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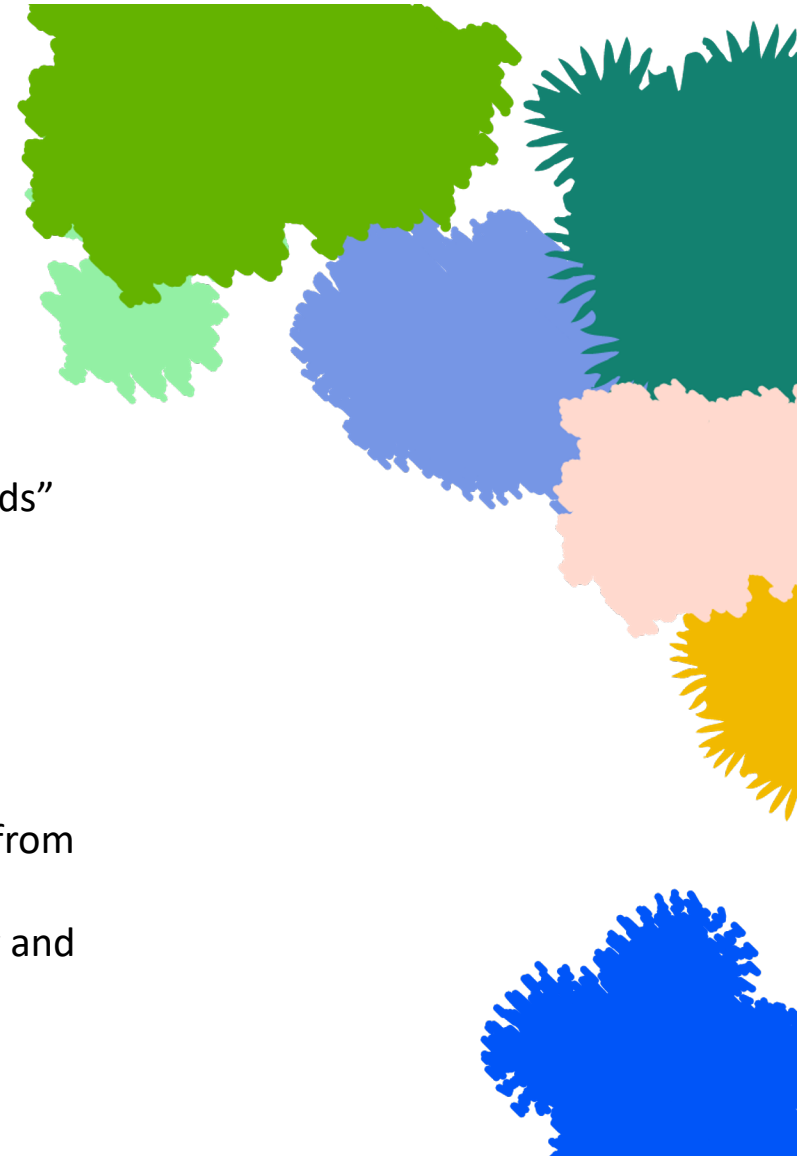
# Open Science - For and With Communities

**Open Research: A Vision for the Future**  
**RIOT Science Club, March 2, 2021**

Leslie Chan, Knowledge Equity Lab  
University of Toronto Scarborough  
[@lesliekwchan](#) [@knowledgeequitylab](#) [@ocsdnet](#)  
[@knowledgegap](#)

# Agenda

- Situating my interests and my biases
- Share some lessons learned about the limits and potentials of “open science/ open research”
  - Current concerns mostly on “technicality” and “standards”
  - Not sufficient attention to the political economy of knowledge
- The World I like to see and some actions to take
  - The need for open infrastructure and governance that enable epistemic diversity
  - Knowledge production is always political and never far from the broader questions of equity and sustainability
  - Local and global collective endeavour built on solidarity and cooperation, instead of individualism and competition





The University of Toronto has been ranked 18th in the world overall in the prestigious *Times Higher Education* 2021 World University Rankings.

Photo by Daria Perevezentsev

Posted on September 3, 2020

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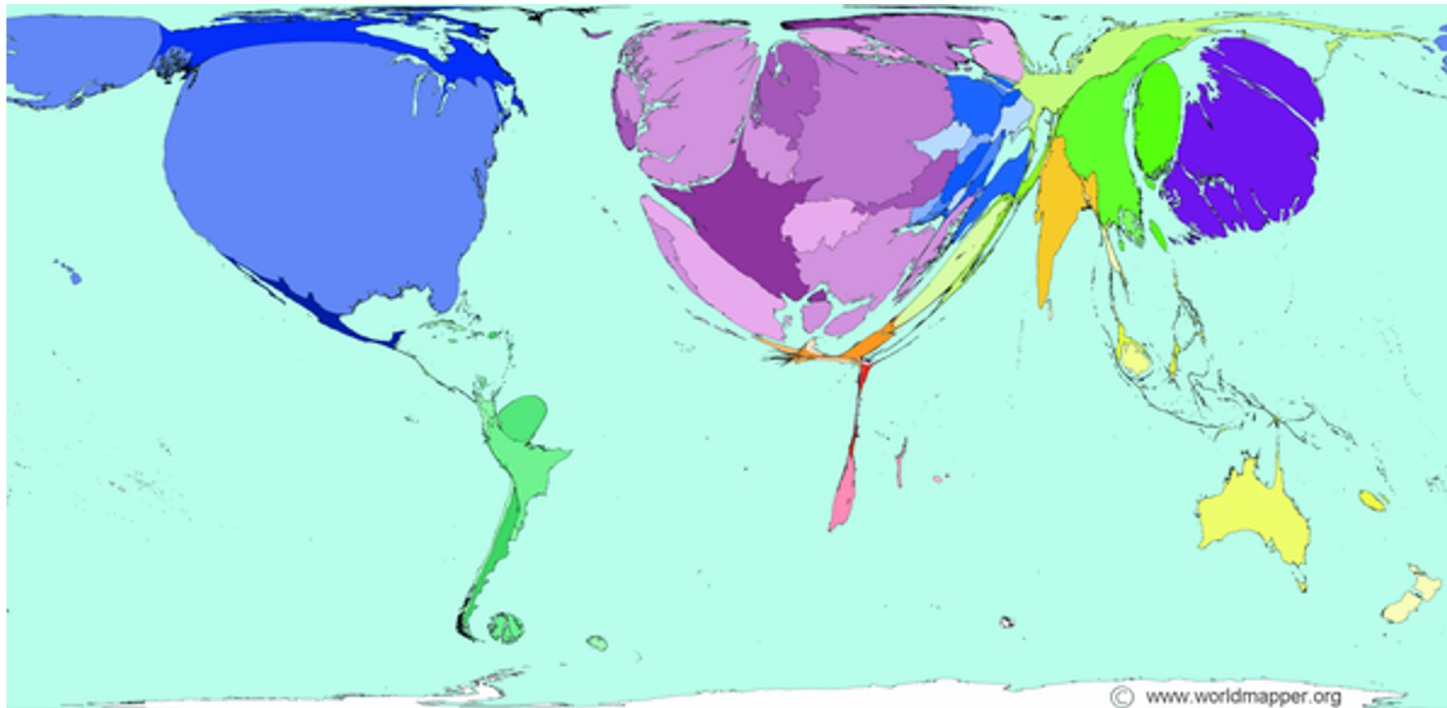
**\$1-million gift from the Vohra Miller Foundation launches U of T's Institute for Pandemics**



**U of T first in Canada, 23rd globally in 2020 Shanghai university rankings**

Situating my biases

## Unequal contribution and participation in Knowledge Production



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

<http://127.0.0.1:8081/plosmedicine/article?id=info:doi/10.1371/journal.pmed.1001016>





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# Budapest Open Access Initiative

From Wikipedia, the free encyclopedia

The **Budapest Open Access Initiative (BOAI)** is a public statement of principles relating to [open access](#) to the [research literature](#),<sup>[1]</sup> which was released to the public February 14, 2002.<sup>[2]</sup> It arose from a conference convened in [Budapest](#) by the [Open Society Institute](#) on December 1–2, 2001 to promote open access – at the time also known as *Free Online Scholarship*.<sup>[3][4]</sup> This small gathering of individuals is recognised as one of the major defining events of the [open access movement](#).<sup>[1]</sup> On the occasion of the 10th anniversary of the initiative, it was reaffirmed in 2012 and supplemented with a set of concrete recommendations for achieving "the new goal that within the next ten years, OA will become the default method for distributing new peer-reviewed research in every field and country."<sup>[5][6]</sup>

## Contents [\[hide\]](#)

- [Initiative](#)
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- [Signatories](#)
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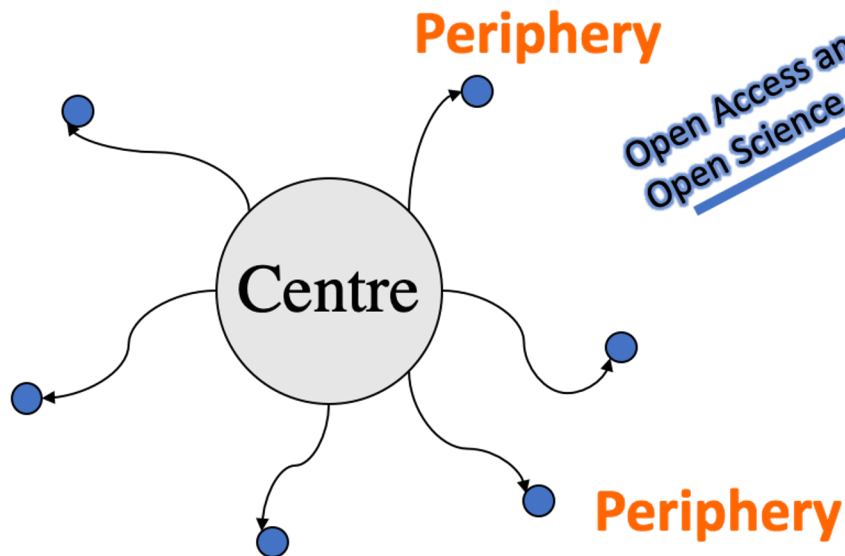


Participants at meeting in Budapest, December 1, 2001

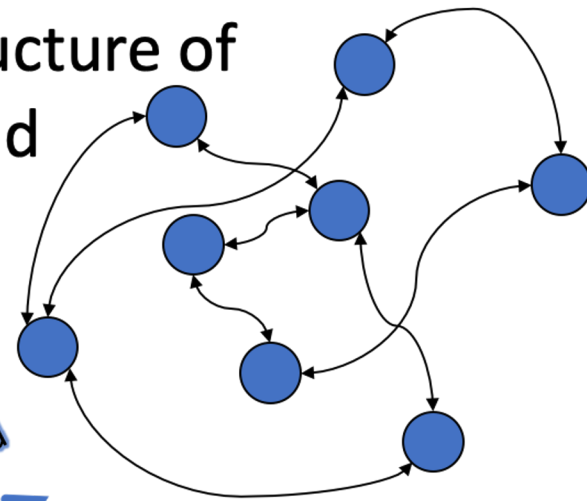


A logo celebrating the 10th anniversary of the Budapest Open Access Initiative in 2012, featuring the [Széchenyi Chain Bridge](#) in Budapest.

Could Open Access and Open Science change the current power structure of global scientific production and dissemination?



Open Access and  
Open Science



Could openness creates the potential for new spaces for collaboration and co-creation of knowledge?



**Bioline International** is a not-for-profit scholarly publishing cooperative committed to providing open access to quality research journals published in developing countries. BI's goal of reducing the South to North knowledge gap is crucial to a global understanding of health (tropical medicine, infectious disease and international development). By providing access to journals from Chile, China, Colombia, Egypt, Ghana, India, Kenya, Mexico, Nigeria, Pakistan, Peru, South Africa, Tanzania, Turkey, Uganda and Venezuela. BI helps to reduce the global knowledge divide by making research community world-wide.

Find out more about:

- Journals in the Bioline International
- How to Support Bioline International



**www.ajfand.net**

AJFAND represents a response to an urgent need for a forum that can adequately address Africa's recurrent problems of poverty, food and nutrition insecurity, non-performing economies, increasing disease threats and run-away environmental degradation. These threats are associated with globalization that entails unfair trade at the international level, and failure by Africa to keep pace with new technology and biotechnology.

**THERE IS HOPE FOR AFRICA.** Despite the grim television pictures of starvation and human suffering, there is tremendous hope for a continent whose people are its greatest resource. Despite massive environmental degradation and socio-political crises of continually escalating violence, Africa remains one of the best natural continents in terms of natural resources. Africa is a continent of great hopes and fears, a continent of great people and a continent that can find its own way to progress.

This journal is meant to create awareness of the multiplicity of challenges facing Africa, the need to adopt poverty and distribution.

This journal strives to become the premier scholarly forum for sharing and debating information relevant and important to Africa. There is a lot of research and practical information on Africa, in Africa, and by Africans which hardly find their way to the international arena.

Let us tell Africa's story here. Let us share our scholarly works with the rest of the world. We can do it.

**Hon. Prof. Ruth Ochieng'**  
Editor-in-Chief



**What's new?**

- African Crop Science Journal, Vol. 28 (03)
- Rwanda Public Health Bulletin, Vol. 02 (01)
- International Journal of Reproductive BioMedicine, Vol. 18 (06)
- Zoological Research, Vol. 41 (03)



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scientists and librarians. It is a collaborative initiative between Bioline Toronto (management and environmental information), Brazil (host computer and software development). The project is run at the University of Toronto Scarborough and by the support of sponsoring libraries and donors & sponsorship page for more details.

international@utoronto.ca

**347666**  
full text downloads in Nov 2020

SPARC SCIENTIFIC COMMUNITIES

**Bioline International**

**needs your support!**





Dr. James Tumwine. Professor of Pediatrics and Child Health. Founder and Editor in Chief of African Health Sciences, Makerere University and Kabbalah University, Uganda

Health Equity and Knowledge Production: African Health Sciences

<https://knowledgeequitylab.ca/podcast/>

# Early assumptions

- Network is flat
- Open Access is key
- Participation is democratized and non-market driven
- Knowledge as a public good
- Scaling up is desirable and easy
- N-S and S-S flow of knowledge

## Lessons thus far

- Digital Networks replicate and reinforce existing hierarchies
- Infrastructure is never neutral
- Concentration of Power
- Governance is opaque and non-transparent
- “Code is Law”
- Access is not enough
- The need to understand structural and institutional inequities built on racial and colonial practices

# Intersecting dimensions of Openness

## Contextualizing Openness

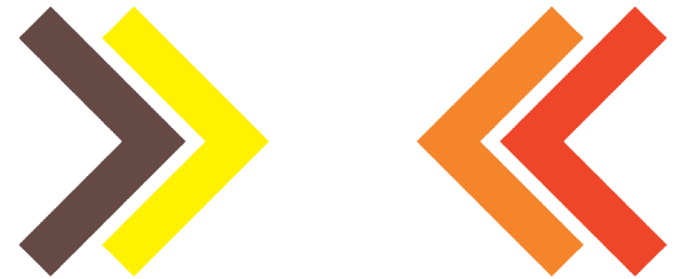
Openness to Publications and Data

Openness to Society

Openness to Excluded Knowledges

Open Science Beyond Open Access: For and with communities

A step towards the decolonization of knowledge



Prepared for the Canadian Commission for UNESCO  
By Leslie Chan, Budd Hall, Florence Piron, Rajesh Tandon and Lorna Williams  
Ottawa, July 2020



<https://www.idrc.ca/en/book/contextualizing-openness-situating-open-science>

<http://doi.org/10.5281/zenodo.3946773>





- 12 projects from Latin America, Middle East, Africa and Asia
- Critical approach to Open Science
- Key output: [Open and Collaborative Science in Development Manifesto](#)



POSTED BY ANGELA ONLINE | ART CHILDREN, CITIZEN SCIENCE, EDUCATION, ENVIRONMENT, KYRGYZSTAN, WATER  
 "THROUGH WATER": PROMOTING AND COMMUNICATING OPEN & COLLABORATIVE RESEARCH WITH A PUBLIC EXHIBITION



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 THE SUSTAINABLE DEVELOPMENT GOALS (SDGS): A CALL FOR ACTION RESEARCH AT THE NATURE CONSERVATION CENTER AT AUB (AUB-NCC)



POSTED BY DENISE ALBERICOZ  
 LESSONS FROM COLOMBIA: TYING OPEN SCIENCE WITH LOCAL DEVELOPMENT NEEDS

# Situated Openness

Open  $\neq$  Visible

“openness” is not a binary condition, but is highly situational, contingent, and dependent on the positionality, privilege and contexts of the knowledge makers

(See the works of feminist philosophers of science Donna Haraway, Sandra Harding, Patricia Hill Collins and more)

# Inclusive Research Infrastructures

“tools, platforms, networks and other socio-technical mechanisms that deliberately allow for multiple forms of participation amongst a diverse set of actors, and which purposefully acknowledge and seek to redress inequities in a given context”

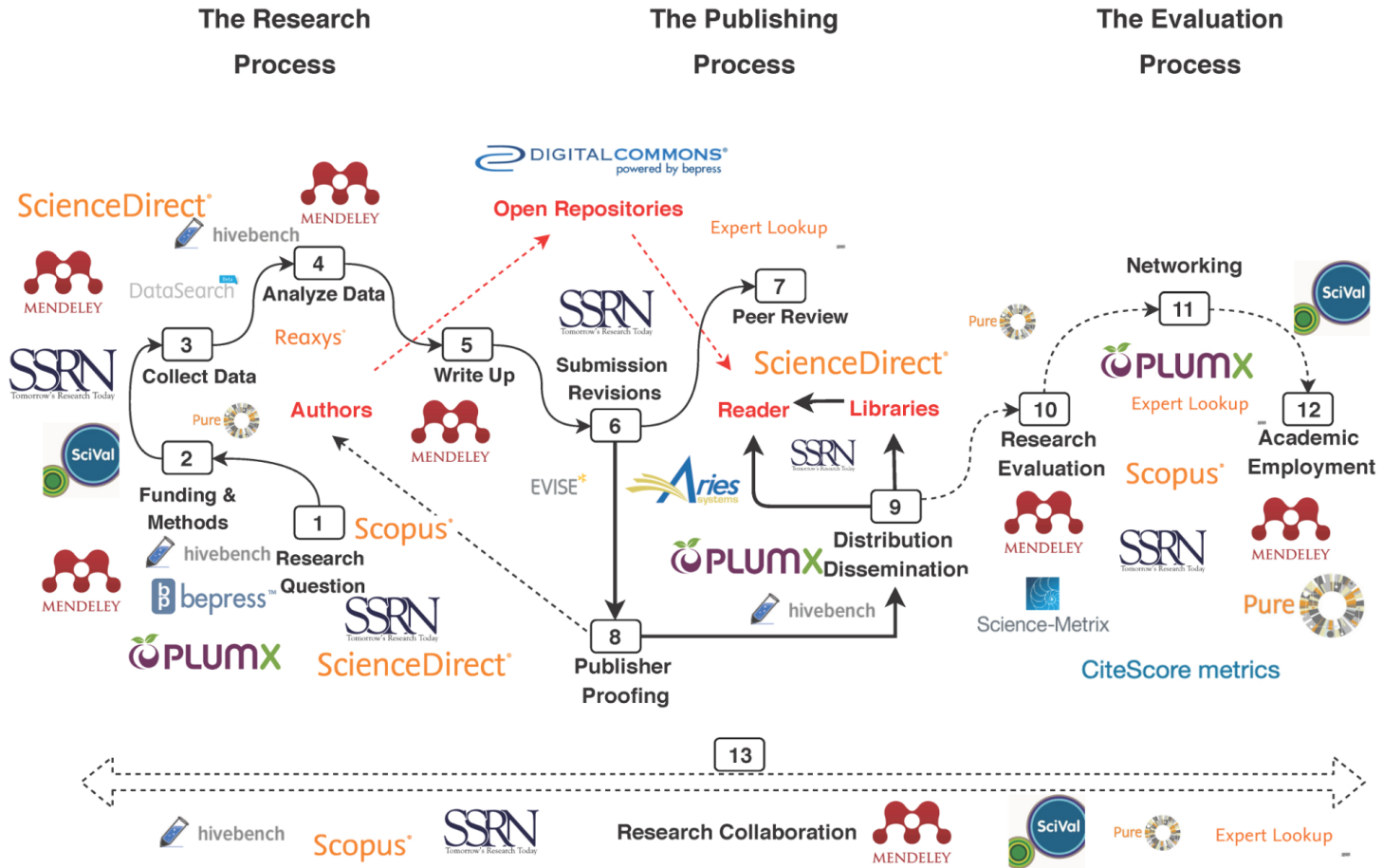
(Okune et al. 2018)



For full paper:

<https://hal.archives-ouvertes.fr/hal-01816808>

# An Enclosed System of Knowledge Production

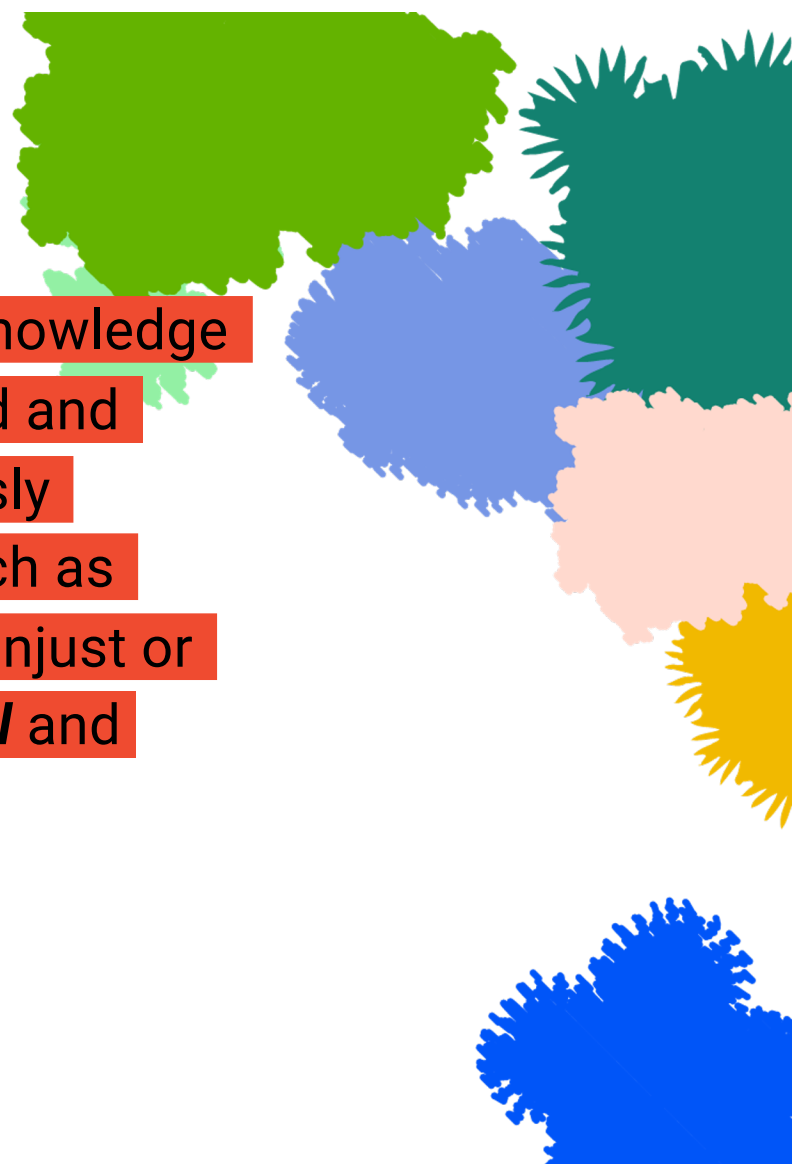


<https://books.openedition.org/oep/9068>



“We need to acknowledge that the dominant knowledge practices and institutions have been structured and implemented in such a way as to simultaneously privilege certain epistemic situated values (such as universality, objectivity and truth) while being unjust or dismissive with regard to other, more *relational* and complex modes of knowledge”

<http://doi.org/10.5281/zenodo.3946773>



# Community-Research Mutuality

Science with community

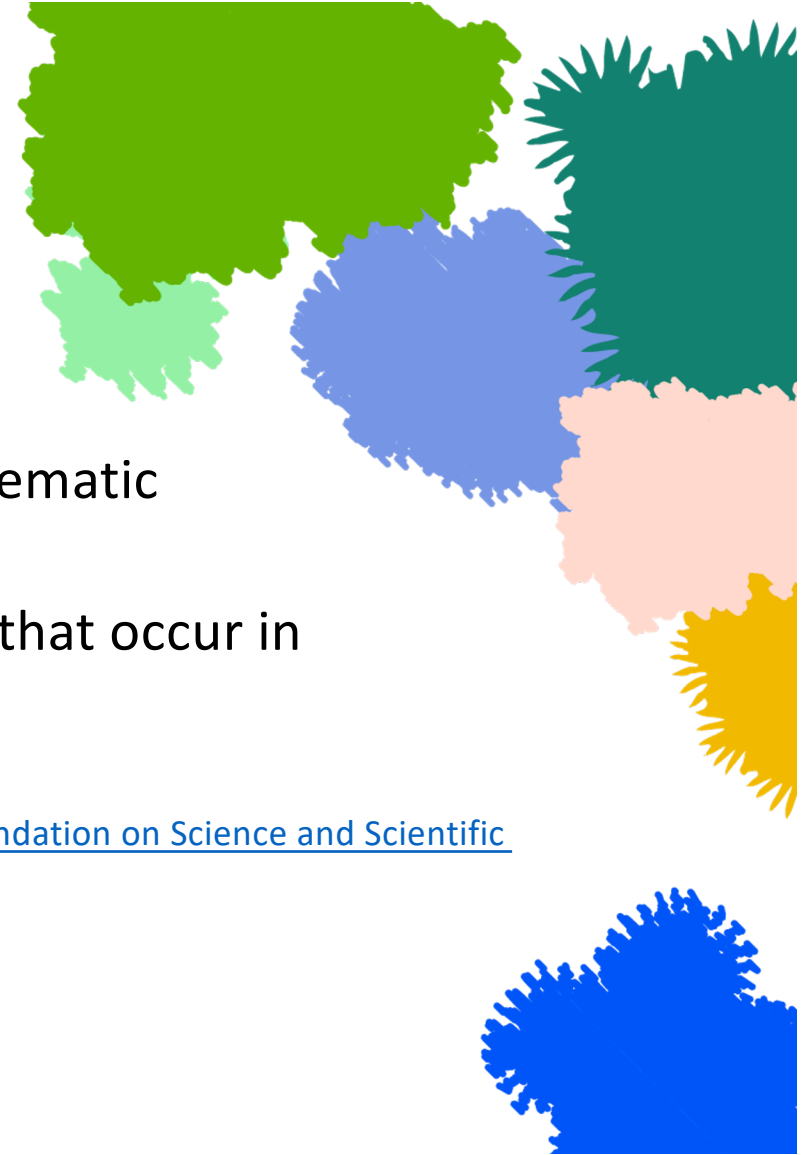
A sense of solidarity but even beyond that... acknowledging the mutual labour and co-construction of knowledges

the sharing of feeling / action / relationship between two or more parties (and particularly between “researchers” and communities)

# What is Science?

- Discovery of relations or interactions
- Connect clusters of knowledge through systematic reflection and conceptualization
- Understand the processes and phenomena that occur in nature and society

UNESCO's 2017 [Recommendation on Science and Scientific Researchers](#)





# Who is science by?

- Who is a “scientist”?
- The Rights to Research

Arjun Appadurai (2006) The right to research, *Globalisation, Societies and Education*, 4:2, 167-177, DOI: [10.1080/14767720600750696](https://doi.org/10.1080/14767720600750696)



# The Right to Research

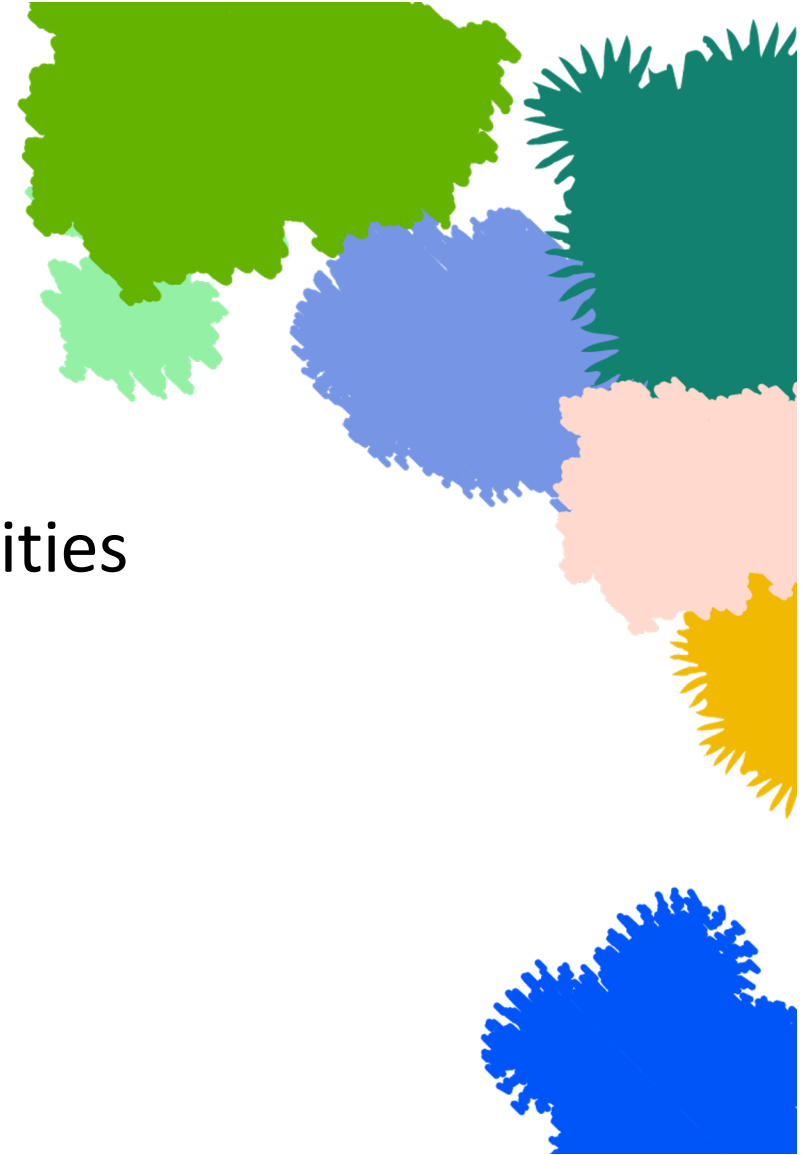
“right to the tools through which any citizen can systematically increase that stock of knowledge which they consider most vital to their survival as human beings and to their claims as citizens.”

Arjun Appadurai (2006) The right to research, *Globalisation, Societies and Education*, 4:2, 167-177, DOI: [10.1080/14767720600750696](https://doi.org/10.1080/14767720600750696)



# Who is Science for?

- Science as a public good
- Science for and WITH communities
- Local and global



# A year of Reckonings?

Limitation of a monolithic view of science as universal, objective and based on causal understandings

Need for structural approaches, analyzing deeply embedded systemic and racial inequities

COVID-19: The need for a Social Vaccine (Baum and Friel 2020)

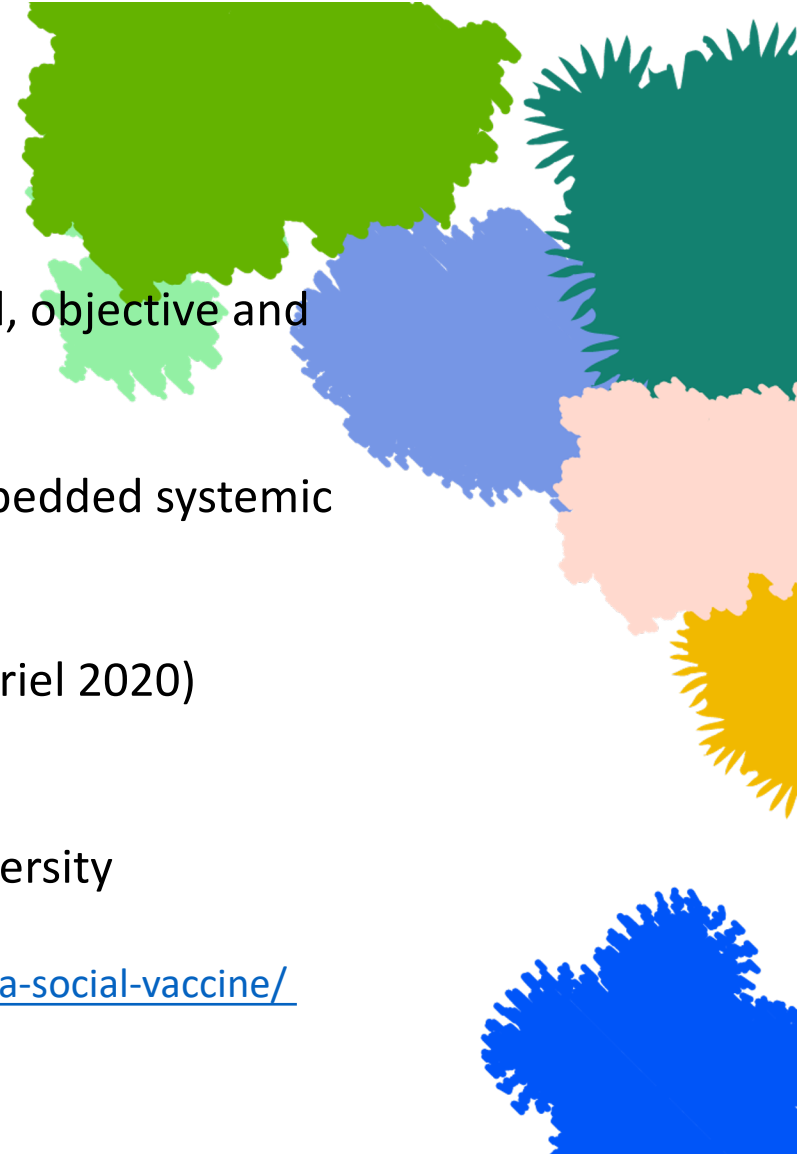
A life with security

Opportunities that are fair

A planet that is habitable and supports biodiversity

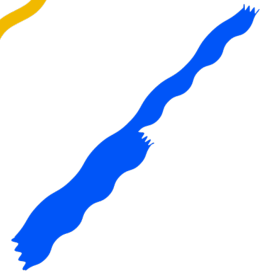
Governance that is just

<https://insightplus.mja.com.au/2020/36/covid-19-the-need-for-a-social-vaccine/>



## “Social Vaccine” against Knowledge Enclosure?

- Community designed and governed infrastructure built on a Pluriversal view of science and knowledge
- Expanding the rights of research
- Transition from an extractive to generative models of knowledge production (care economy)



Thank you!

