
Platform Capitalism and the Governance of Knowledge Infrastructure

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Digital Initiative Symposium 2019, April 29-30, University of San Diego



Sonia Chaidez and Stephanie Carmona, Whittier College

Some broad questions

- Why should we be concerned with the platformitization of scholarly infrastructure?
- How should we think collectively about building open inclusive infrastructure that serves the pubic goods?
- What roles for Open Access?

Claims

- Open Access has been instrumental in raising awareness about inequity and social injustice in knowledge production and circulation
- But we remained too narrowly fixated on an old artifact – the journal and its content

Claims

- This has allowed the concentration of power and wealth of the publishing oligopoly
- They are using data extraction as a new form of capital accumulation and rent-seeking, which is further fueling inequality, and diminishing epistemic diversity and social inclusion

Claims

- We have also been too focused on the visible problems with Access, and not paying enough attention to the **Hidden and Invisible barriers** and the structural imbalance in **Power** that continue to define what constitutes legitimate knowledge

Hidden Power

- The ability to set agendas and decisions
- The ability to mobilize and accumulate resources
- The ability to set standards and norms
- The ability to set boundaries of participation
- The ability to control infrastructure – what gets built

Invisible power

- Data infrastructure
 - Capturing evidence of institutional “competitiveness”
 - Centralized sources for inspection by policymakers and politicians that can be used to evaluate institutional outcomes, create ranked league tables
 - Decision to award or withhold financial resources

Two simple examples

Search as invisible infrastructure
Technology as mediator of Access



Article

Whose Knowledge is It? Towards Reordering Knowledge Production and Dissemination in the Global South

Journal **Educational Research for Social Change**

Volume **4** Peer reviewed **No**

Issue **2** Page **35** Date **2015-10-01**

Author **Moletsane, Relebohile**

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Naydene de Lange



Chukwuemeka Afigbo
@nke_ise



If you have ever had a problem grasping the importance of diversity in tech and its impact on society, watch this video

♥ 216K 5:48 AM - Aug 16, 2017

<https://www.iflscience.com/technology/this-racist-soap-dispenser-reveals-why-diversity-in-tech-is-muchneeded/>

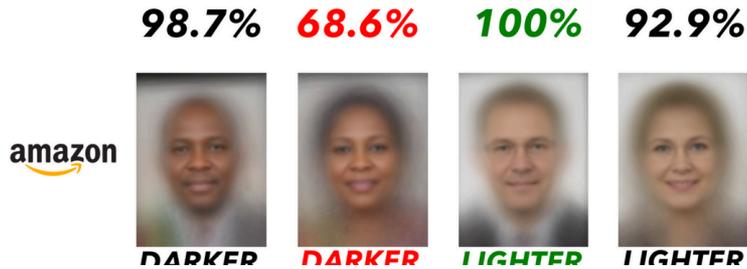
Open \neq Visible

“openness” is not a binary condition, but is highly situational, contingent, and dependent on context



Joy Buolamwini

Jan 25 · 14 min



Response: Racial and Gender bias in Amazon Rekognition — Commercial AI System for Analyzing Faces.



16

2 responses



Joy Buolamwini

The rise of artificial intelligence necessitates careful attention to inadvertent bias that can perpetuate discriminatory practices and exclusionary experiences for people of all shades.

<https://medium.com/@Joy.Buolamwini/response-racial-and-gender-bias-in-amazon-rekognition-commercial-ai-system-for-analyzing-faces-a289222eeced> (Jan 25, 2019)

<https://hackernoon.com/algorithms-arent-racist-your-skin-is-just-too-dark-4ed31a7304b8> (May 29, 2017)

“We have to keep in mind that default settings are not neutral. They reflect the Coded Gaze, the preferences of those who have the opportunity to develop technology. Sometimes these preferences can be exclusionary.” (Buolamwini 2017)

<https://hackernoon.com/algorithms-arent-racist-your-skin-is-just-too-dark-4ed31a7304b8>

"This book is downright scary—but...you will emerge smarter and more empowered to demand justice." —NAOMI KLEIN

AUTOMATING INEQUALITY

HOW HIGH-TECH TOOLS PROFILE,
POLICE, AND PUNISH THE POOR



why are black women so
why are black women so angry
why are black women so loud
why are black women so mean
why are black women so attractive
why are black women so lazy
why are black women so annoying
why are black women so confident
why are black women so sassy
why are black women so insecure

ALGORITHMS OF OPPRESSION

HOW SEARCH ENGINES
REINFORCE RACISM

SAFIYA UMOJA NOBLE

NEW YORK TIMES BESTSELLER

WITH A NEW AFTERWORD

WEAPONS OF MATH DESTRUCTION

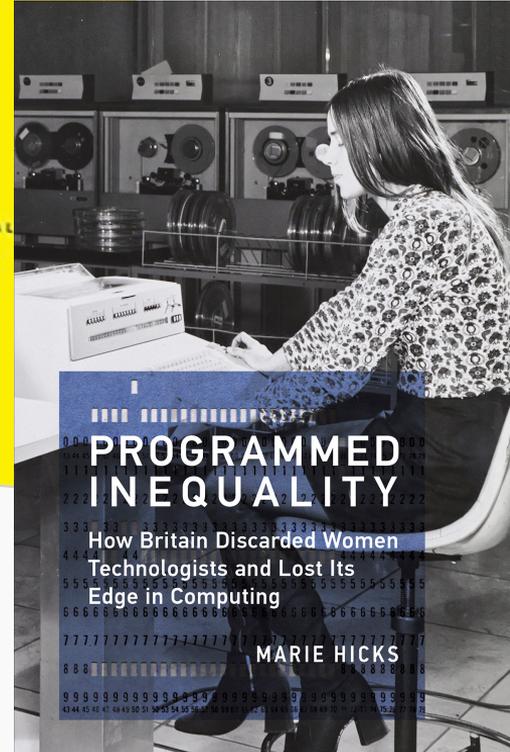


HOW BIG DATA INCREASES INEQUALITY
AND THREATENS DEMOCRACY

CATHY O'NEIL



"This is a manual for the 21st-century citizen,
and it succeeds where other big data accounts
have failed—it is accessible, refreshingly
critical, and feels relevant and urgent."
—FINANCIAL TIMES



PROGRAMMED INEQUALITY

How Britain Discarded Women
Technologists and Lost Its
Edge in Computing

MARIE HICKS

"This book is downright scary—but...you will emerge smarter and more empowered to demand justice." —NAOMI KLEIN

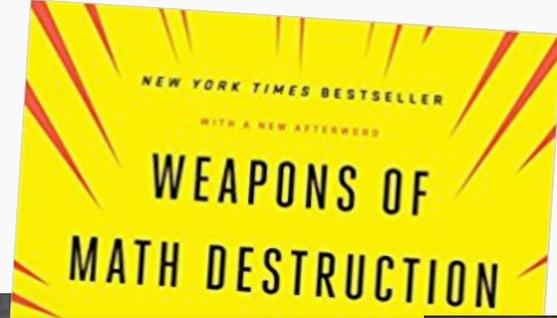


AUTOMATING
INEQUALITY

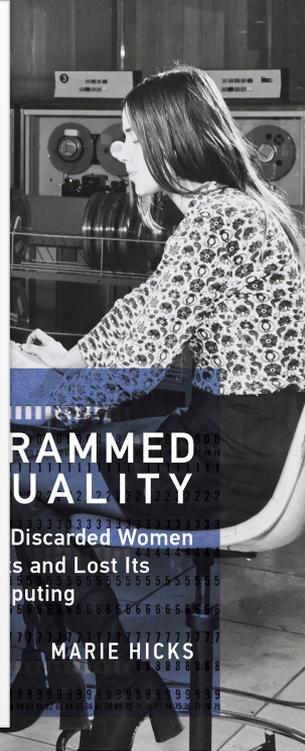
HOW HIGH-TECH TOOLS
POLICE, AND PUNISH



VIRGINIA



Algorithms are not neutral
How we define “success” for
machines determines who
wins and who loses
“Neutrality” is a code word for
maintaining the status quo



RAMMED
QUALITY

Discarded Women
and Lost Its
Putting

MARIE HICKS

THE AGE OF SURVEILLANCE CAPITALISM

THE FIGHT FOR A
HUMAN FUTURE
AT THE NEW
FRONTIER OF POWER

SHOSHANA
ZUBOFF

THE PLATFORM SOCIETY



PUBLIC VALUES IN A CONNECTIVE WORLD

JOSÉ VAN DIJCK | THOMAS POELL | MARTIJN DE WAAL

THE AGE OF

THE

S

Prescriptive Technology designed by Extractive industries of the mind

Technology of enclosure

Technology of decision making

New forms of rentier capitalism

Datafication of everything

Extreme Extraction and Accumulation of personal data

Commodification of everything

Extraction as a service

“Behavioural surplus” as new form of financialization

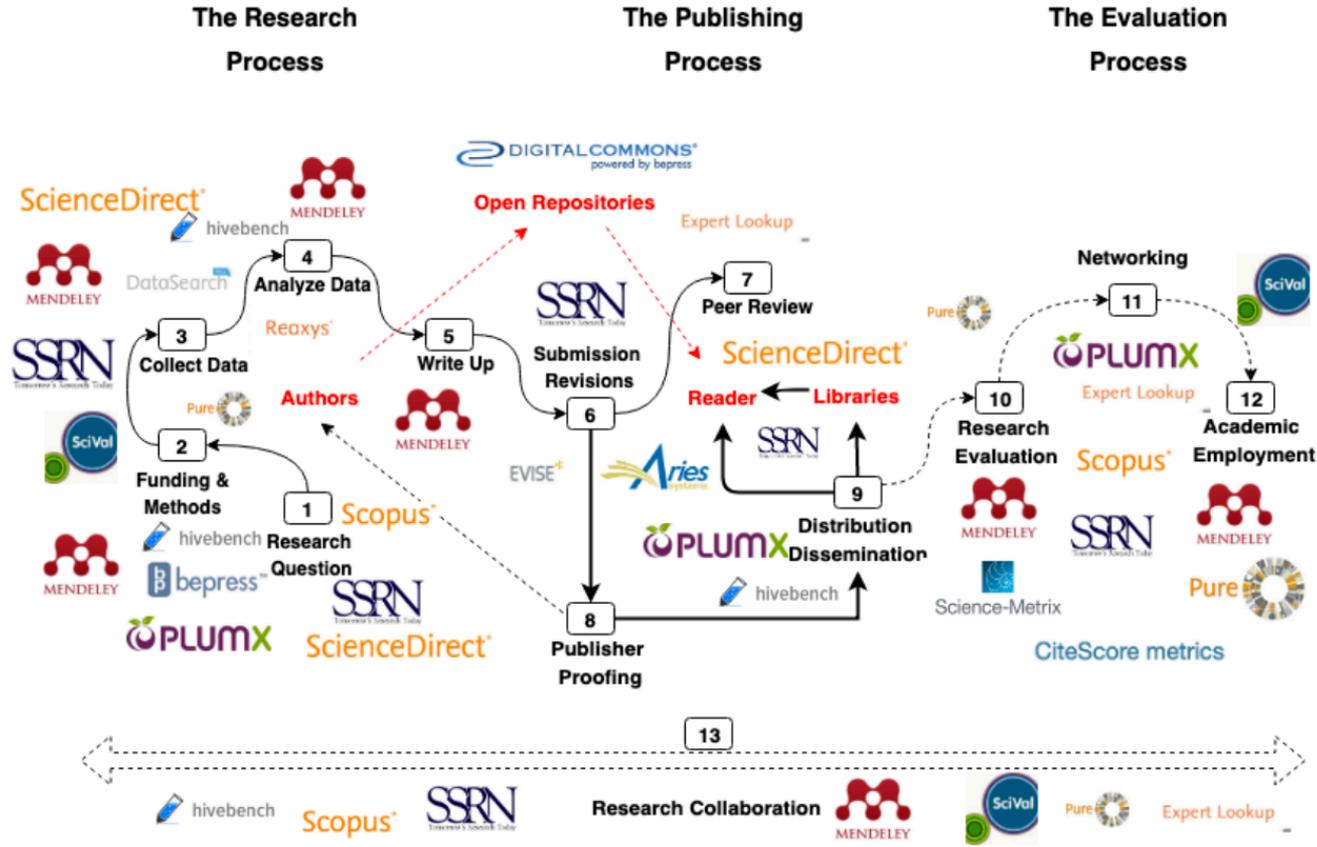
Data grab as the new land grab

Expulsion as means of profit maximization

FOMA as a business strateg

Normalizing Precarity and Anxiety

The Academic Knowledge Research Production Process



Posada and Chen 2019, forthcoming. Based on Posada , Alejandro and Chen , George - Inequality in Knowledge Production: The Integration of Academic Infrastructure by Big Publishers <https://elpub.episciences.org/4618>



What would research look like if the information system supporting it was source-neutral, interoperable and transparent, and under the researcher's control? This is our vision for the future, are you ready to co-create it? Read more and join us. bit.ly/2V1wg6U



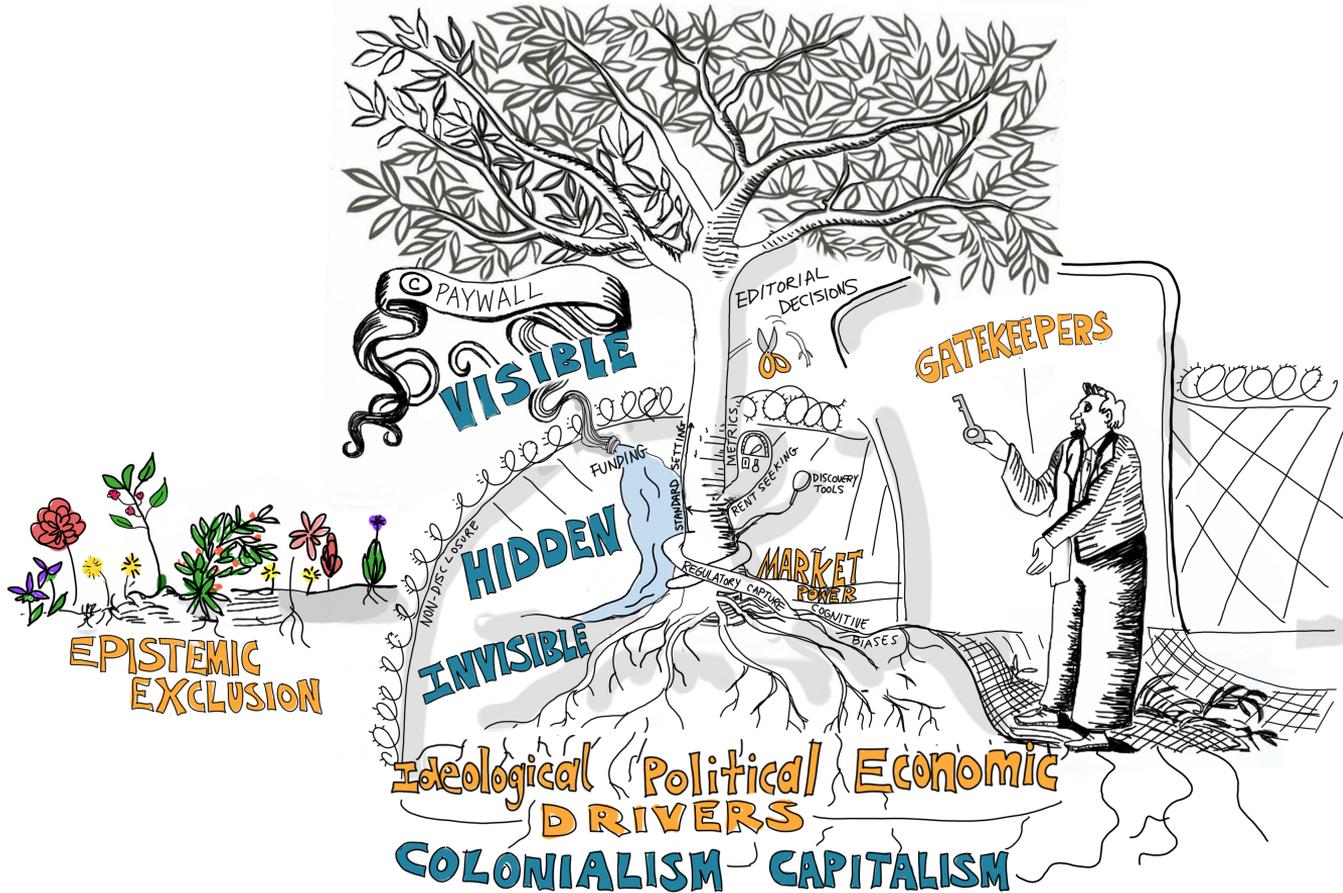


My Research Dashboard shows download activity, shares, citations, demographic data about who is reading your research, and how and where your publications are being discovered.

“Whether your members are working towards a promotion or are applying for research funding, understanding the impact of their research is an incredibly useful asset.

Elsevier has combined and improved upon its CiteAlert and Article Usage Report tools with the creation of My Research Dashboard. Any author who has published at least one article in a journal published by Elsevier can register for a free and personalized dashboard. The data feeding the dashboard comes from Scopus, ScienceDirect, Mendeley, and Newsflo. Elsevier acquired Newsflo, a media monitoring service, in January 2015. Newsflo shows authors where their research is being talked about in the media.”

This is not a healthy "ecosystem" of knowledge



Giulia Forsythe, Associate Director, Centre for Pedagogical Innovation. Brock University, Canada

[@giuliaforsythe](https://twitter.com/giuliaforsythe)

Infrastructure is not neutral

- Infrastructure as invisible form of governance
- Infrastructure controls what's possible
- Infrastructure is embedded with ideological assumptions and biases
- Infrastructure discriminates
- Growing reliance on AI: Governance by algorithms

“Contemporary infrastructure ... is the secret weapon of the most powerful people in the world precisely because it orchestrates activities.... Some of the most radical changes to the globalizing world are being written ... [in] infrastructural technologies—often because market promotions or prevailing political ideologies lubricate their movement” Easterling (2016: 15)

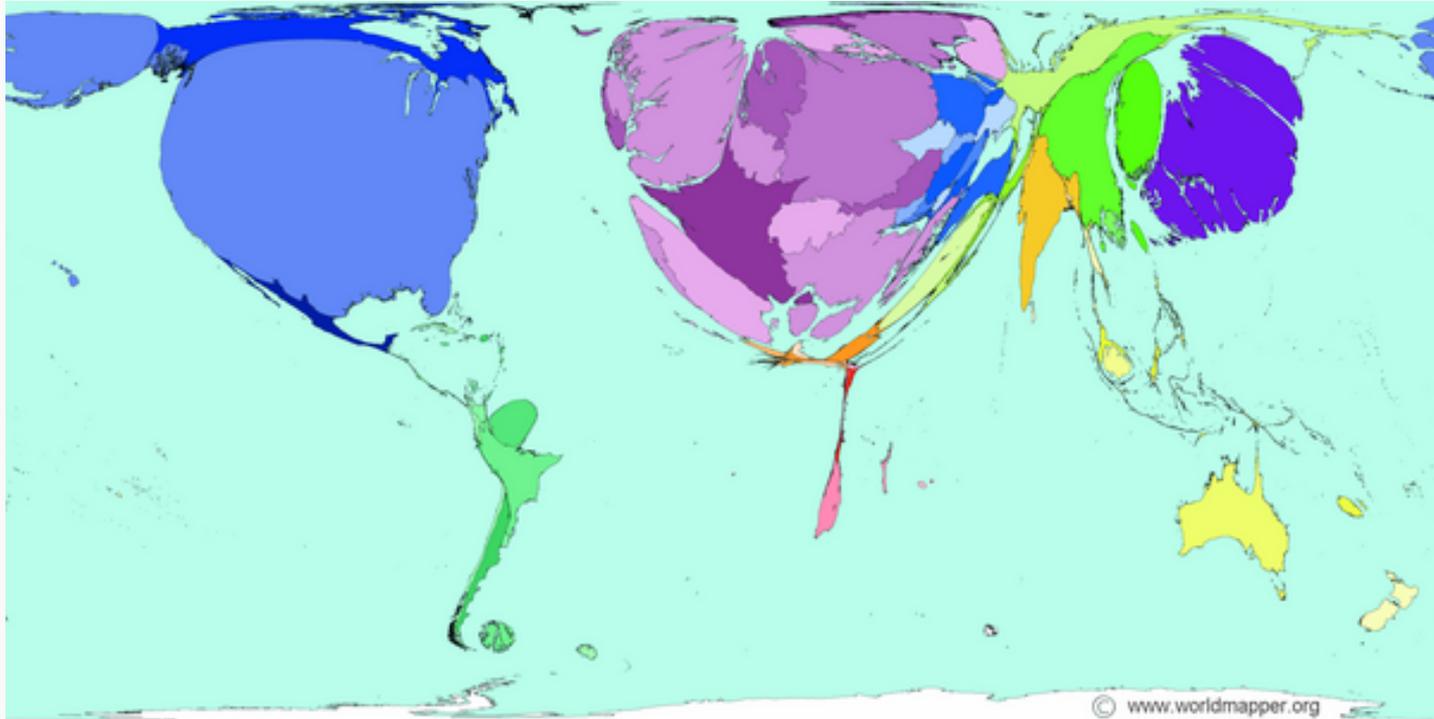
Easterling, K. (2016). Extrastatecraft: The power of infrastructure space. London: Verso.

Vandana Shiva: “Monoculture of the Mind”

“The “monoculture of the mind” treats diversity as disease and creates coercive structures to remodel this biologically and culturally diverse world of ours on the concepts of one privileged class, one race and one gender of a single species.”

<https://www.commondreams.org/views/2013/04/24/tackling-monoculture-mind>

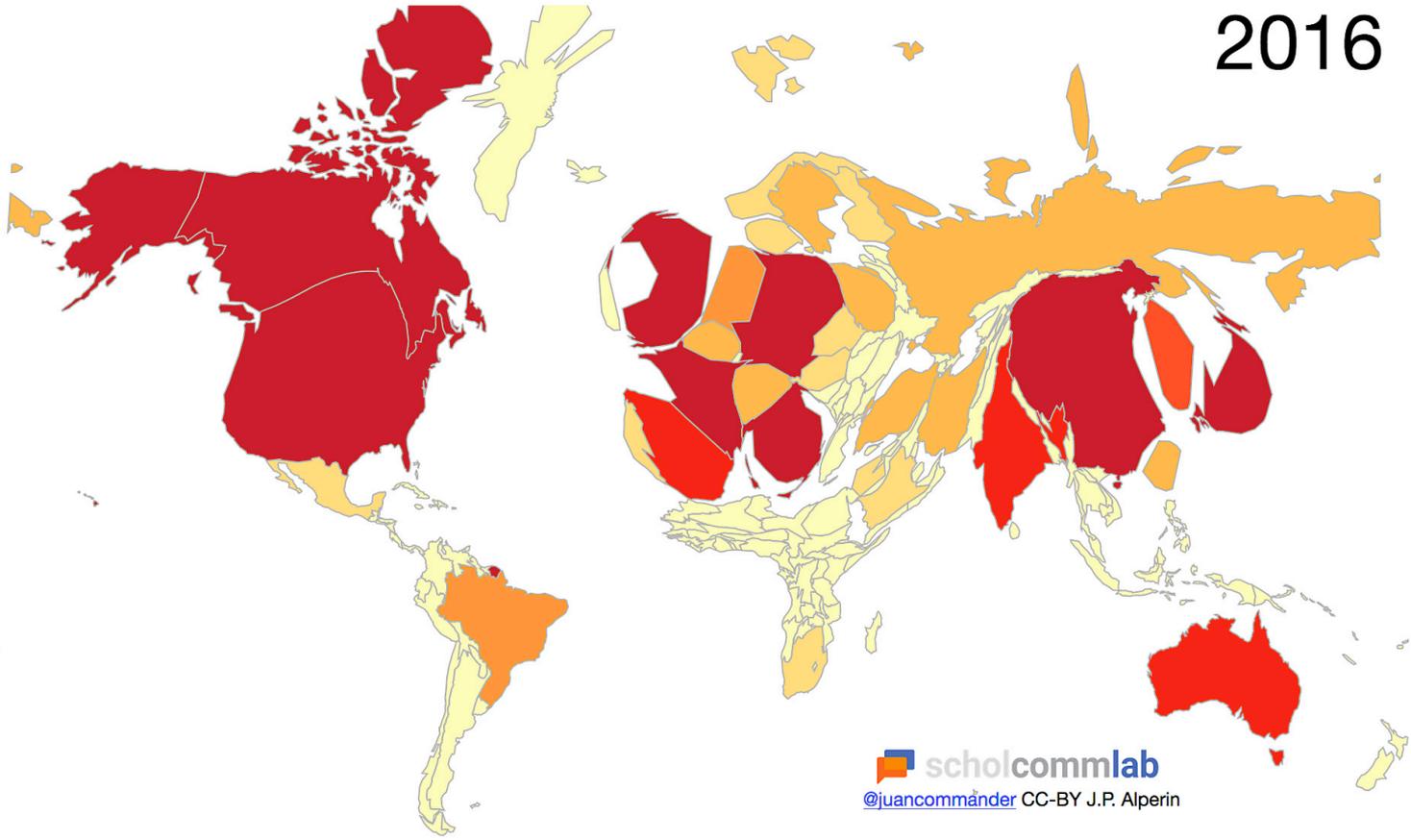
Figure 1. Unequal contribution and participation in science.



Chan L, Kirsop B, Arunachalam S (2011) Towards Open and Equitable Access to Research and Knowledge for Development. PLOS Medicine 8(3): e1001016. <https://doi.org/10.1371/journal.pmed.1001016>
<https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001016>

World scaled by number of documents with authors from each country in Web of Science

2016



 **scholcommlab**
@juancommander CC-BY J.P. Alperin

Web of Science Sold for More Than \$3 Billion

Thomson Reuters has transferred the science-citation database, along with the rest of its intellectual property and science division, to private-equity firms.

By Bob Grant | July 15, 2016



WIKIMEDIA, [TOM BURKE](#)

The science-literature citation index, Web of Science, is going to private-equity firms as part of a \$3.55 billion dollar deal, struck by Thomson Reuters, the company that has owned and maintained the resource since its inception in 1997. The multibillion dollar transaction is part of Thomson Reuters' divestiture of its intellectual property and science division, which includes the sprawling Web of Science database.

The Web of Science was preceded in 1964 by the launch of the Science Citation Index, brainchild of Eugene Garfield—who also started *The Scientist*.

The database and division will soon likely be the property of private equity funds associated with

Web of Science

Web of Science Core
Collection

Data Citation Index

Databases

Open Access

Release Notes

Set up Web of Science

Highly Cited Researchers

Training

Kopernio

Getting started

Web of Science

Trust the difference

Contact us

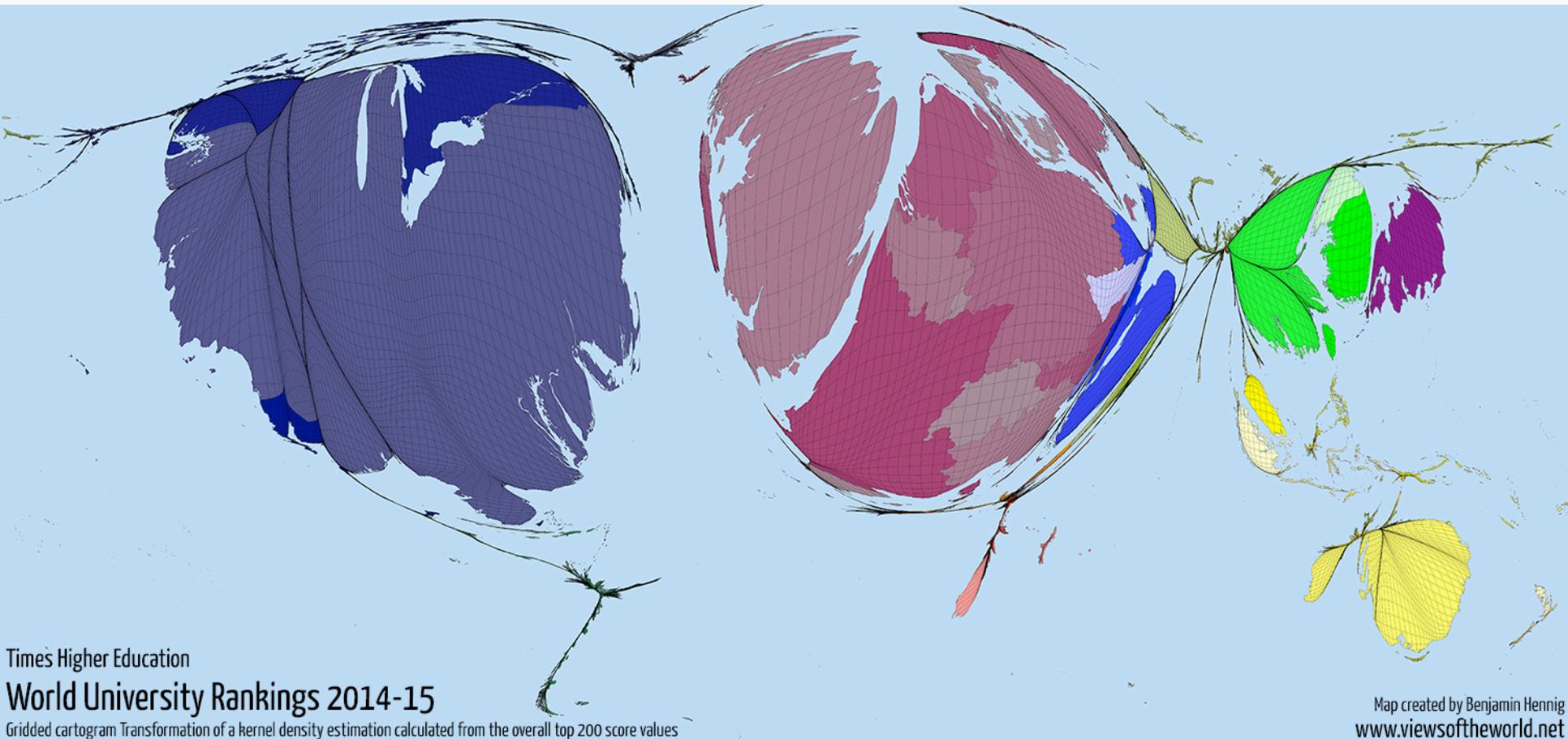
Product log in

What if you could uncover new connections in research with guaranteed quality, impact, and neutrality?

Research data is booming. The opportunity to reveal meaningful linkages – between past and current research, between collaborators, between funding and research impact – is huge, as long as you start with the right data.

With the *Web of Science* platform, you can access an unrivalled breadth of world-class research literature linked to a rigorously selected core of journals and uniquely discover new information through meticulously captured metadata and citation connections.

The *Web of Science* platform connects the [Web of Science Core Collection](#) to regional citation indexes, patent data, specialized subject indexes, and an index of research data sets, all in all totaling over 33,000 journals, meaning you have the breadth you need to be truly comprehensive in your search.



Times Higher Education

World University Rankings 2014-15

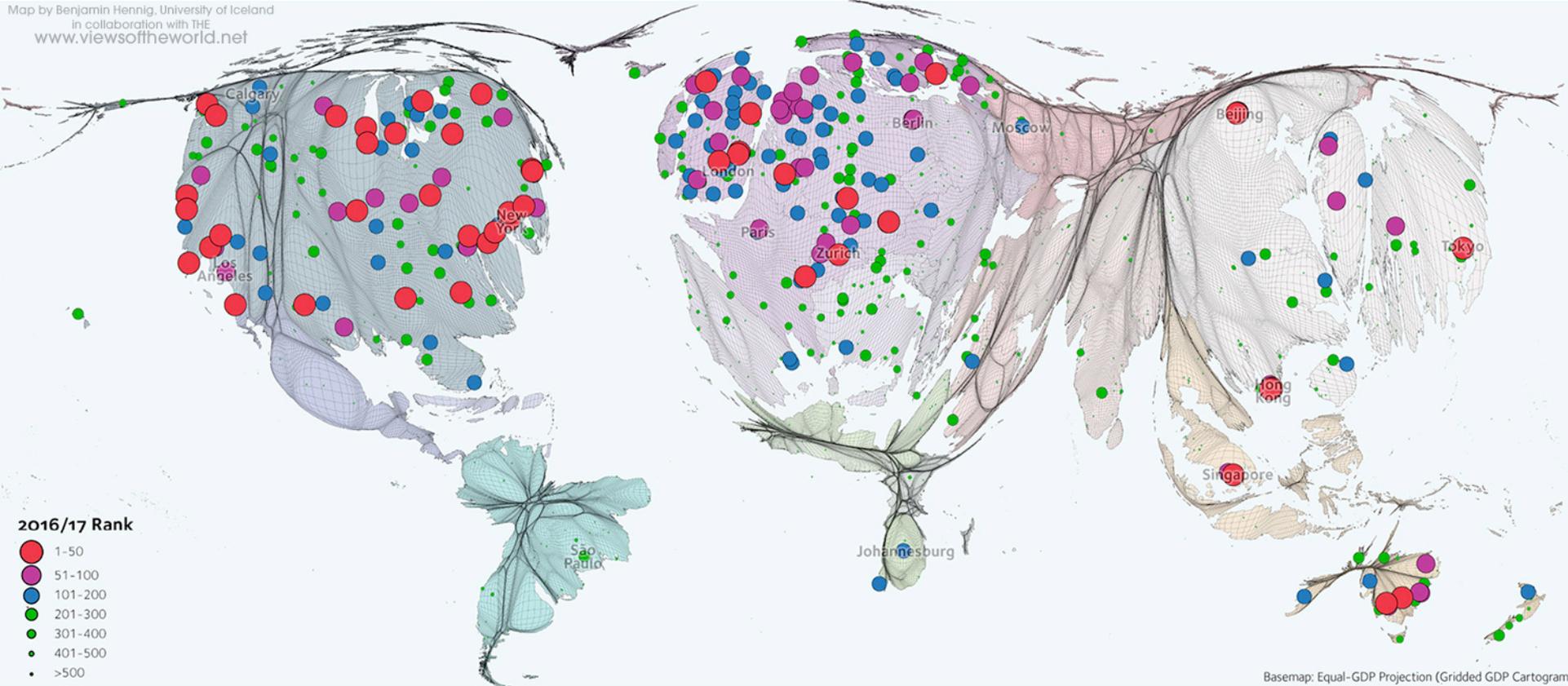
Gridded cartogram Transformation of a kernel density estimation calculated from the overall top 200 score values

Map created by Benjamin Hennig
www.viewsoftheworld.net

[http://www.viewsoftheworld.net/wp-content/uploads/2014/11/](http://www.viewsoftheworld.net/wp-content/uploads/2014/11/THE2014_OverallScore_KernelDensityCartogram.jpg)
[THE2014_OverallScore_KernelDensityCartogram.jpg](http://www.viewsoftheworld.net/wp-content/uploads/2014/11/THE2014_OverallScore_KernelDensityCartogram.jpg)

THE WORLD UNIVERSITY RANKINGS IN A WORLD ADJUSTED FOR NATIONAL WEALTH

Map by Benjamin Hennig, University of Iceland
in collaboration with THE
www.viewsoftheworld.net



Basemap: Equal-GDP Projection (Gridded GDP Cartogram)

[http://www.viewsoftheworld.net/wp-content/uploads/2017/07/](http://www.viewsoftheworld.net/wp-content/uploads/2017/07/THE_WorldUniversityRankings201617_gdpmap.jpg)
[THE_WorldUniversityRankings201617_gdpmap.jpg](http://www.viewsoftheworld.net/wp-content/uploads/2017/07/THE_WorldUniversityRankings201617_gdpmap.jpg)



World University Rankings

As a renewed multiyear partnership draws on Elsevier's Scopus data, we look at how those rankings are created

By Shereen Hanafi and Sacha Boucherie January 18, 2018

 Elsevier Connect



Trevor Barratt, Managing Director of *Times Higher Education* (left), and M'hamed el Aisati, Elsevier's VP of Product Management, Funding and Content Analytics meet to discuss the provision of Scopus analytics for the Times Higher Education World University Rankings.

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Inflexion completes acquisition of Times Higher Education from TPG Capital

Fri, 01/03/2019 - 10:39

Tags : [Deals & Transactions](#) [Acquisitions](#)

Inflexion Private Equity has acquired Times Higher Education (THE) from TPG Capital (TPG), the global private equity platform of alternative asset firm TPG.

THE, formerly part of Tes Global, has been carved out as an independent entity as part of the investment from Inflexion. The investment was made by Inflexion's dedicated mid-market buyout funds.

THE is the world leader in university data, rankings and content, with institutions, academics, students, industry and governments utilising the information to gain insight, inform strategic priorities, benchmark, assess and select higher education institutions. THE has led on higher education analysis for nearly half a century, and has more than 700 clients globally across its data, consultancy and hiring services, including Oxford and Cambridge Universities in the UK and Harvard and MIT (Massachusetts Institute of Technology) in the US. For its 2019 University Rankings (including the World University Rankings), THE's in-house data team analysed over nine million data points on 3,500 institutions worldwide, more than half of which featured. The website attracts over 30 million unique visitors annually. The company employs over 100 people across its five offices in the UK, US, Australia, China and Singapore.

Elsevier: How research analytics is driving success at a Nigerian university

“In its 15 years, Covenant University has powered its way up the country’s research rankings and is looking to compete internationally”

<https://www.elsevier.com/connect/how-research-analytics-is-driving-success-at-a-nigerian-university>

25/10/18

Togo: L'urgence de relever le budget de la recherche

“Les chercheurs sont davantage occupés à vouloir monter en grade plutôt qu’à orienter leurs activités vers la résolution des problèmes de développement auxquels fait face l’Etat”

Kouami Kokou, directeur national de la recherche scientifique

“Researchers are more busy trying to upgrade their ranks rather than directing their activities towards solving development problems facing the state”

Kouami Kokou, National Director of Scientific Research

- The platformitization of knowledge infrastructure is antithetical to the epistemic and intellectual diversity that is crucial to the sustainability of our planet. It drives needless growth and amplify inequality.

Openness, when decontextualized from its historical and political roots, could become as exploitative and oppressive as the legacy system it seeks to displace

Towards a “Pluriversal” framework

ARTURO ESCOBAR



Designs for the
Pluriverse

Radical Interdependence, Autonomy, and the Making of Worlds

- “a world where many worlds fit”
- built on the concept of diversity within a whole Earth system, a multiplicity of worlds and peoples coexisting within the Planet
- life’s ceaselessness, always flowing, constantly changing owing to interdependence of all aspects of living systems

Open Knowledge for Latin America and the Global South

CLACSO, Latindex, Redalyc and many more

<https://goo.gl/mq4EUt>

Principles to achieve Open Access

Europe



Authors retain copyright of their publication with no restrictions. All publications must be published under an open license, preferably the Creative Commons Attribution Licence CC BY. In all cases, the license applied should fulfil the requirements defined by the Berlin Declaration;

The Funders will ensure jointly the establishment of robust criteria and requirements for the services that compliant high quality Open Access journals and Open Access platforms must provide;

In case such high quality Open Access journals or platforms do not yet exist, the Funders will, in a coordinated way, provide incentives to establish and support them when appropriate; support will also be provided for Open Access infrastructures where necessary;

Where applicable, Open Access publication fees are covered by the Funders or universities, not by individual researchers; it is acknowledged that all scientists should be able to publish their work Open Access even if their institutions have limited means;

When Open Access publication fees are applied, their funding is standardised and capped (across Europe);

The Funders will ask universities, research organisations, and libraries to align their policies and strategies, notably to ensure transparency;

The above principles shall apply to all types of scholarly publications, but it is understood that the timeline to achieve Open Access for monographs and books may be longer than 1 January 2020;

The importance of open archives and repositories for hosting research outputs is acknowledged because of their long-term archiving function and their potential for editorial innovation;

The 'hybrid' model of publishing is not compliant with the above principles;

The Funders will monitor compliance and sanction non-compliance.

Latin America and the Global South



1 Scientific knowledge generated by public funds is a common good and access to it is a right.

2 Open Access must be legally protected in order to avoid the appropriation of scientific knowledge for profit.

3 Open Access has no future or meaning without an evolution of research evaluation systems.

4 The consolidation of Open Access must consider the transition to digital scientific communication as an essential axis.

5 The economical investment in Open Access must be coherent with its benefit to society just as commercial solutions are paid.

6 The adverse economic scenarios facing Open Access will have to be overcome with work schemes based on collaboration and sustainability.

7 It is necessary to recognize the diversity of scientific journals and stop the pressures that seek to homogenize them. In the other hand, journals must support the strengthening of institutional repositories by means of the disappearance of policies of embargo.

8 The social impact of science is the foundation of Open Access' existence.

9 It is necessary to respect the different dynamics of generation and circulation of knowledge by area, especially the dynamics of the social sciences and the humanities.

10 Open Access must be permanently conceptualized and accordingly defined. The three "B" homogenize the conditions of the development of science and the conditions of the South are different from those of the North.

AmeliCA vs Plan S:

Same target, two different strategies
to achieve Open Access.



Open Knowledge for
Latin America and the Global South



0:06 / 2:53



AmeliCA vs Plan S: Same target, two different strategies to achieve Open Access

<https://www.youtube.com/watch?v=5kXe1UO4beE>

What We Can Do

Ethics of Openness

- Acknowledge Biases and Injustices
- Mindful of consent and privacy
- Practice mutual care
- Demand disclosure

Collective Actions

- Build community governed infrastructure
- Poly-centric governance
- Think De-growth for Sustainability
- Value Pluralism
- Poly-centric governance

Public Policy

- Policy on platform monopoly and regulations
- Community Benefit Sharing Agreements

