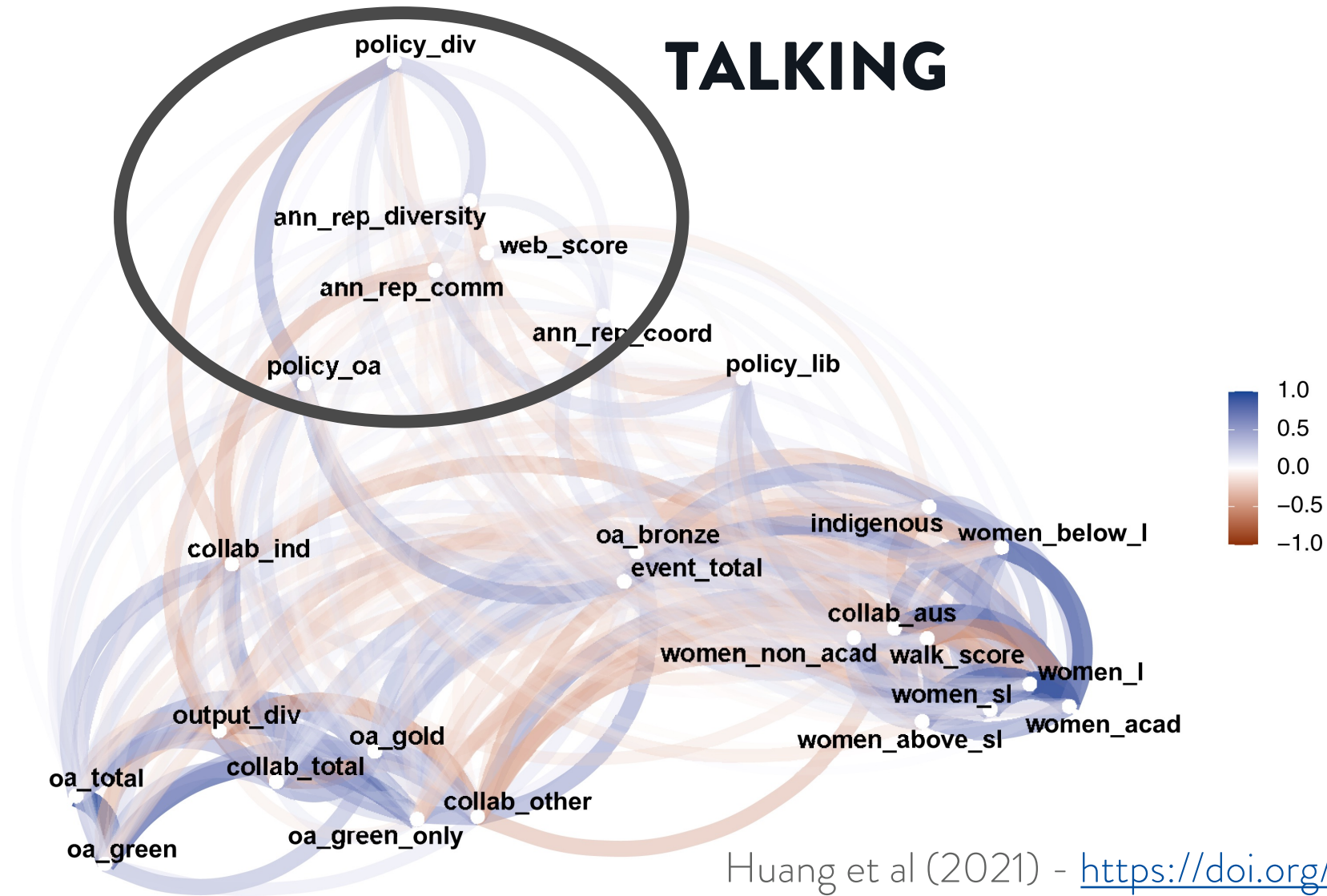




Huang et al (2021) - <https://doi.org/10.7717/peerj.11391>

Wilson et al (2022) - <https://doi.org/10.3390/publications10030022>

TALKING

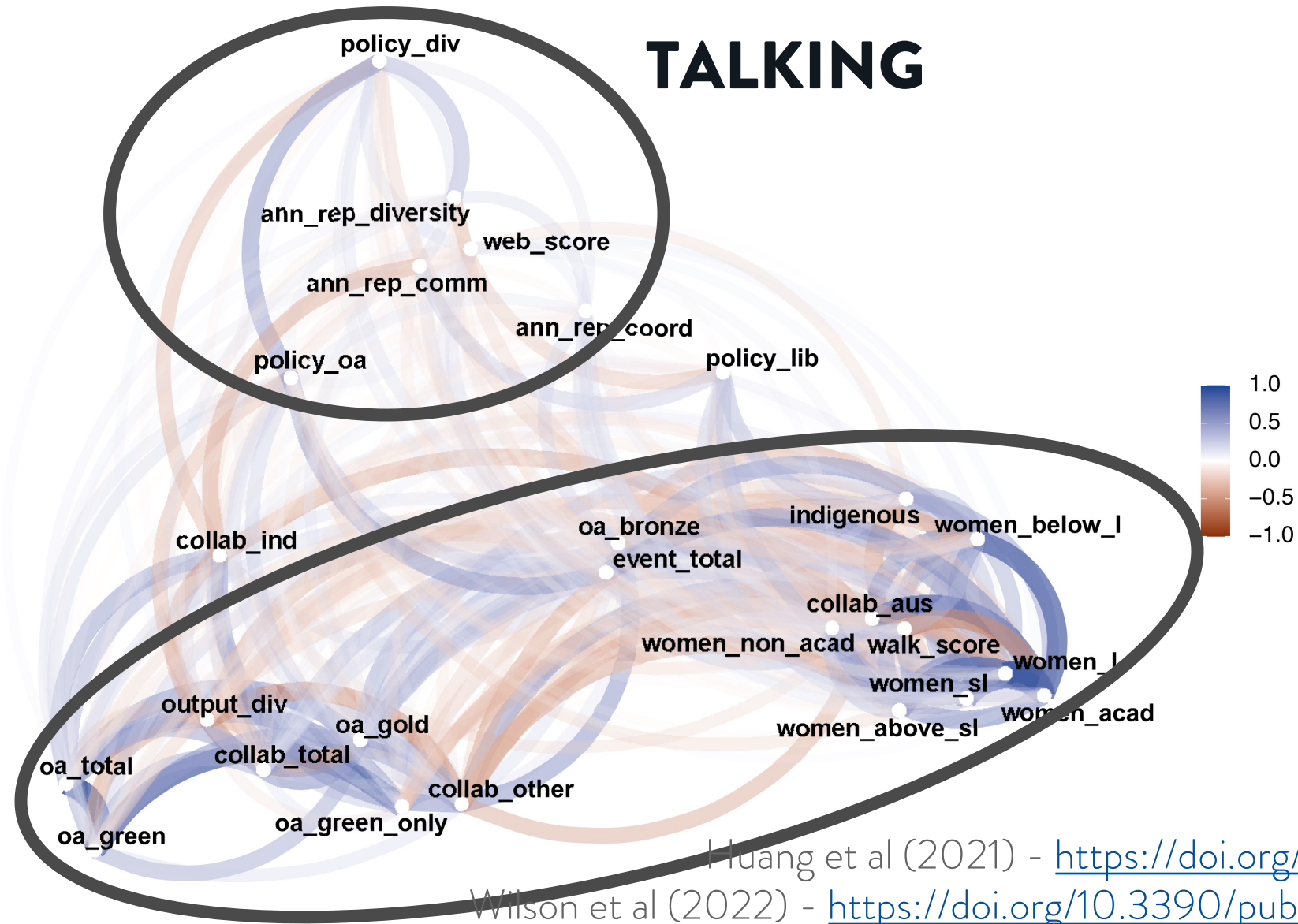


Huang et al (2021) - <https://doi.org/10.7717/peerj.11391>

Wilson et al (2022) - <https://doi.org/10.3390/publications10030022>

TALKING

DOING

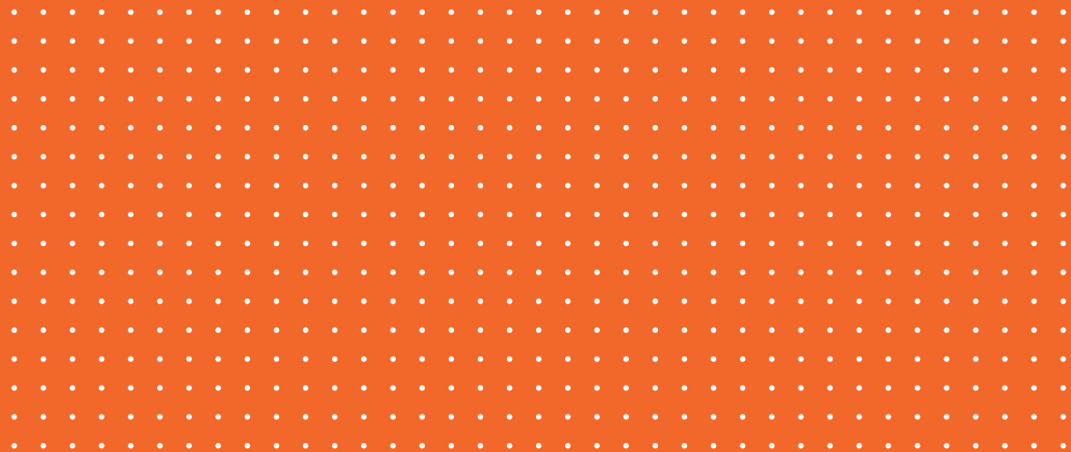


Huang et al (2021) - <https://doi.org/10.7717/peerj.11391>

Wilson et al (2022) - <https://doi.org/10.3390/publications10030022>

DATA SOURCES

INTRODUCING THE CURTIN OPEN KNOWLEDGE INITIATIVE

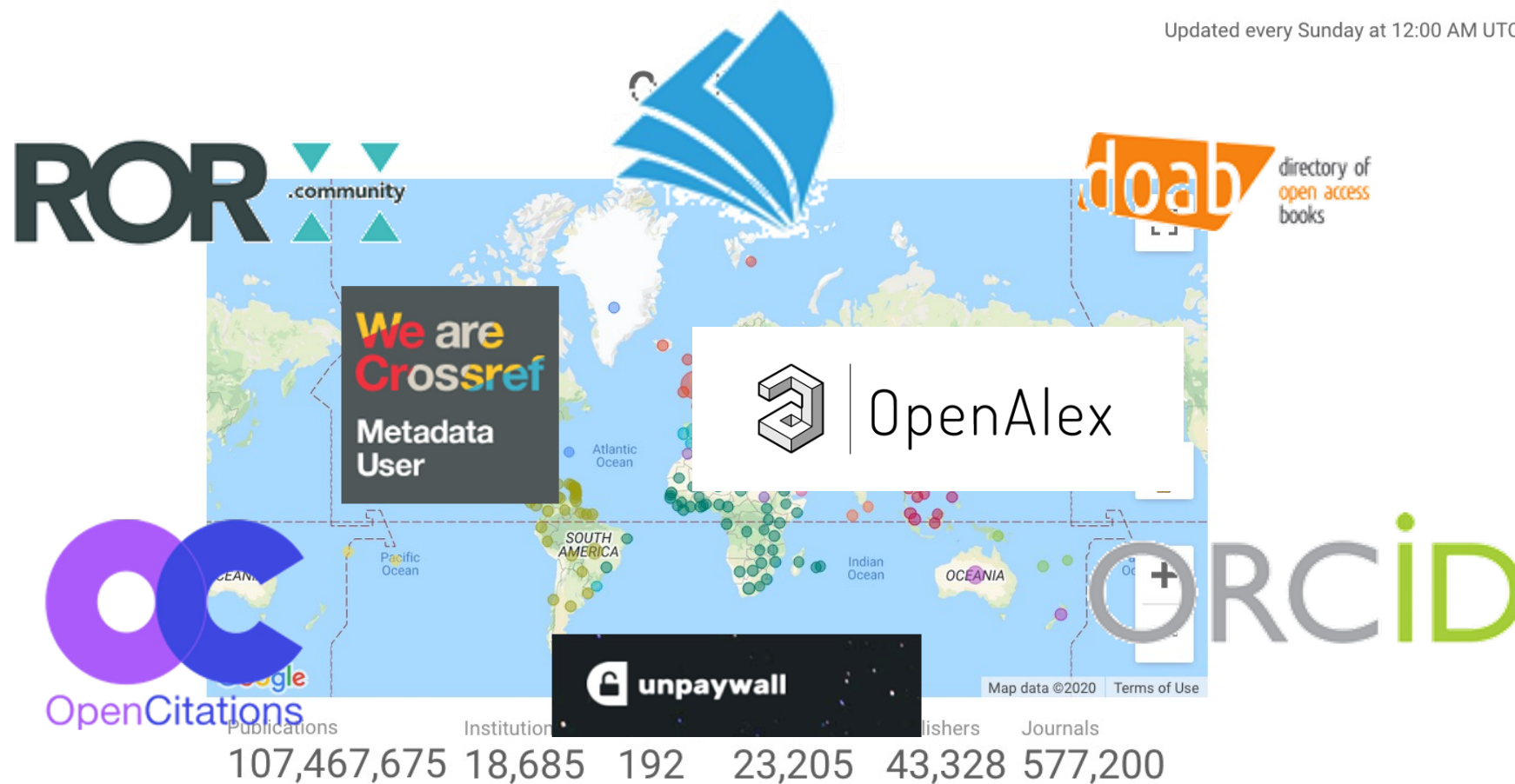




“Our goal is to **change the stories that universities tell about themselves**, placing open knowledge at the heart of that narrative.”

DATA

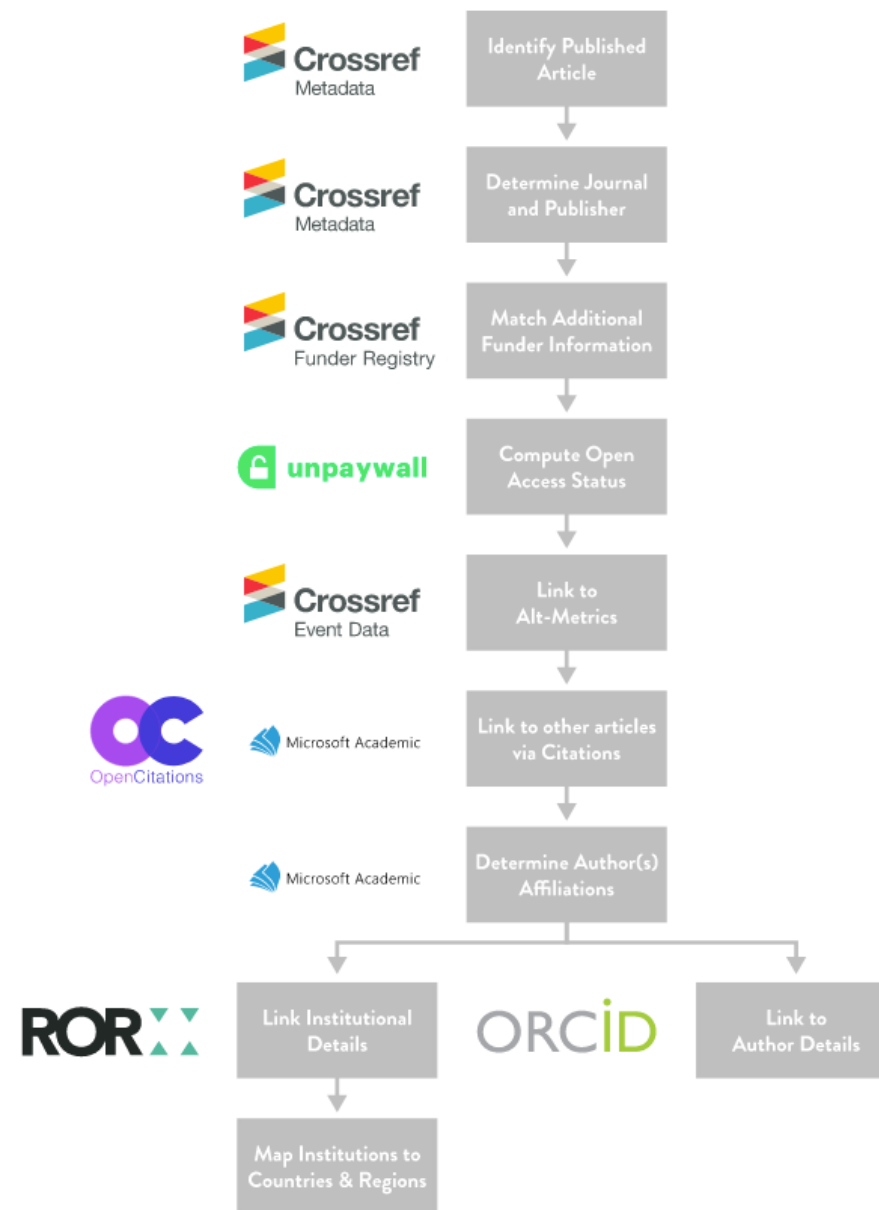
Updated every Sunday at 12:00 AM UTC



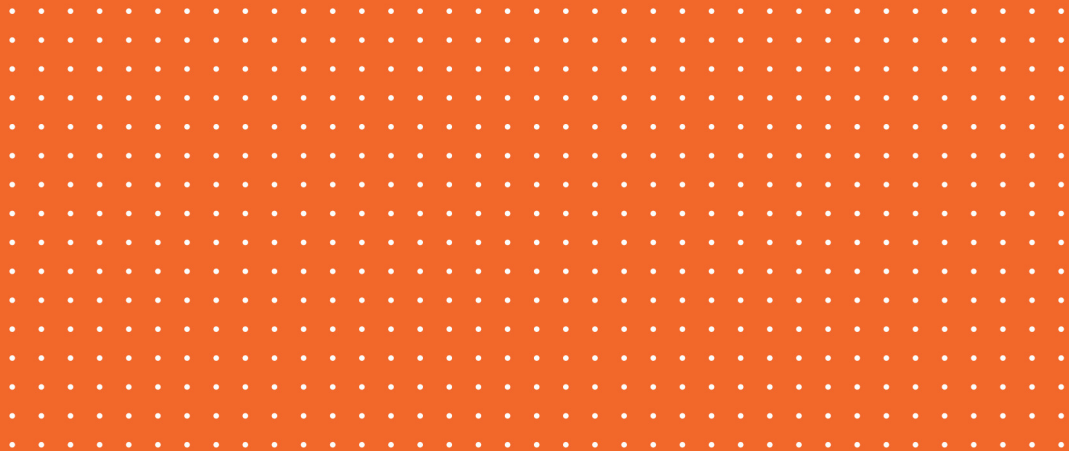
Explore Different Views of the Data

[Institution View](#) | [Country View](#) | [Funder View](#) | [Publisher View](#) | [Group View](#)

DATA

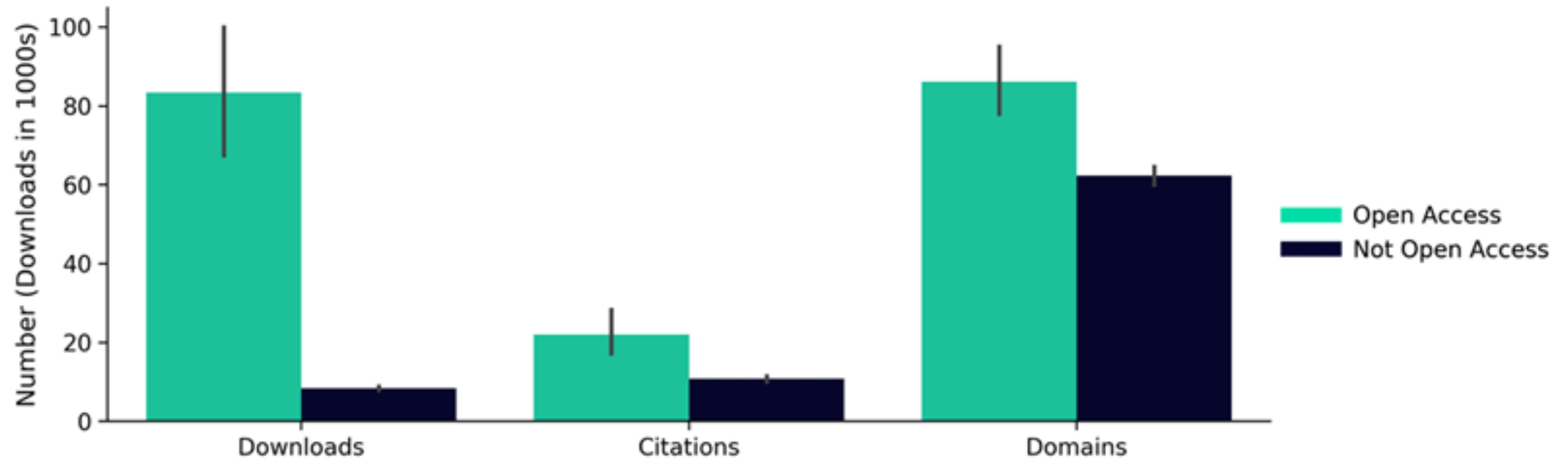


DIVERSITY INDICATORS

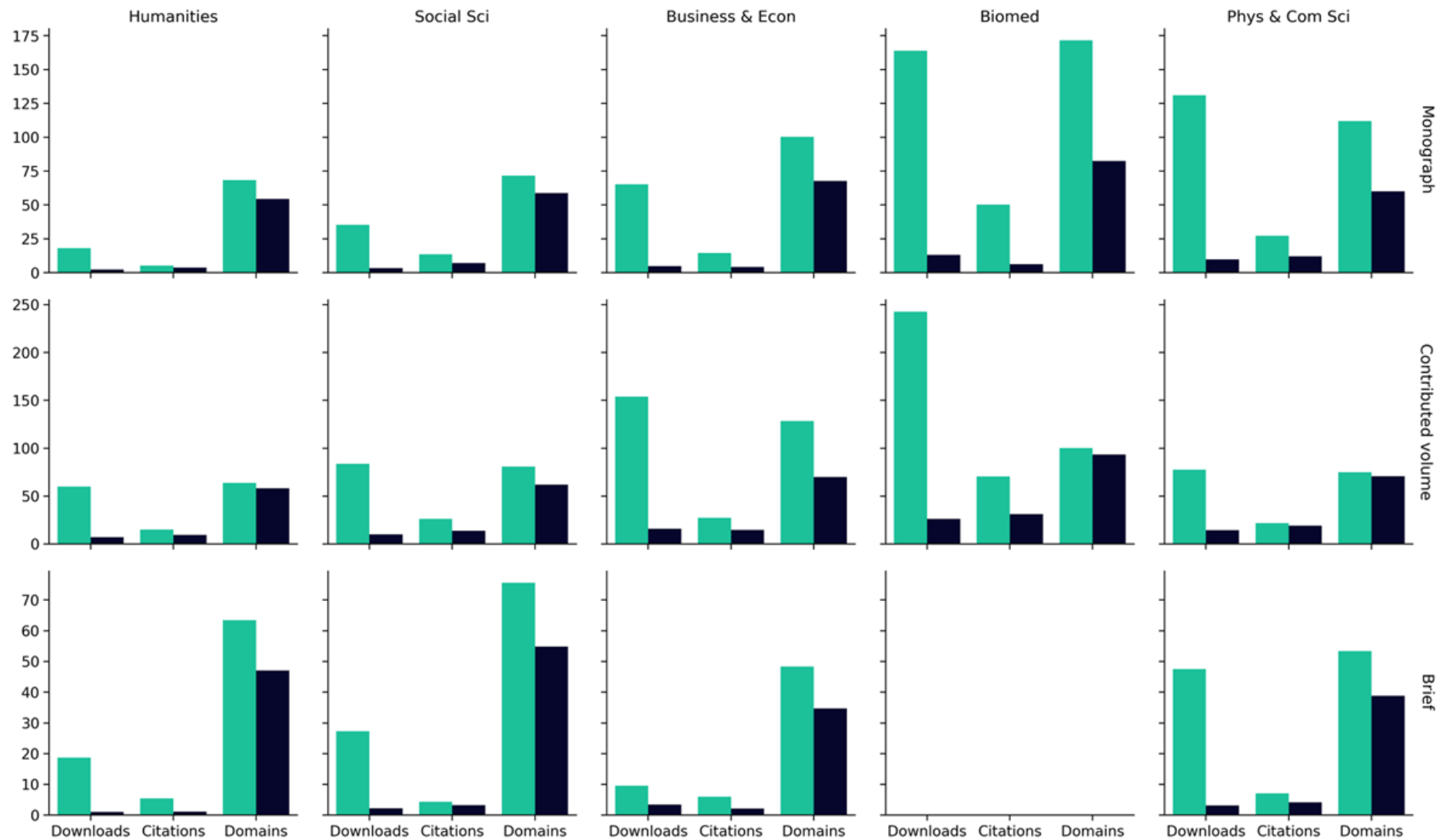




We've all heard of the “open access citation advantage” but is that really the right question?



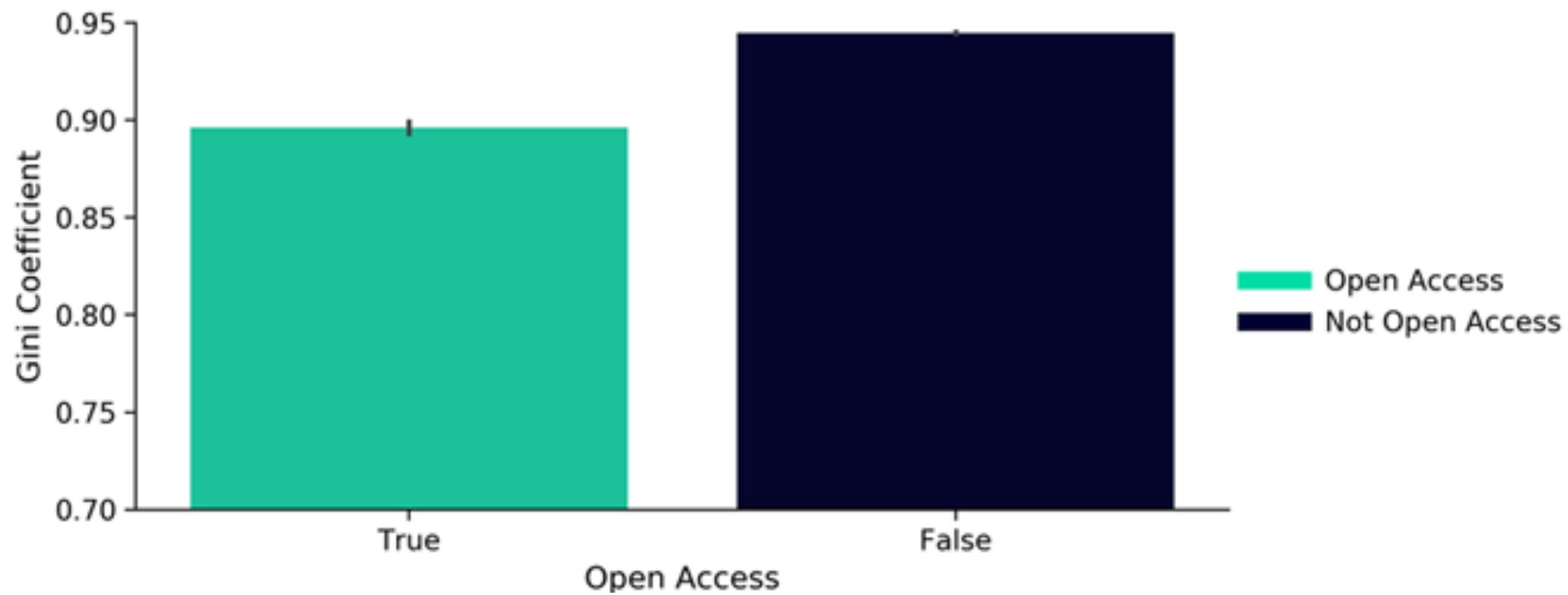
Neylon et al (2021) - <http://doi.org/10.1629/uksg.558>



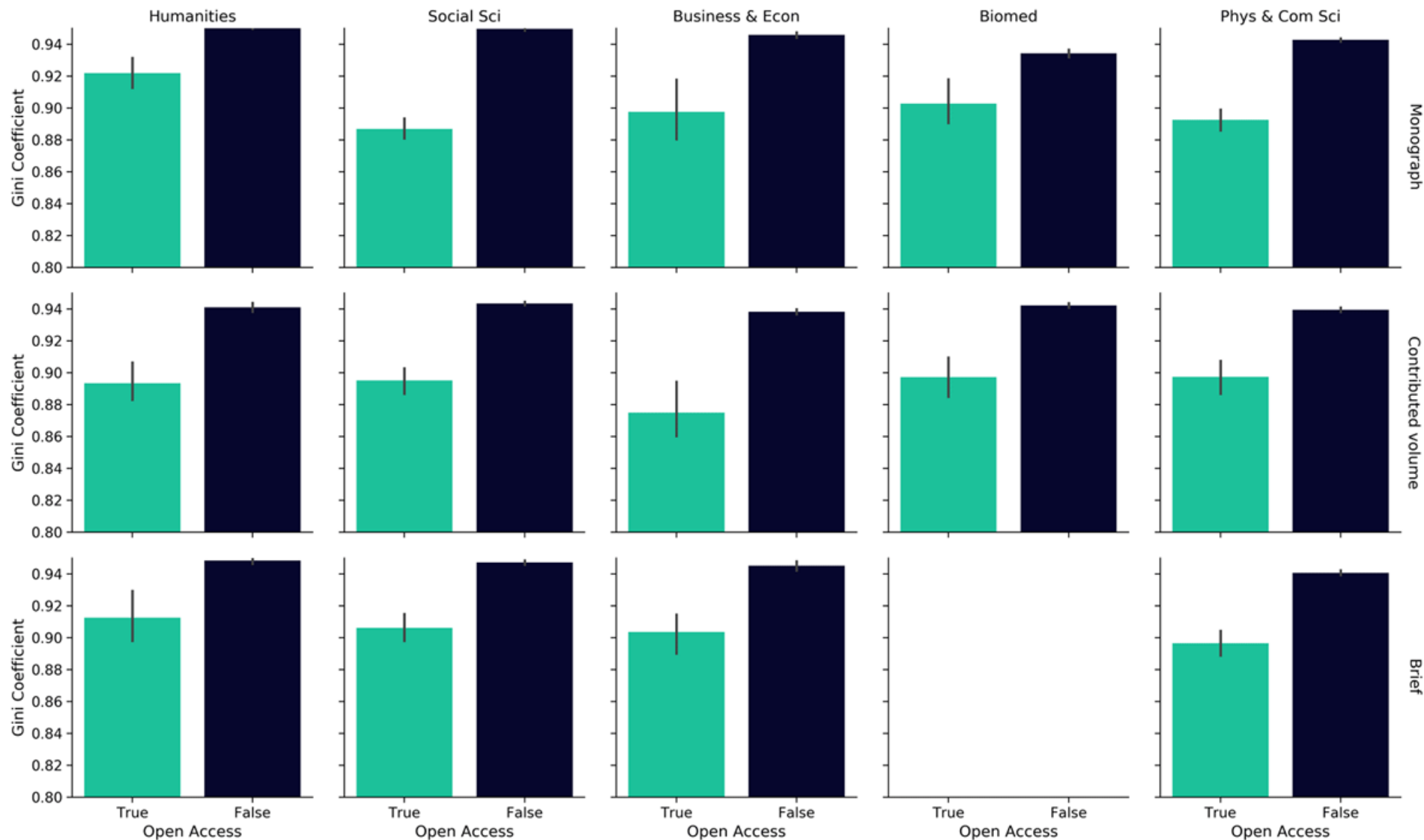
Neylon et al (2021) - <http://doi.org/10.1629/uksg.558>



More reading events but are they just the same
readers over and over again?



Neylon et al (2021) - <http://doi.org/10.1629/uksg.558>



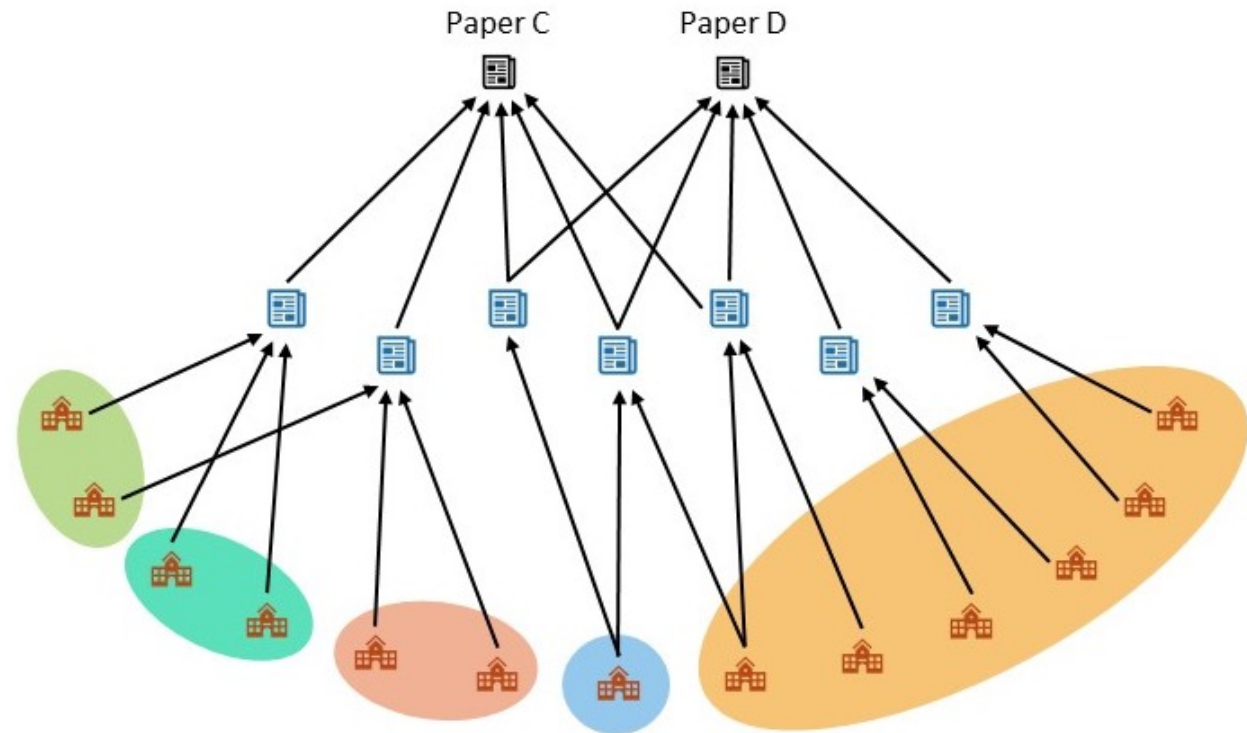
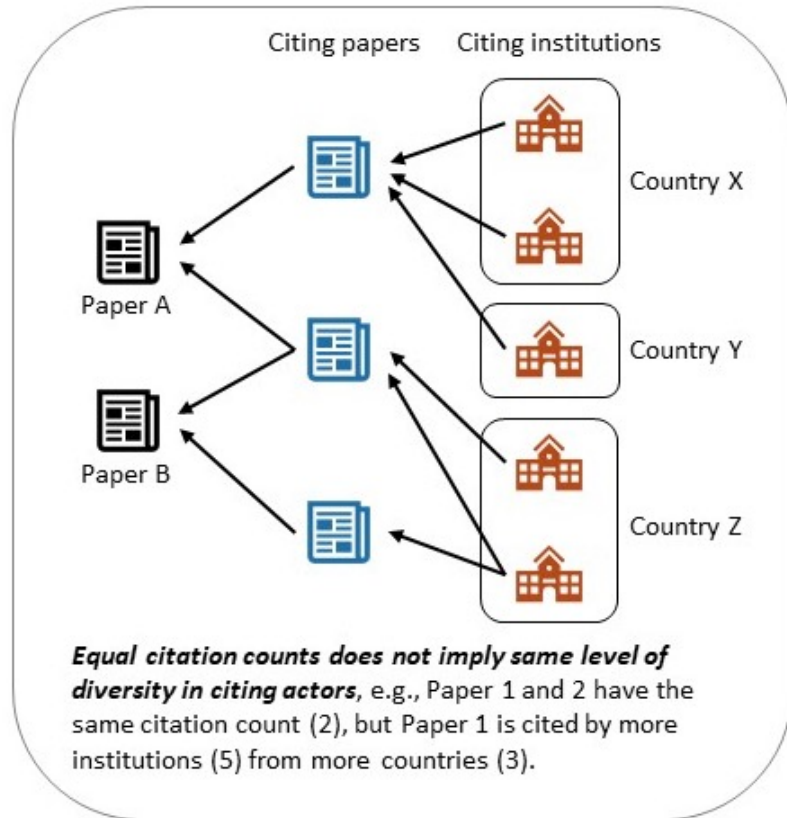
Neylon et al (2021) - <http://doi.org/10.1629/uksg.558>



Can we apply diversity measures more generally where we usually just count?

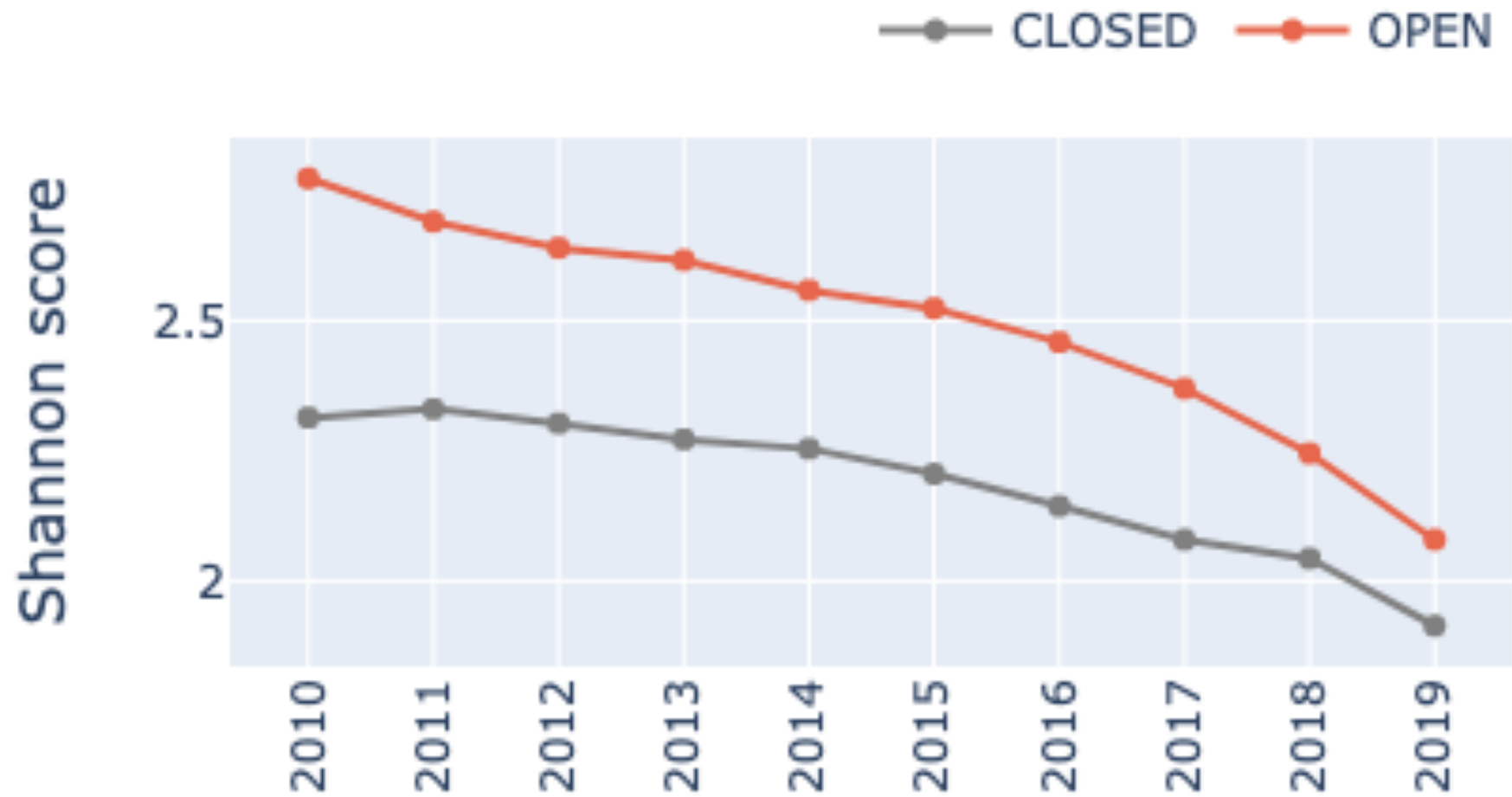


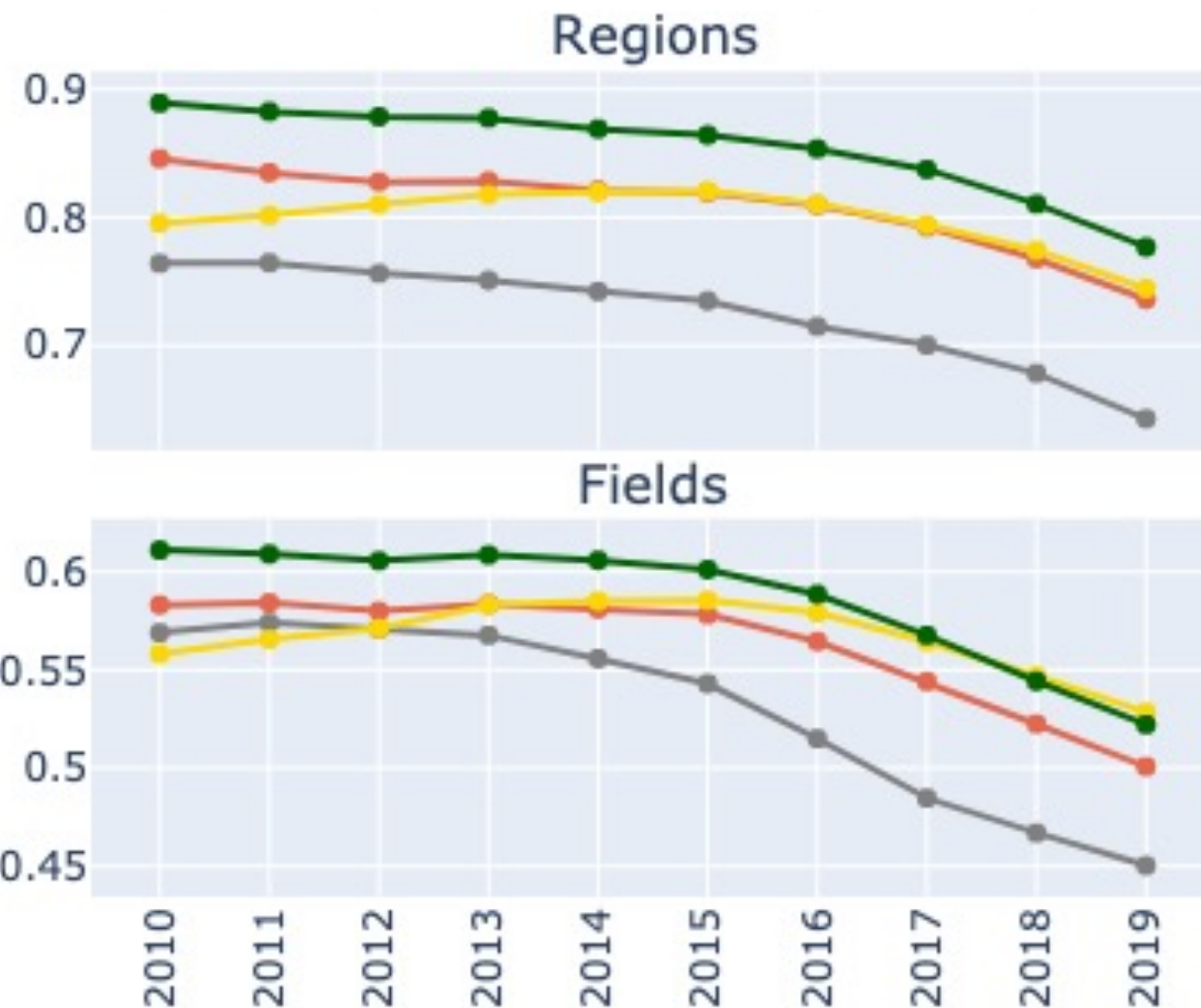
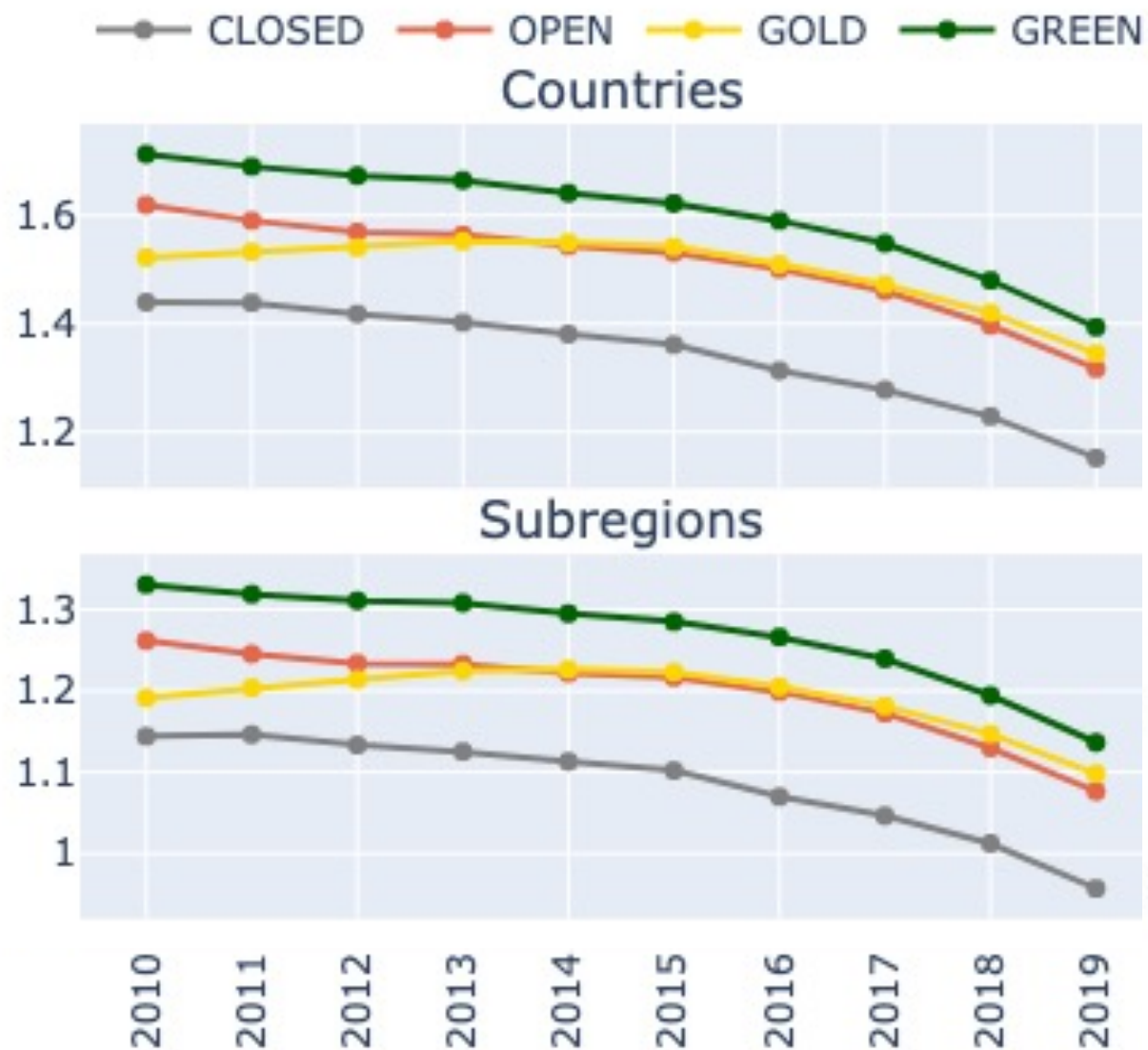
Is there evidence of an open access
“citation diversity advantage”?

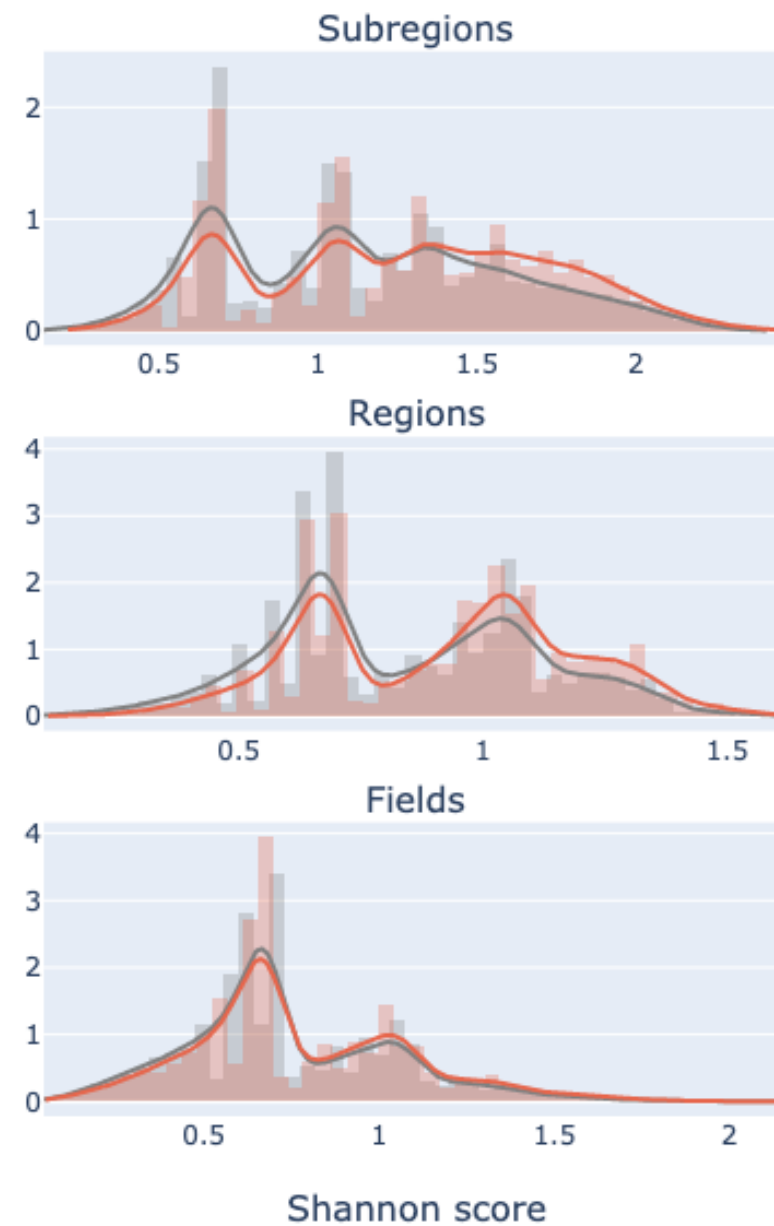


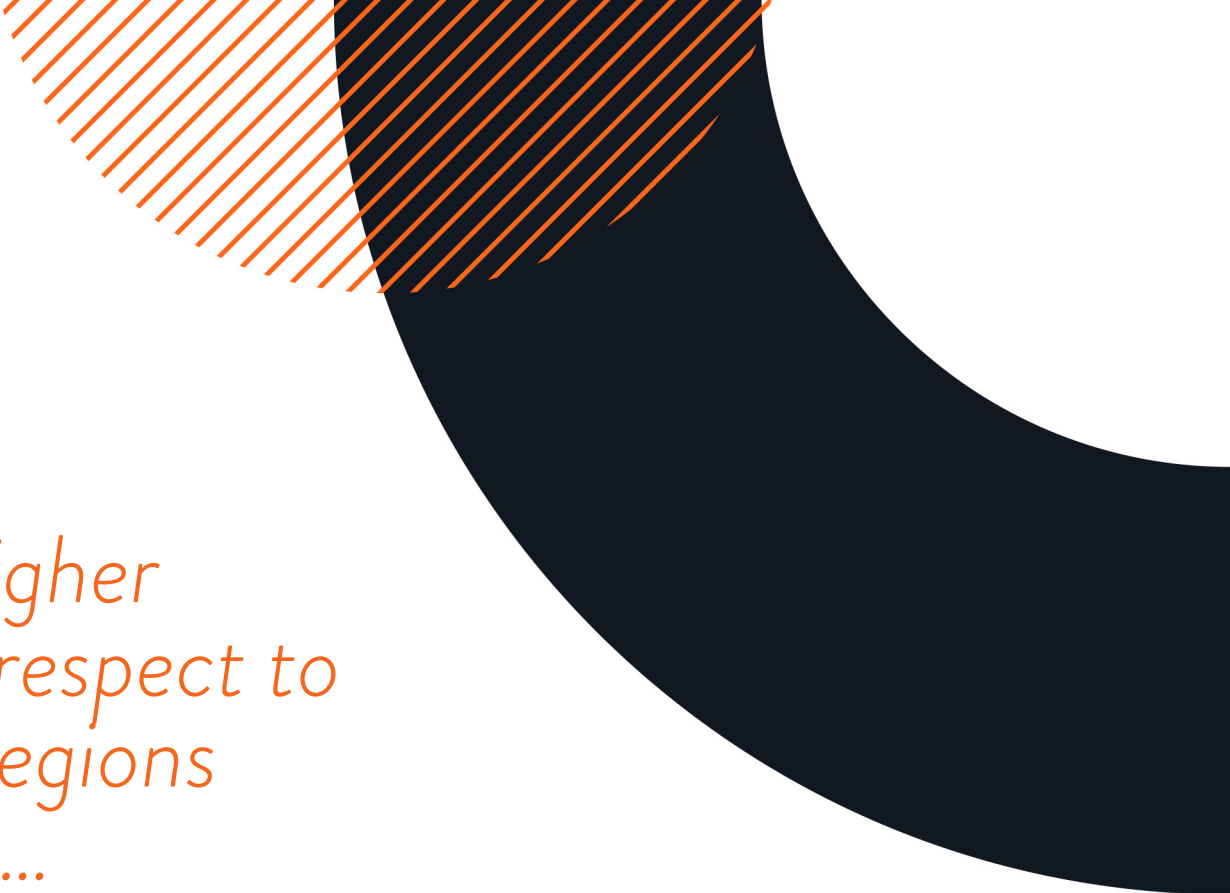
Paper	# Citations	# Citing institutions	# Citing countries	Gini-Simpson*	Shannon*
C	5	9	5	0.79	1.59
D	5	7	2	0.55	0.53

* Calculated based on grouping all "citing paper to citing institution" pairs by countries.





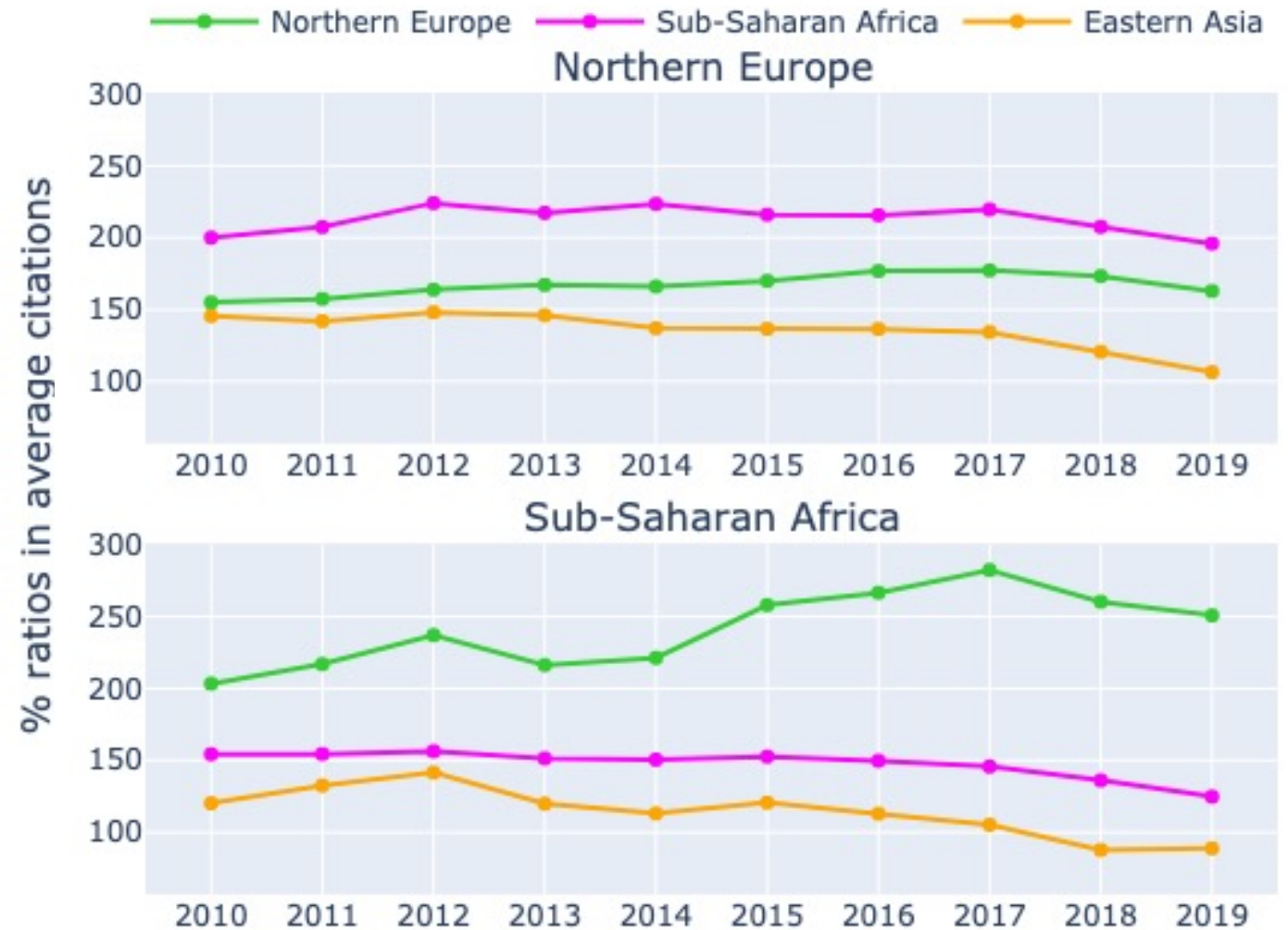
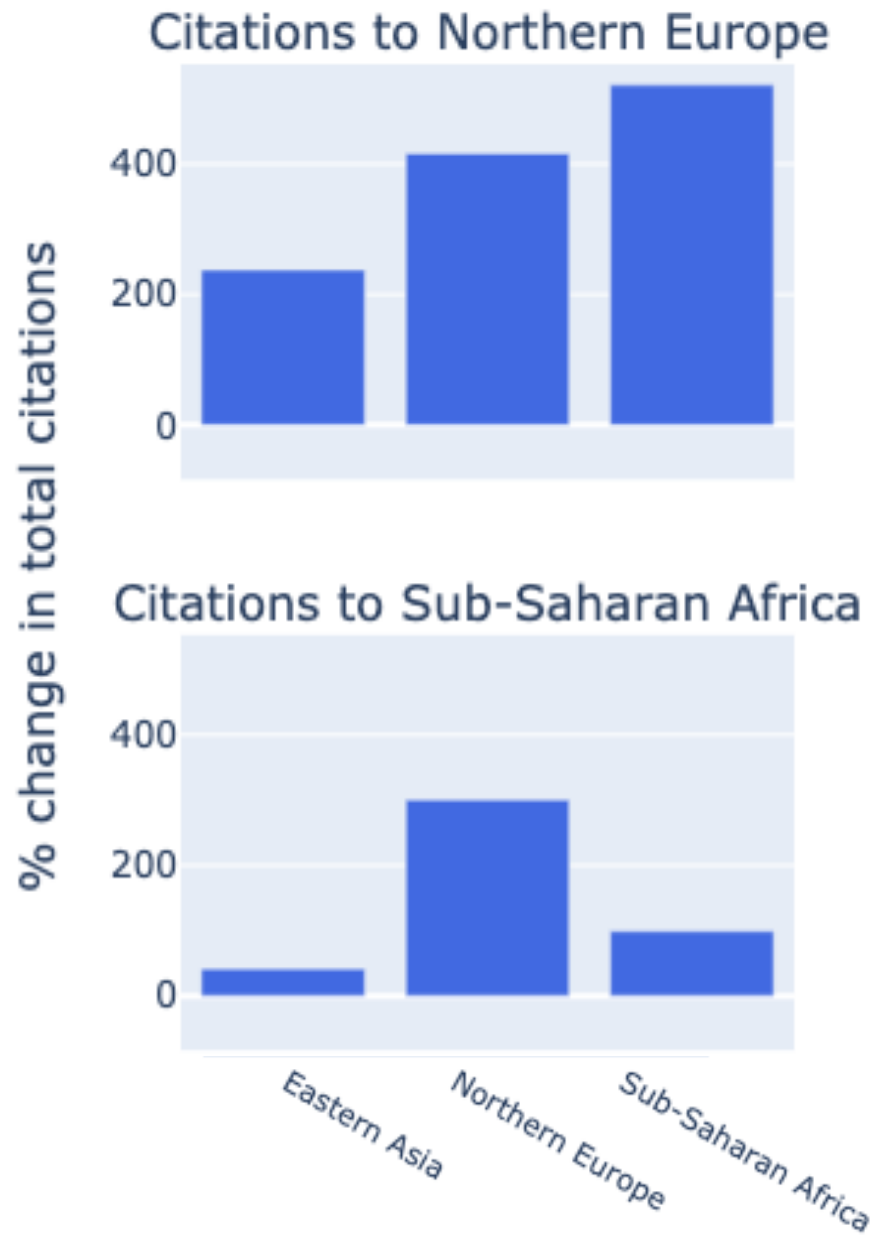




Open Access is associated with a higher diversity of incoming citations with respect to institutions, countries, subregions, regions and fields for every year since 2010...



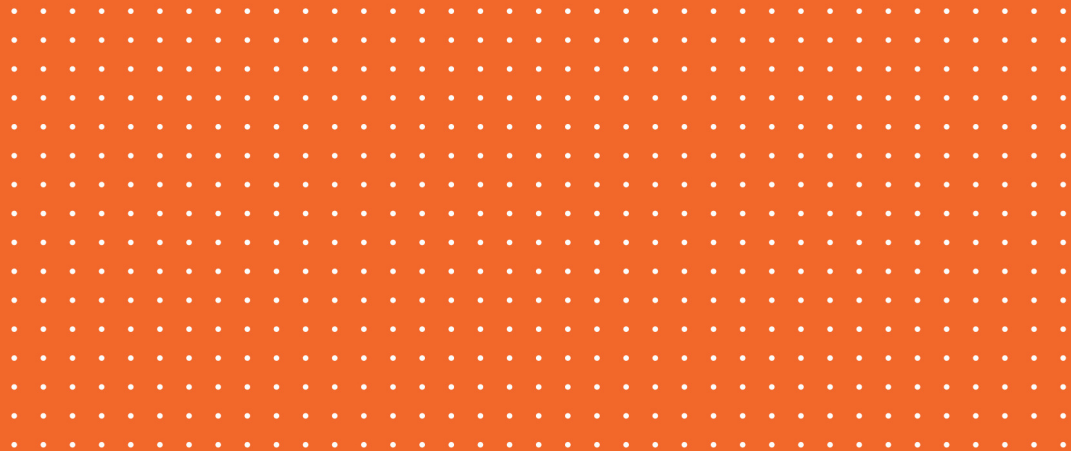
...but that benefit is unevenly distributed



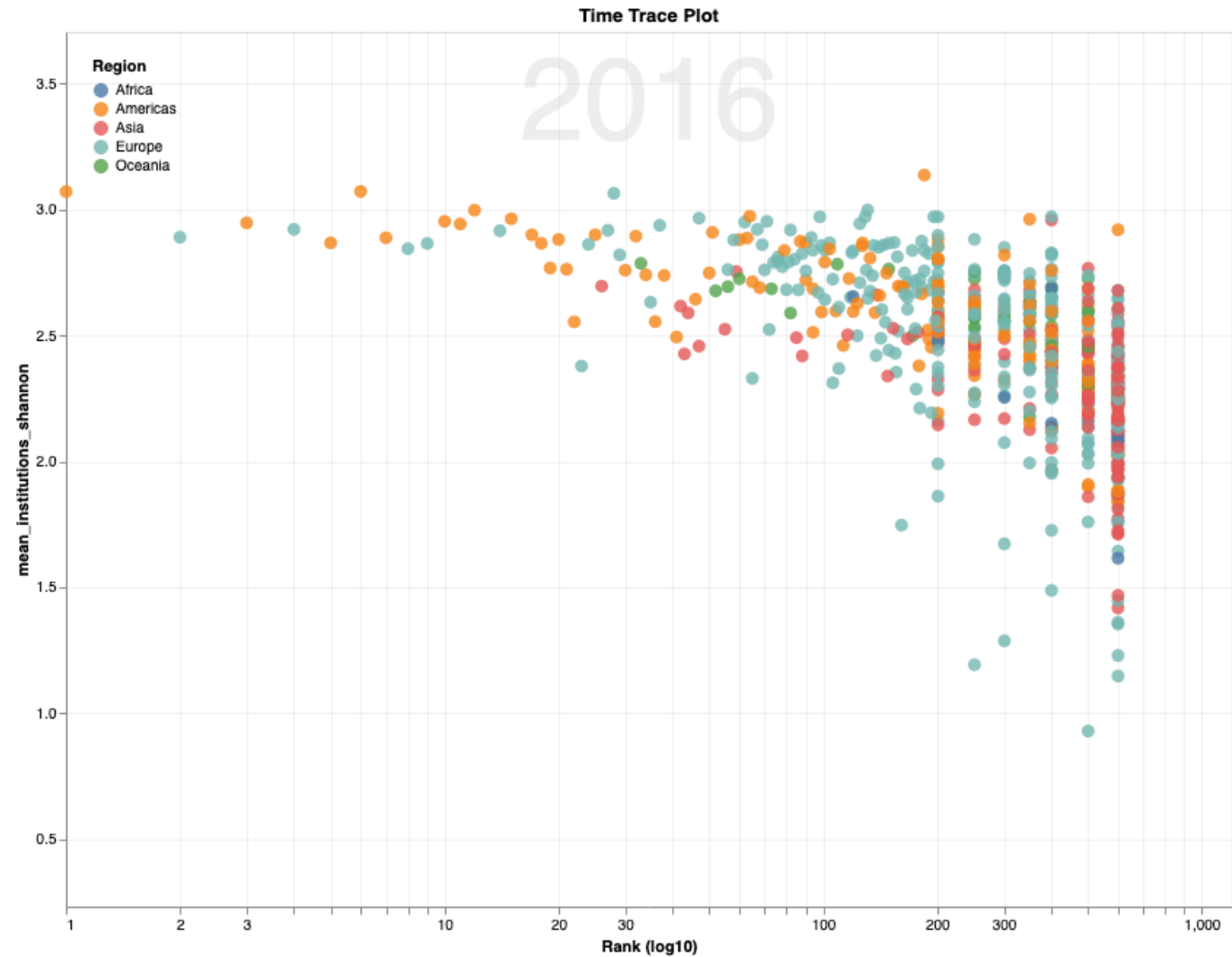
Huang et al (2022) -
<https://doi.org/10.5281/zenodo.7081036>

SO WHAT'S NEXT?

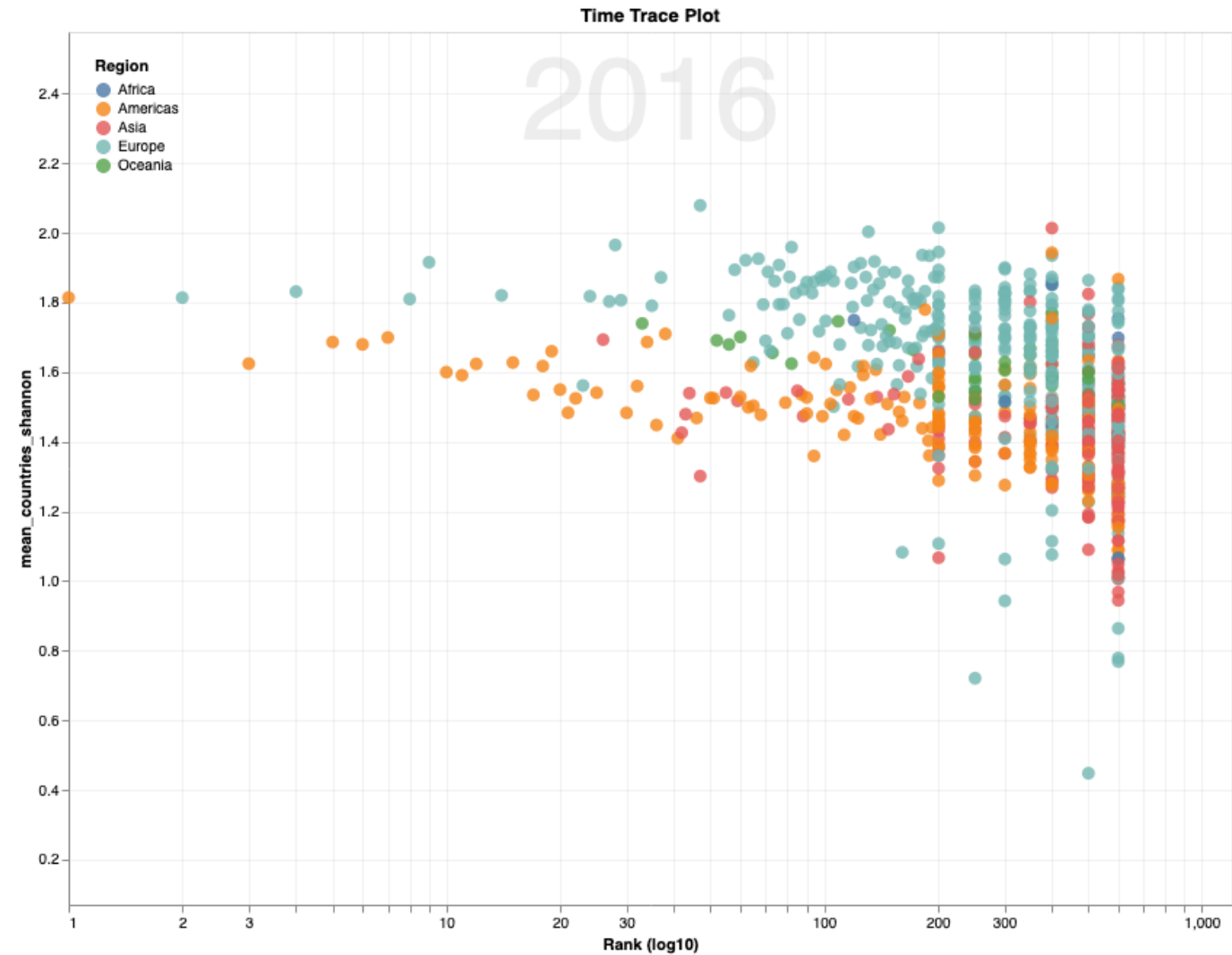
ONE NEW METRIC TO RULE THEM ALL?



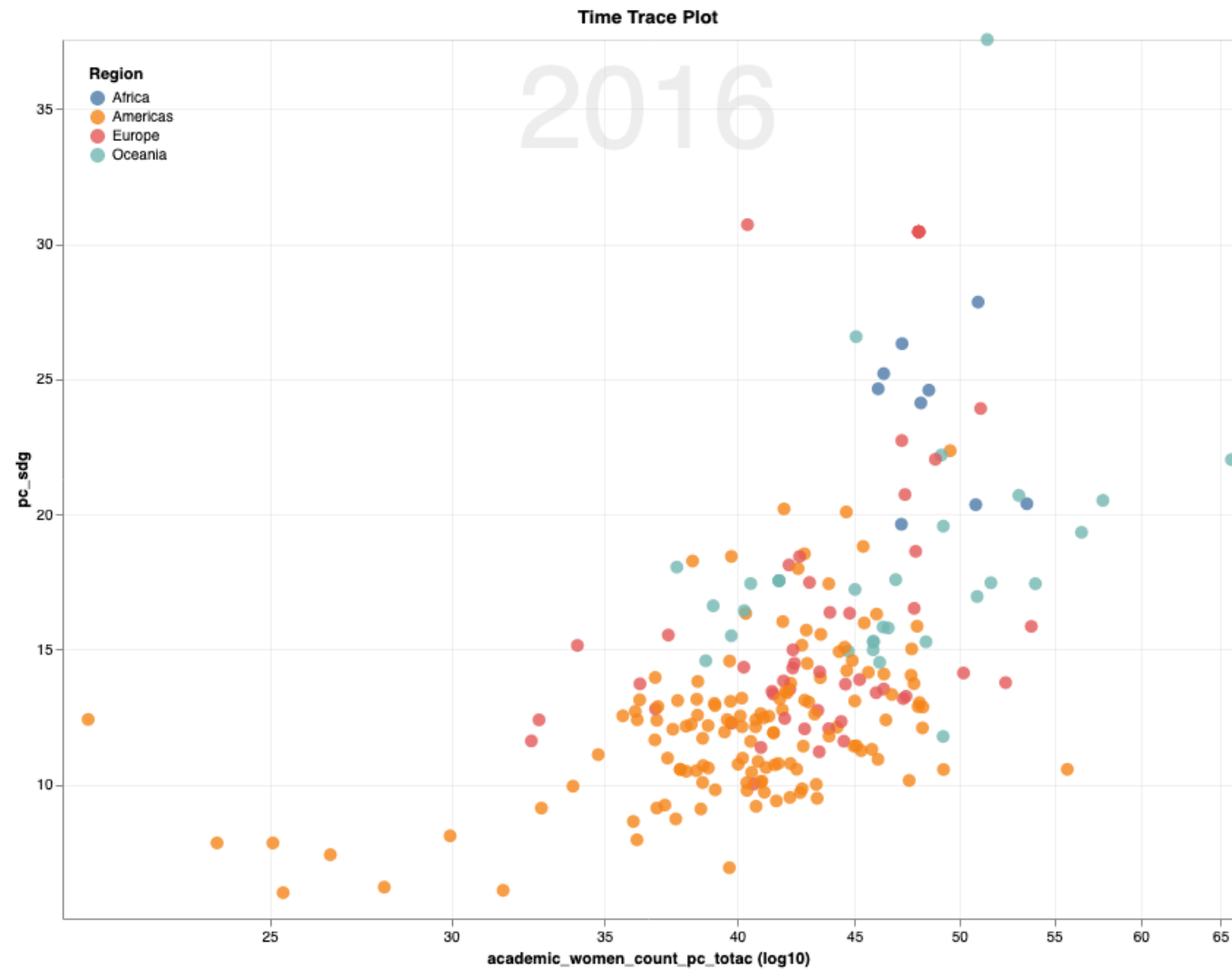
THES RANKING VS CITATION DIVERSITY (INSTITUTION)



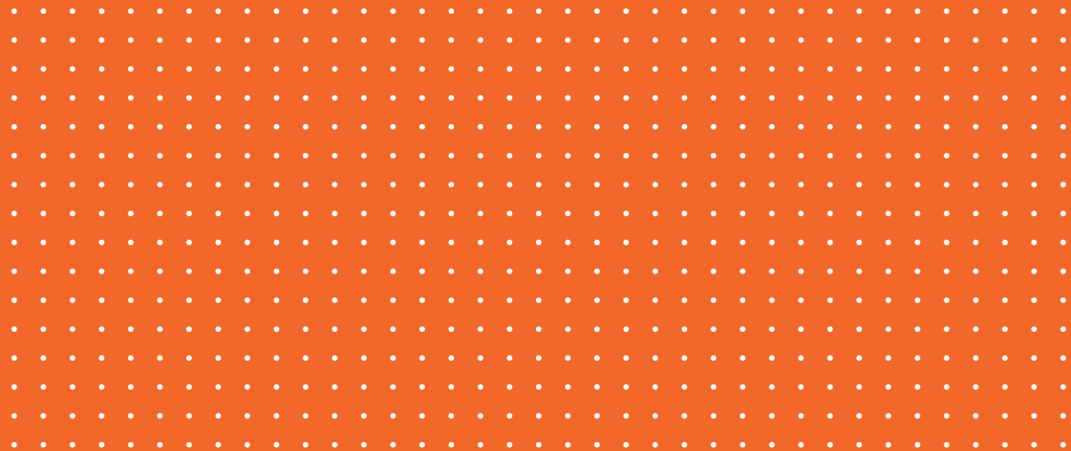
THES RANKING VS CITATION DIVERSITY (COUNTRIES)



SDGS AND PERCENT WOMEN



CONCLUDING





Diversity is a foundational requirement
of social knowledge-making



Our institutions matter and offer
platforms for progressive change, even
as they are deeply problematic...



Supporting diversity is about more
than flexibility or baskets, it requires an
*institutional commitment to
contextualized evaluation...*



...but institutional change is hard and slow (by design) so tactical changes that are small, but significant, can have real power...



What was it we meant to measure
when we counted citations? And isn't
measuring their diversity a better way
to do that?

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Curtin University

USEFUL LINKS

Montgomery et al., 2021. Open Knowledge Institutions: Reinventing Universities. MIT Press, Cambridge.
<https://doi.org/10.7551/mitpress/13614.001.0001>

Huang C-K, Wilson K, Neylon C, Ozaygen A, Montgomery L, Hosking R. 2021. Mapping open knowledge institutions: an exploratory analysis of Australian universities. PeerJ 9:e11391
<https://doi.org/10.7717/peerj.11391>

Wilson K, Huang C-K, Montgomery L, Neylon C, Handcock RN, Ozaygen A, Roelofs A. 2022 Changing the Academic Gender Narrative through Open Access. Publications. 10(3):22.
<https://doi.org/10.3390/publications10030022>

Neylon, Cameron, Alkim Ozaygen, Lucy Montgomery, Chun-Kai (Karl) Huang, Ros Pyne, Mithu Lucraft, and Christina Emery. 2021. “More Readers in More Places: The Benefits of Open Access for Scholarly Books”. Insights 34 (1): 27. <http://doi.org/10.1629/uksg.558>

Huang, Chun-Kai (Karl), Neylon, Cameron, Montgomery, Lucy, Handcock, Rebecca N., & Wilson, Katie. (2022). Open Access Research Outputs Receive More Diverse Citations (Version 1). Zenodo.
<https://doi.org/10.5281/zenodo.7081037>

Zenodo Community: <https://zenodo.org/communities/coki>

Dynamic Visualisations: https://storage.googleapis.com/rt-era-public/plots/cameron_2022_09_14/index.html

This Slide Deck: <https://doi.org/10.5281/zenodo.7081871>



@COKIproject - @CameronNeylon

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