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## Closing Keynote: Platform Capitalism and the Governance of Knowledge Infrastructure

Leslie Chan University of Toronto Scarborough

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## Closing Keynote: Platform Capitalism and the Governance of Knowledge Infrastructure

#### **Presenter 1 Title**

Associate Professor and Associate Director of the Centre for Critical Development Studies

#### Session Type

**Keynote Address** 

#### Abstract

The dominant academic publishers are busy positioning themselves to monetize not only on content, but increasingly on data analytics and predictive products on research assessment and funding trends. Their growing investment and control over the entire knowledge production workflow, from article submissions, to metrics to reputation management and global rankings means that researchers and their institutions are increasingly locked in to the publishers' "value chain". I will discuss some of the implications of this growing form of "surveillance capitalism" in the higher education sector and what it means in terms of the autonomy of the researchers and the academy. The intent is to call attention to the need to support community-governed infrastructure and to rethink our understanding of "openness" in terms of consent and social values.

#### Location

**KIPJ** Theatre

#### Comments

Leslie is an Associate Professor and Associate Director of the Centre for Critical Development Studies at the University of Toronto Scarborough. Leslie has been interested in the role of "openness" in the design of knowledge infrastructure, and the implications on the production and flow of knowledge and their impact on local and international development. As one of the original signatories of the Budapest Open Access Initiative, Leslie has been active in the experimentation and implementation of scholarly communication initiatives of varying scales around the world. Director of Bioline International, an international collaborative open access platform, Leslie is a long time advocate for knowledge equity and inclusive development. Leslie was the principal investigator for the Open and Collaborative Science in Development Network (OCSDNet), funded by IDRC in Canada and DFID in the UK, and the PI of the Knowledge G.A.P project.

Bioline International: http://www.bioline.org.br

OCSDNet: http://www.ocsdnet.org

Knowledge G.A.P.: http://www.knowledge.org

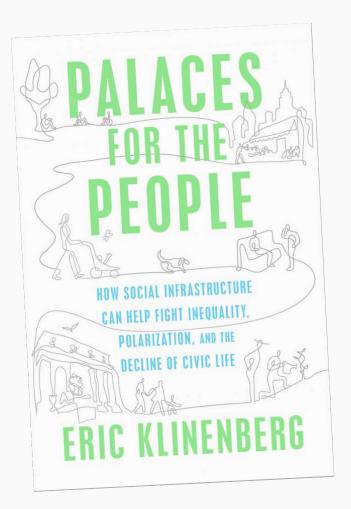
# Platform Capitalism and the Governance of Knowledge Infrastructure

Leslie Chan, Centre for Critical Development Studies University of Toronto Scarborough @lesliekwchan

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



#### Sonia Chaidez and Stephanie Carmona, Whittier College



When we invest in social infrastructures such as libraries, parks, or schools, we reap all kinds of benefits. We become more likely to interact with people around us, and connected to the broader public. If we neglect social infrastructure, we tend to grow more isolated, which can have serious consequences.

## 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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2. Request this item from another institution. (First time users will need to register for RACER.)

3. Ask us to help you find it.

#### **Educational Research for Social Change**

An Online Journal

ISSN/E-ISSN: / 2221-4070 Key title: Educational research for social change Abbreviated key title: Educ. res. soc. change

Home Current Issue Contents: Volume 4 Number 2 (2015)

Previous Issues

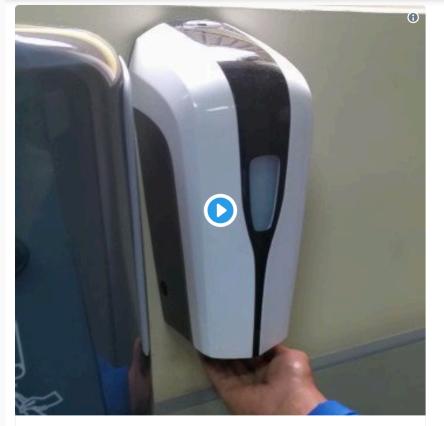
Call for Papers

Submit an Article

About Us

Editorial Vol 4 No 2 October 2015 Naydene de Lange
Looking backwards: How to be a South African university Crain Soudien
Public Scholarship, Democracy and Scholarly Engagement Enver Motala
Whose Knowledge is It? Towards Reordering Knowledge Production and Dissemination in the Global South Relebohile Moletsane
Looking at Showing: On the Politics and Pedagogy of Exhibiting in Community-Based Research and Work With Policy Makers Claudia Mitchell
Hacking Through Academentia: Autoethnography, Data and Social Change Keyan G Tomaselli
Reflections of a Novice Academic Writer Kimera Moodley, with Angela James and Michelle Stears
Integrating Reflexivity: Negotiating Researcher Identity Through Autoethnography Ying Syuan Huang
Book Review: Knowledge as Enablement: Engagement between Higher Education and the Third Sector in South Africa Anne Harley, University of KwaZulu-Natal, and Mark Butler
Report: Sexual Violence Research Initiative Forum, 14–17 September 2015, Spier Estate, Stellenbosch, South Africa

Navdene de Lance





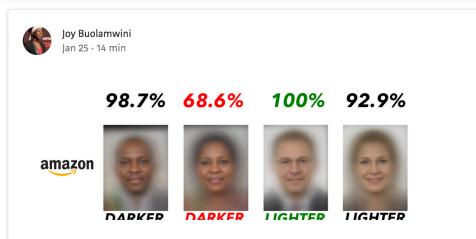
Chukwuemeka Afigbo @nke\_ise y

If you have ever had a problem grasping the importance of diversity in tech and its impact on society, watch this video  $\bigcirc$  216K 5:48 AM - Aug 16, 2017

https://www.iflscience.com/ technology/this-racist-soapdispenser-reveals-whydiversity-in-tech-ismuchneeded/



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



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

ڭ 16

2 responses

https://medium.com/@Joy.Buolamwini/response-racial-and-genderbias-in-amazon-rekognition-commercial-ai-system-for-analyzing-facesa289222eeced (Jan 25, 2019)

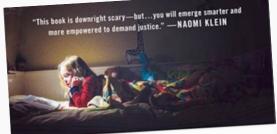
## Joy Buolamwini

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://hackernoon.com/algorithms-arent-racist-your-skinis-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-toodark-4ed31a7304b8



### A UTOMATING INEQUALITY HOW HIGH-TECH TOOLS PROFILE,

HOW HIGH-TECH TOOLS PROTIEN 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 OPPRESSION

HOW SEARCH ENGINES REINFORCE RACISM

SAFIYA UMOJA NOBLE

## WEAPONS OF MATH DESTRUCTION



NOW BIG DATA INCREASES INEQUAL AND THREATENS DEMOCRACY

### CATHY O'NEIL

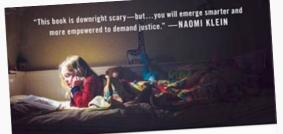
This is a manual for the 21st-century citizen, and it succeeds where other big data accounts have failed – it is accessible, refreshingly critical, and foels relevant and argent," -FINANCIAL TIMES

### PROGRAMMED IN E Q U A L I T Y

0 .....

How Britain Discarded Women Technologists and Lost Its Edge in Computing

MARIE HICKS



WEAPONS OF MATH DESTRUCTION

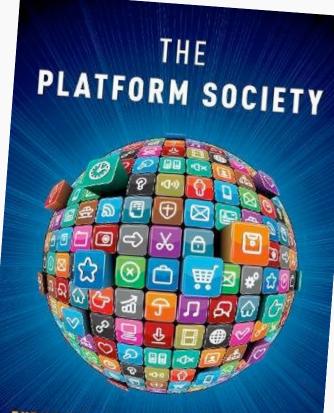
### AUTOMATING **INEQUA** Algorithms are not neutral HOW HIGH-TECH TO How we define "success" for POLICE, AND PUNI machines determines who wins and who loses RGIN "Neutrality" is a code word for maintaining the status quo

Discarded Wome s and Lost Its putina MARIE HICKS



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

### SHOSHANA ZUBOFF



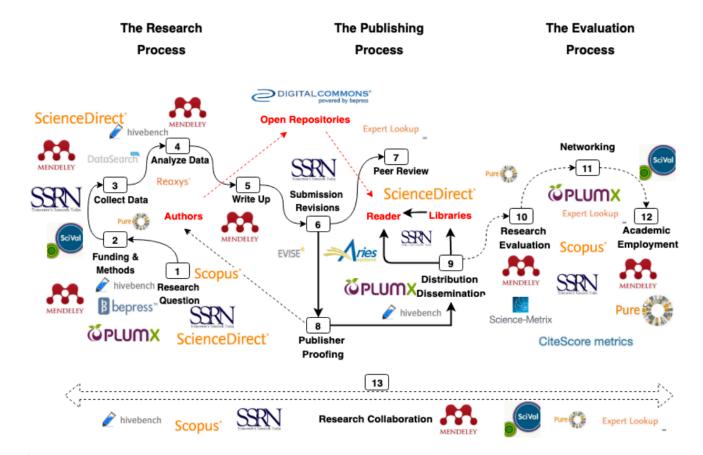
PUBLIC VALUES IN A CONNECTIVE WORLD JOSÉ VAN DIJCK | THOMAS POELL | MARTIJN DE WAAL

#### THE ACE OF

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

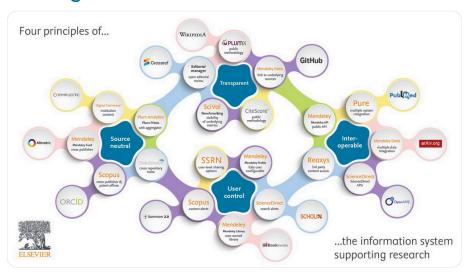


Posada and Chen 2019, forthcoming. Based on Posada , Alejandro and Chen , George - Inequality in Knowledge Production: The Integration of Academic Infrastructure by Big Publishers <u>https://elpub.episciences.org/4618</u>





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



<sup>6:54</sup> AM - 15 Feb 2019

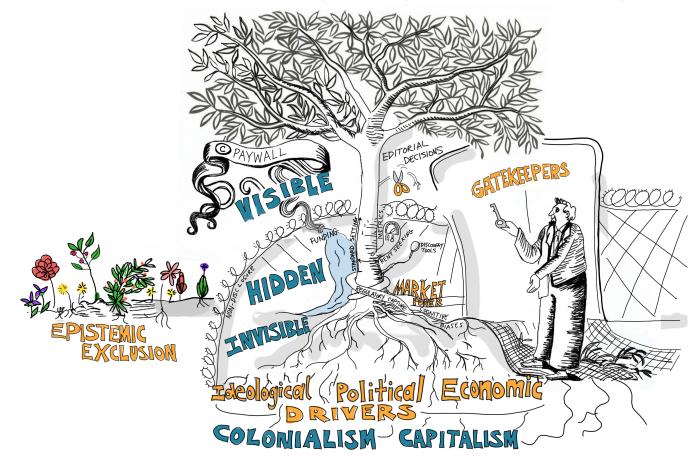


My Research Dashboard shows download activity, shares, citations, demographic data about who is reading your research, and how and where your publications are being discovered.

"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."

https://www.elsevier.com/books-and-journals/societies/societies-update/issue-4/an-impactful-

#### This is not a healthy "ecosystem" of knowledge



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

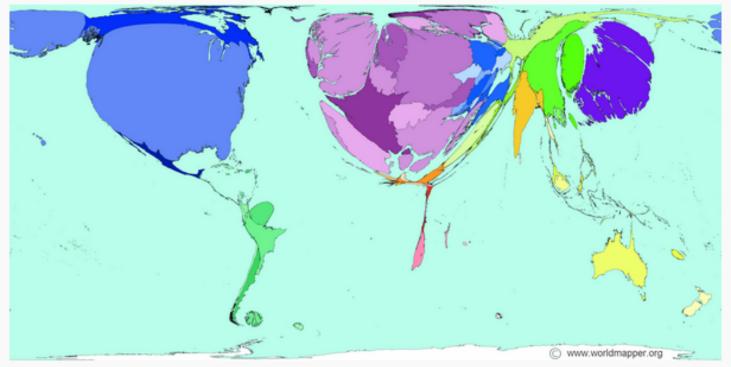
Easterling, K. (2016). Extrastatecraft: The power of infrastructure space. London: Verso.

## 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.

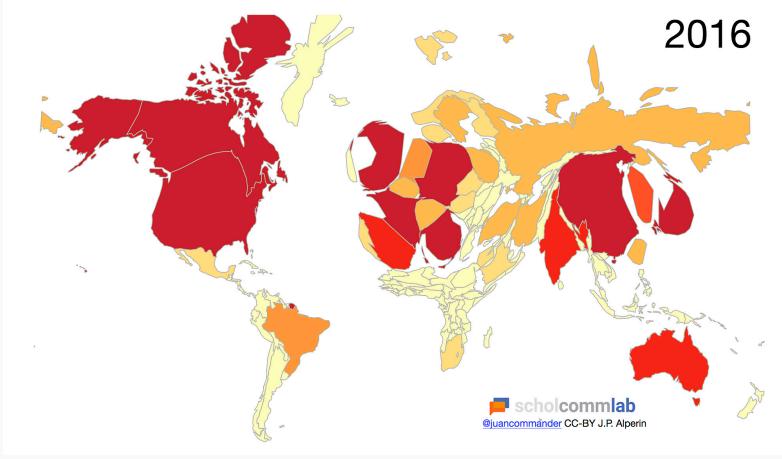


Chan L, Kirsop B, Arunachalam S (2011) Towards Open and Equitable Access to Research and Knowledge for Development. PLOS Medicine 8(3): e1001016. https://doi.org/10.1371/journal.pmed.1001016

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



https://figshare.com/articles/World\_scaled\_by\_number\_of\_documents\_with\_authors\_from\_each\_country\_in\_Web\_of\_Science\_2016/7064771

## 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



Blog

Q

#### 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



### 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.

#### https://clarivate.com/products/web-of-science/

**Times Higher Education** 

World University Rankings 2014-15

http://www.viewsoftheworld.net/wp-content/uploads/2014/11/

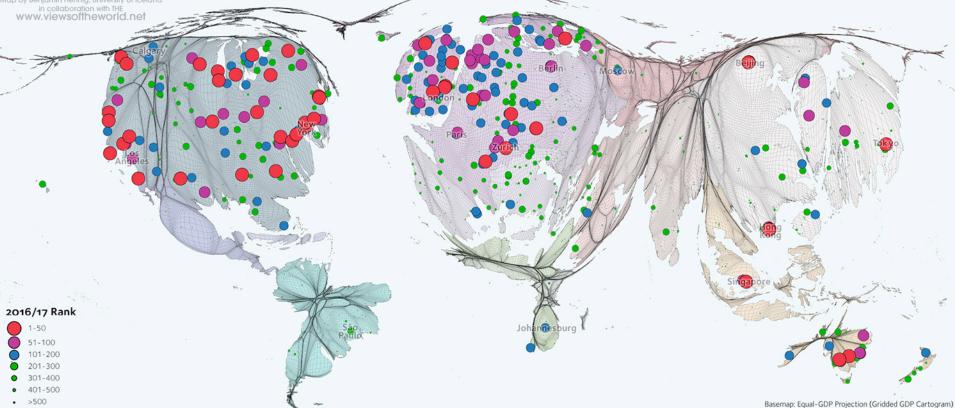
THE2014 OverallScore KernelDensityCartogram.jpg

Map created by Benjamin Hennig www.viewsoftheworld.net



### THE WORLD UNIVERSITY RANKINGS IN A WORLD ADJUSTED FOR NATIONAL WEALTH

in collaboration with THE



http://www.viewsoftheworld.net/wp-content/uploads/2017/07/ THE WorldUniversityRankings201617 gdpmap.jpg



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#### 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





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.

https://www.elsevier.com/connect/discover-the-data-behind-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.

https://www.privateequitywire.co.uk/2019/03/01/273580/inflexion-completes-acquisition-times-higher-education-tpg-capital

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-researchanalytics-is-driving-success-at-a-nigerian-university



### 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

https://www.scidev.net/afrique-sub-saharienne/r-d/article-de-fond/togo-relegue-recherche-scientifique-second-plan.html

 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 an oppressive as the legacy system it seeks to displace

## Towards a "Pluriversal" framework

ARTURO ESCOBAR



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

<u>CLACSO</u>, <u>Latindex</u>, <u>Redalyc</u> and many more

#### https://goo.gl/mq4EUt

Principles to achieve Open Access	
Europe	Latin America and the Global South
Blan S Making full and immediate Open Access a reality	
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;	Scientific knowledge generated by public funds is a common good and access to it is a right.
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;	s 🙎 scientific knowledge for profit.
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;	evaluation systems.
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;	s 4 scientific communication as an essential axis.
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;	pressures that seek to homogenize them. In the other hand, journals must
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 social impact of science is the foundation of Open Access' existence.
The 'hybrid' model of publishing is not compliant with the above principles:	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.
The Funders will monitor compliance and sanction non-compliance.	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.

to achieve Open Access. [Message on a blog]. Ameli Blog. Retrieved from

http://www.amelica.org/en/index.php/2019/01/10/amelica-vs-plan-s-mismo-objetivo-dos-

🚊 🔮 rekayo Arg - XmeliCA



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

