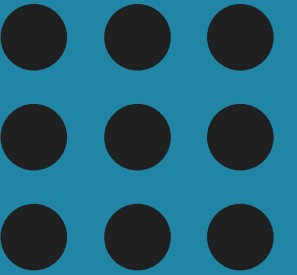


# “WHAT OPEN SCIENCE DO WE WANT?”

Challenges and disputes  
for the democratization  
of knowledge”

**Thaiane Oliveira**

Universidade Federal Fluminense



# Topics

What is Open Science?

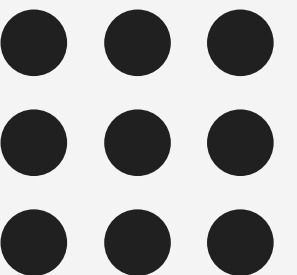
Different Arguments and Schools of Open Science?

OS as solution of many crisis

Critics about Northern Open Science

Decolonizing Open Science Practices

Lessons from Latin America



# Context

The health crisis highlighted two urgent deficiencies to be debated:

the closed system of science and  
the anglophone bias of scientific research



# Context

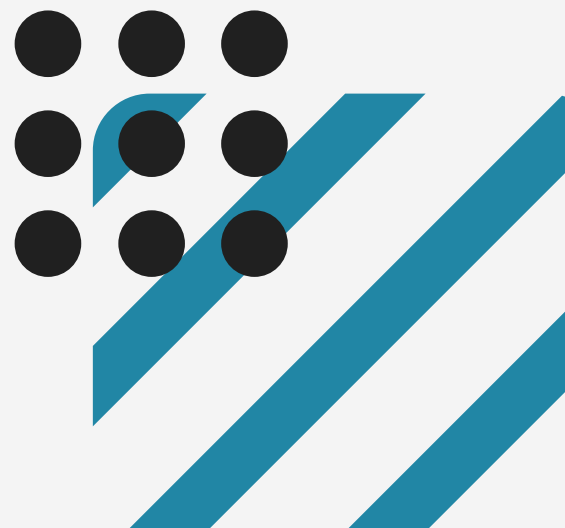
Scientists have been asked to quickly publish not only the results of their research but also the data

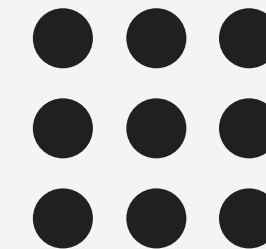
## ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

In global emergencies like the coronavirus (COVID-19) pandemic, open science policies can remove obstacles to the free flow of research data and ideas, and thus accelerate the pace of research critical to combating the disease.

## UNESCO

Today, the world is in urgent need of rapid sharing of scientific information. Policy and decision-makers rely on scientific information to make evidence-based decisions to control the current outbreak and prevent any future one. When informed about scientific facts, citizens act more responsibly and are able to debunk misinformation.



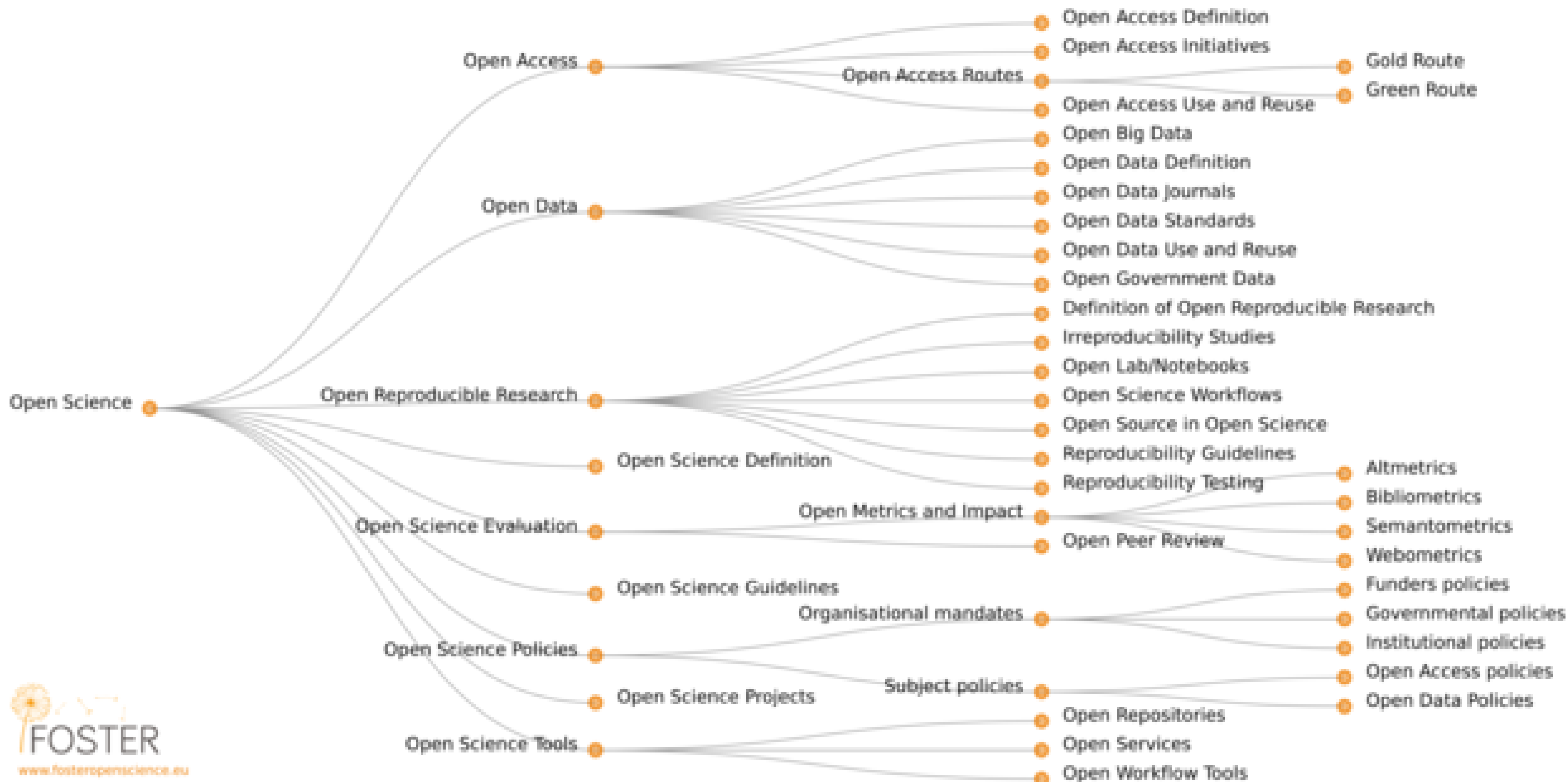


"Scientific knowledge must be free for people to use, reuse and distribute without legal, technological, or social restrictions"

Open Knowledge



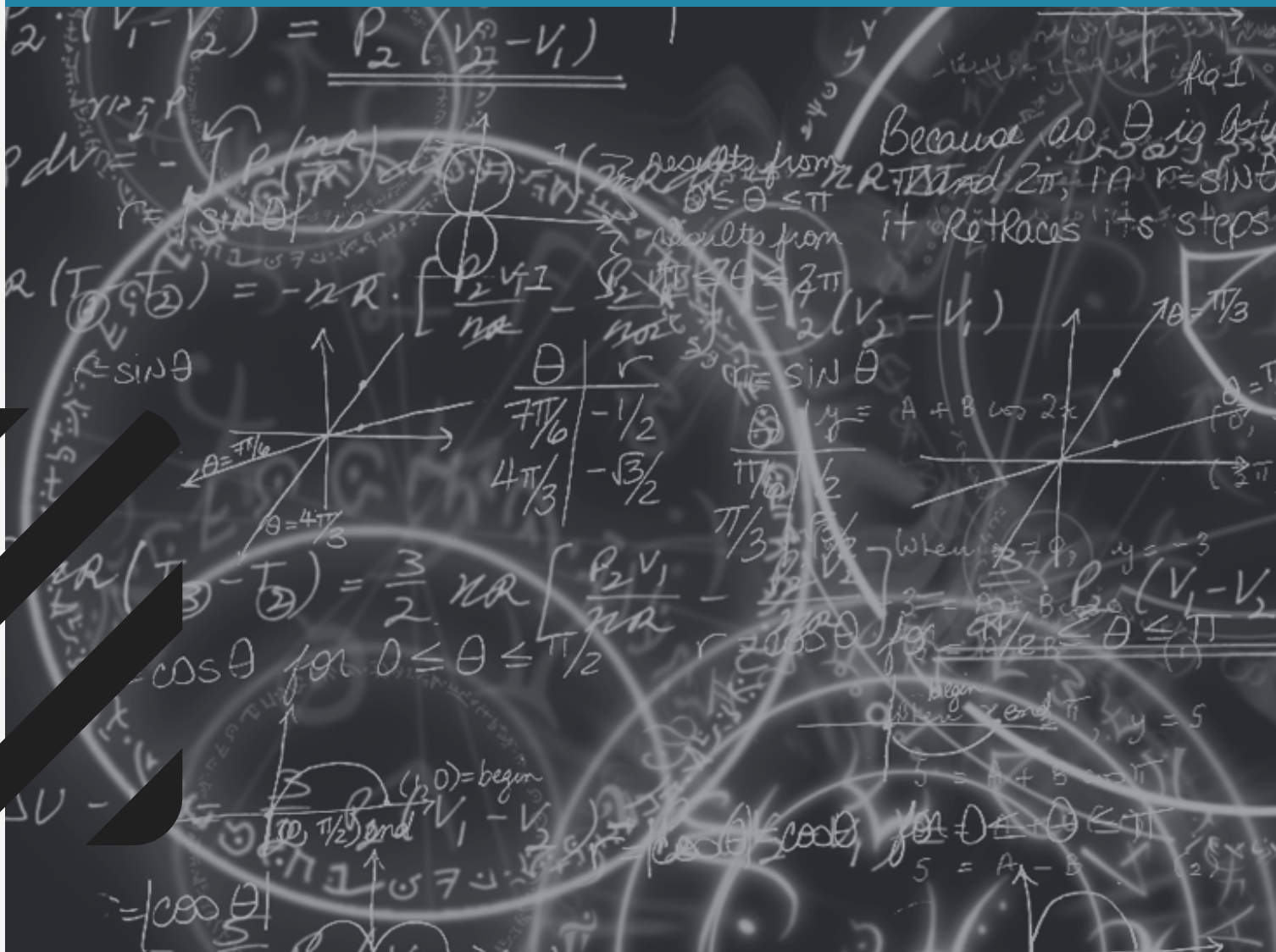
# Open Science Taxonomy



David, 2004

## Historical context

scientific revolution  
Economy of sponsorship,  
promotion and accountability



## Technological context

Big Science  
E-Science

Waters, 2012

5

SCHOOLS OF  
THOUGHT

PUBLIC

Accessibility and Inclusion

PRAGMATIC

Collaboration and Open  
Innovation

METRICS

Impact measurement and  
alternative metrics

INFRASTRUCTURAL

Attention to the technological  
architecture

DEMOCRATIC

Knowledge as a human right



# ARGUMENTS FOR OPEN SCIENCES

## 1 ECONOMICAL

Scientific oligopoly, paywalls  
and closed access, APCs

## 2 LEGAL

Copyright

## 3 EDITORIAL

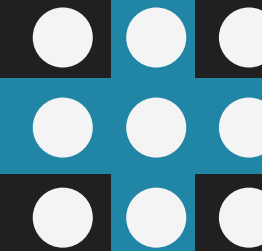
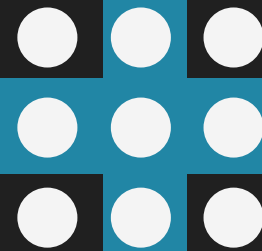
Less power to gatekeepers in  
definition of agendas

## 4 TECHNOLOGICAL

Transparency and  
Interoperability

## 5 SOCIAL

Knowledge as a public good

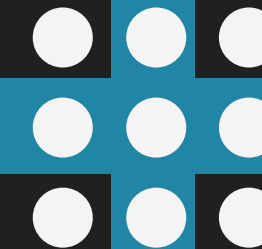
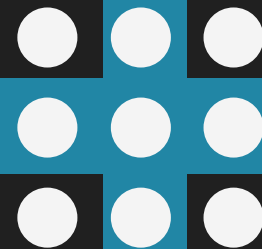


# Open ScienceS

Organizational proposal  
oriented on information  
property rights

Urgency for a new model of  
trust through greater  
transparency, accountability,  
replication of scientific  
practices - debunk  
disinformation and literate  
population,

Reconfiguration of scientific  
communication based on  
new technologies: speed,  
reach and without mediators



Alternative to abusive fees  
charged by the scientific  
editorial oligopoly

Affordable and Quickly  
Spreadable Data Preservation  
Engine

Social and Epistemic justice  
and social responsibility to  
allow everyone to enjoy the  
fruits and benefits of scientific  
research

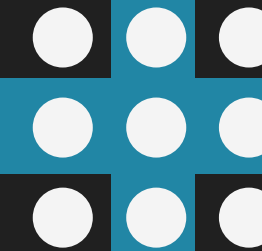
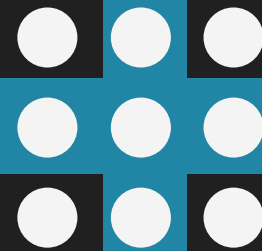
(David, 2003; Munafò, et al, 2017,  
Larivière, Haustein, Mongeon, 2015,  
Albagli; Clinio; Raychtock, 2014, entre  
outros)

# Open ScienceS

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# Recent Agendas

## "In-Field"

### **The reliability Agenda**

lack of confidence about science.  
Reproduction and Replicability

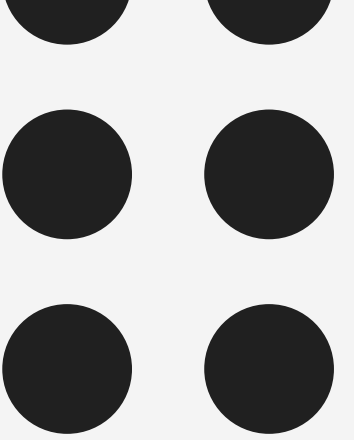
### **Accountability Agenda**

Transparency  
Accountability

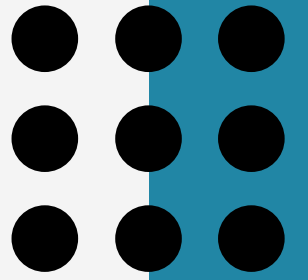
## "Out-Field"

### **The untrustworthy Agenda**

When informed about scientific facts,  
citizens act more responsibly and are able  
to debunk misinformation, disinformation  
and fake news (Unesco)



# UNDER CRISIS



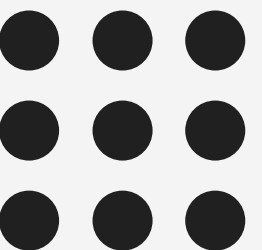
- **Replicability**
- **Transparency**
- **Disinformation**

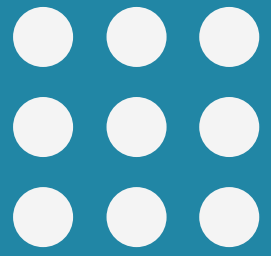
MEANINGS OF THE CONCEPTS IN DISPUTE



# NORTHERN REPLICATION CRISIS

The making of the crisis of replicability is an exercise in whiteness that erases the complex cultural, racial, and colonial phenomena which a priori shape the meanings and definitions of replicability and its kin. Moreover, hegemonic constructions of the “replication crisis,” located within the discursive terrains of Northern academia, fail to engage with decolonizing southern critiques of reductionist knowledge practices in/from the North that have long noted the limits to generalizability in Northern knowledge claims anchored in misplaced confidence in data (Dutta et al, 2021)





# Open aid, open societies: a vision for a transparent world Agenda

Lost of control for communities, activists, and researchers in the Global South seeking community sovereignty over processes of knowledge generation  
Dutta et al, 2021

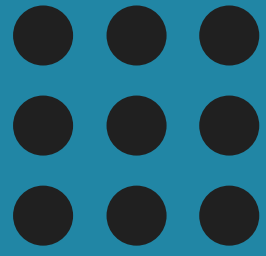


## PARADOXES OF TRANSPARENCY

what kinds of transparency lead to what kinds of accountability, and under what conditions?" (Turilli and Floridi , 2007)

The state that is made visible proves to be more truly democratic, as well as more accountable and efficient.  
Fenster, 2015

a notice that gives enough information for an individual to make a truly informed choice likely gives too much information for most people to either spend the time reading or to understand  
Nissenbaum, 2011



# OCDNET'S CITIZEN SCIENCES EXPERIENCES



## SOUTH AFRICA

In the case of indigenous communities in South Africa, openness was associated with the colonial expropriation of land and knowledge.



## KYRGYZSTAN

In the case of children and rural teachers in Kyrgyzstan, open practices were taken with fear and suspicion due to the country's history of authoritarianism.

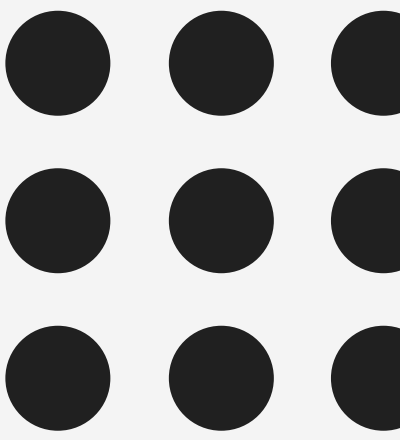


## ARGENTINA

social movement activists chose to protect their information rather than open it for fear of political persecution.



# Fake news/ disinformation as an empty concept?



## intentionality

disorder and hybrid war agenda in a traditionally inquisitorial society

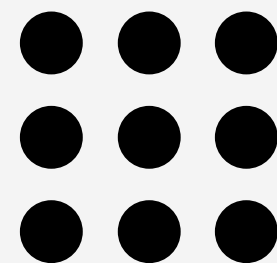


## Epistemic legitimation/delegitimation of opposition

It is the other who is not a journalist, the other who is not scientist or is not from "prestigious field", the other who is not democratic (specially Russia and China), as the cause of the rupture of an informational "disorder".

# The illiberal turn

Previous doubtful action of epistemic institutions, especially the judiciary and the media, in the process of institutional crisis that we experienced during the coup against president Dilma Rouseff



cuts in state investment in STI

delegitimation of epistemic institutions for the legitimation of "new" epistemic authorities with economic interests

Institutional and epistemic crisis



# Fake Sciences and illiberal experts

## More than denialism

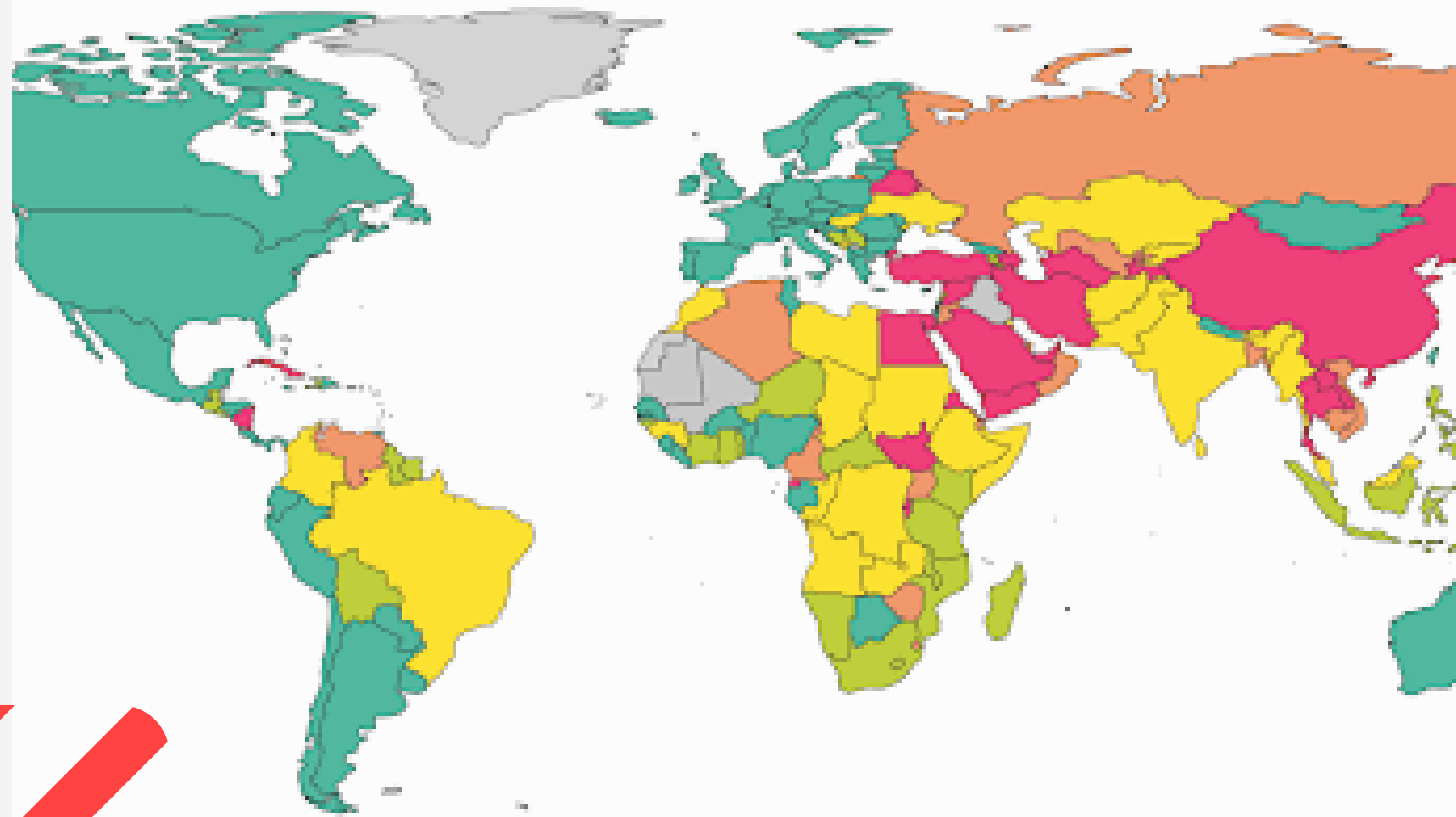
Appropriation of scientific discourses, signs or authority to elect new epistemic authorities



Remarkable knowledge: employees without specialization or technical competence or who "invent" scientific competences to assume positions in the government.

They subvert values of recognition and authority from the scientific field to create their own authorities based on their ideological and political values.

Academic Freedom 2020: Status Groups According to the Academic Freedom Index



cept developed by the authors, based on V-Dem data (v11)

### OPINIÓN CONTRA EL AMEDRENTAMIENTO ACADÉMICO EN CHILE

OPINIÓN EN CONTRA DEL AMEDRENTAMIENTO A ACADÉMICOS Y ACADÉMICAS EN CHILE

La Universidad de Valparaíso (UV) recibió recientemente, a través de Ley de Transparencia de acceso a información de una académica de su Escuela de Sociología, mediante el cual se pide información sobre sus liquidaciones de sueldo, bienes, calificaciones, y curiosamente, su participación en cursos sobre "noción y derechos humanos" y sobre "probidad y transparencia".

Pocos días después de que la académica en cuestión diera inicio a un debate en la UV sobre la gravedad de otro requerimiento de información hacia la Universidad de Chile y Universidad de Santiago. Dos diputados se dirigieron a ambas universidades, mediante oficio, solicitando información sobre asignaturas, planes de estudio y programas de "ideología de género, perspectiva de género, diversidad sexual". Asimismo, el oficio requería la "individualización de los funcionarios o funcionarias" a cargo de estos. La secuencia de los hechos sugiere que existen razones para pensar en un acto de represalia y amedrentamiento personal en contra de la académica de Sociología de la UV.

La Ley de Transparencia surgió y se aprobó en gran parte gracias a organizaciones civiles, las que lucharon por lograr una mayor fiscalización, especialmente de los grupos de poder. Un gobierno transparente ayuda a lograr una mayor participación y confianza en las instituciones públicas para, así, avanzar hacia una cultura de probidad y transparencia.



# Attacks against scientists around the world

## But what about epistemic contests that undermine credibility?

Vaccine, treatments and preventions

And other knowledge?

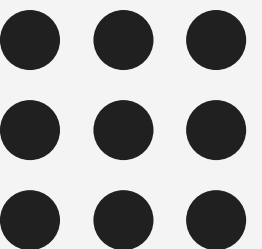
gender ideology

Marxism

Ethnical and Racial policies

Public security

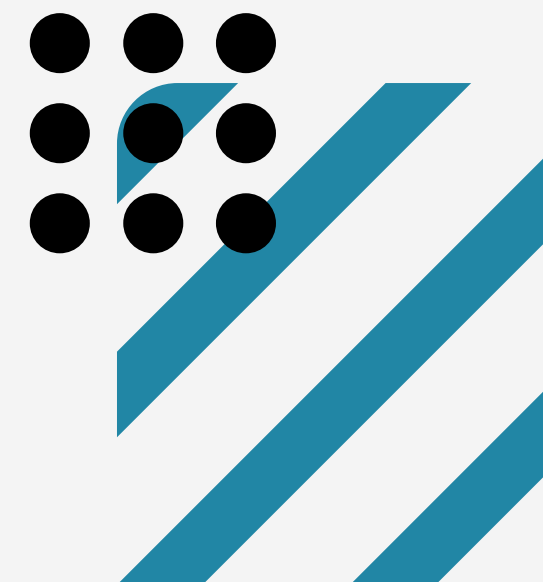
Fake news? Disinformation?





# THE CRISIS

Constructing the open science as a solution for the crisis of trust in science, proposing technological fixes of transparency, fail to engage with the underlying reasons for public mistrust in science, the deep neoliberal reforms that have attacked and depleted public infrastructures for science while privatizing science to serve private interests



# Two main approaches

## ADMINISTRATIVE

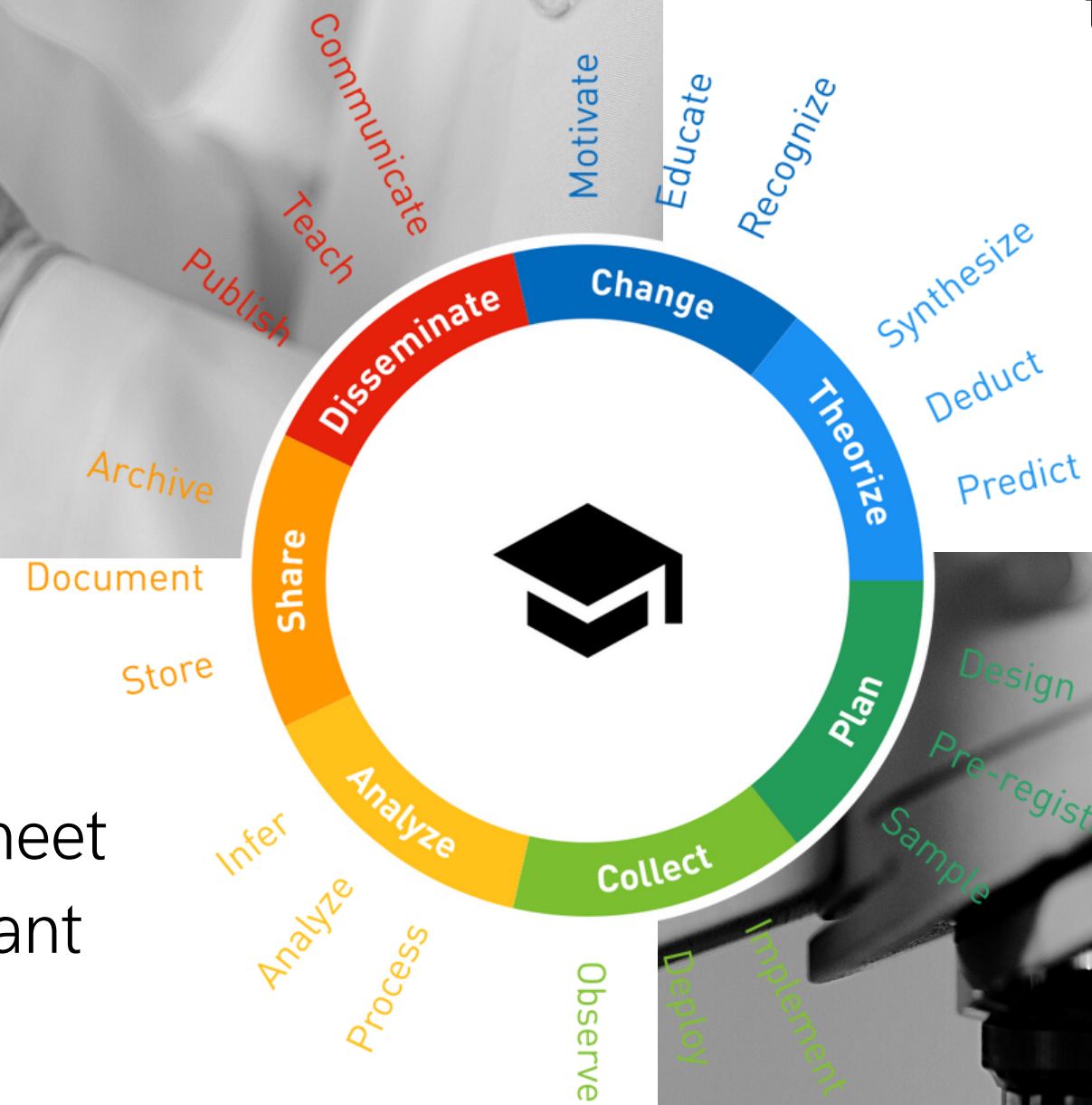
tends to attribute alleged neutrality and universality to scientific production processes

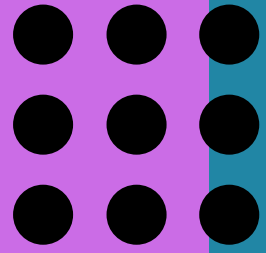
Acceleration, cooperation, visibility, reproducibility and transparency

## CRITICAL

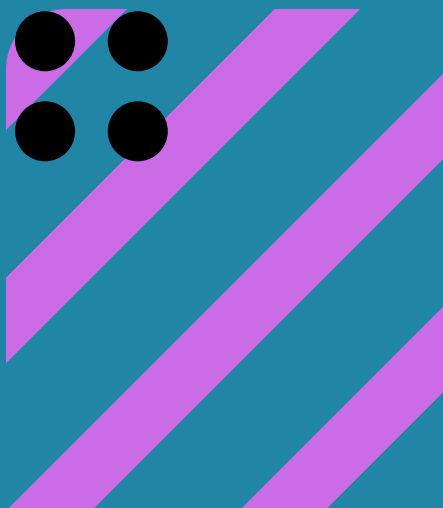
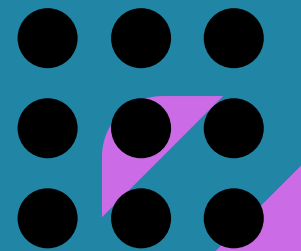
aims to reshape institutions to meet the collective needs of the relevant social community

Democratization of knowledge, participation, access and social justice.





# Other critics about open science





## **OPEN WASHING**

has an appearance of open-source and open-licensing for marketing purposes, while continuing proprietary practices.

Audrey Watters

## **PLATFORMIZATION OF SCIENCE**

penetration of infrastructures and economic processes of digital platforms in scientific practices

Mirowski, 2018; Oliveira et al 2021

## **ACADEMIC CAPITALISM**

neoliberal practices and responsibility of individual practices

## **STANDARDIZATION**

Language, procedures, epistemic, geopgraphical standardization

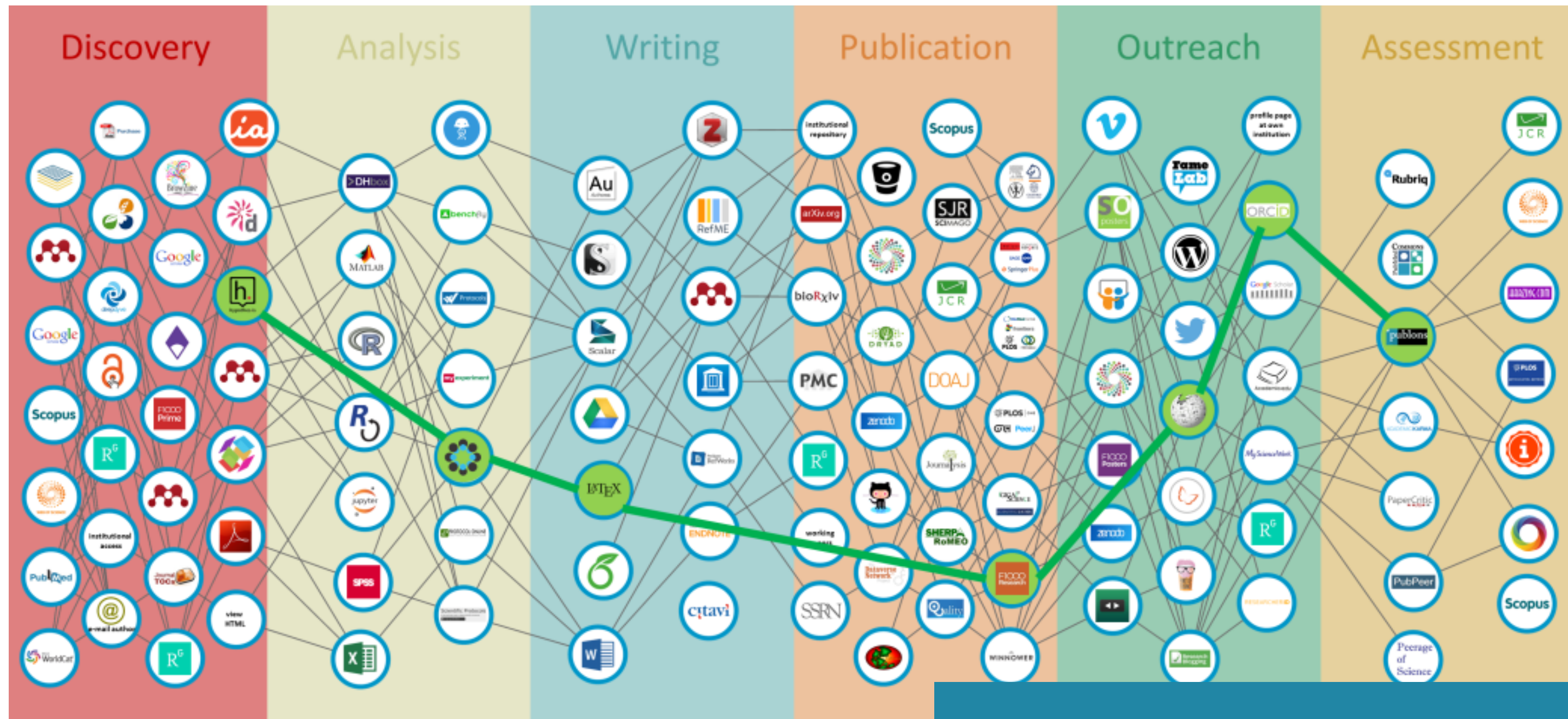
## **GLOBAL SOUTH ASYMMETRIES**

Private Infrastructural dependency and "unationalization" of scientific institutions and universities (Dutta et al, 2021)

**CRITICS**

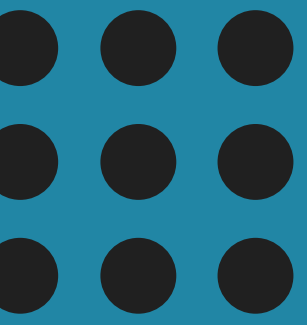


# ROADMAP FOR OPEN SCIENCE



**WIKIMEDIA**  
FOUNDATION

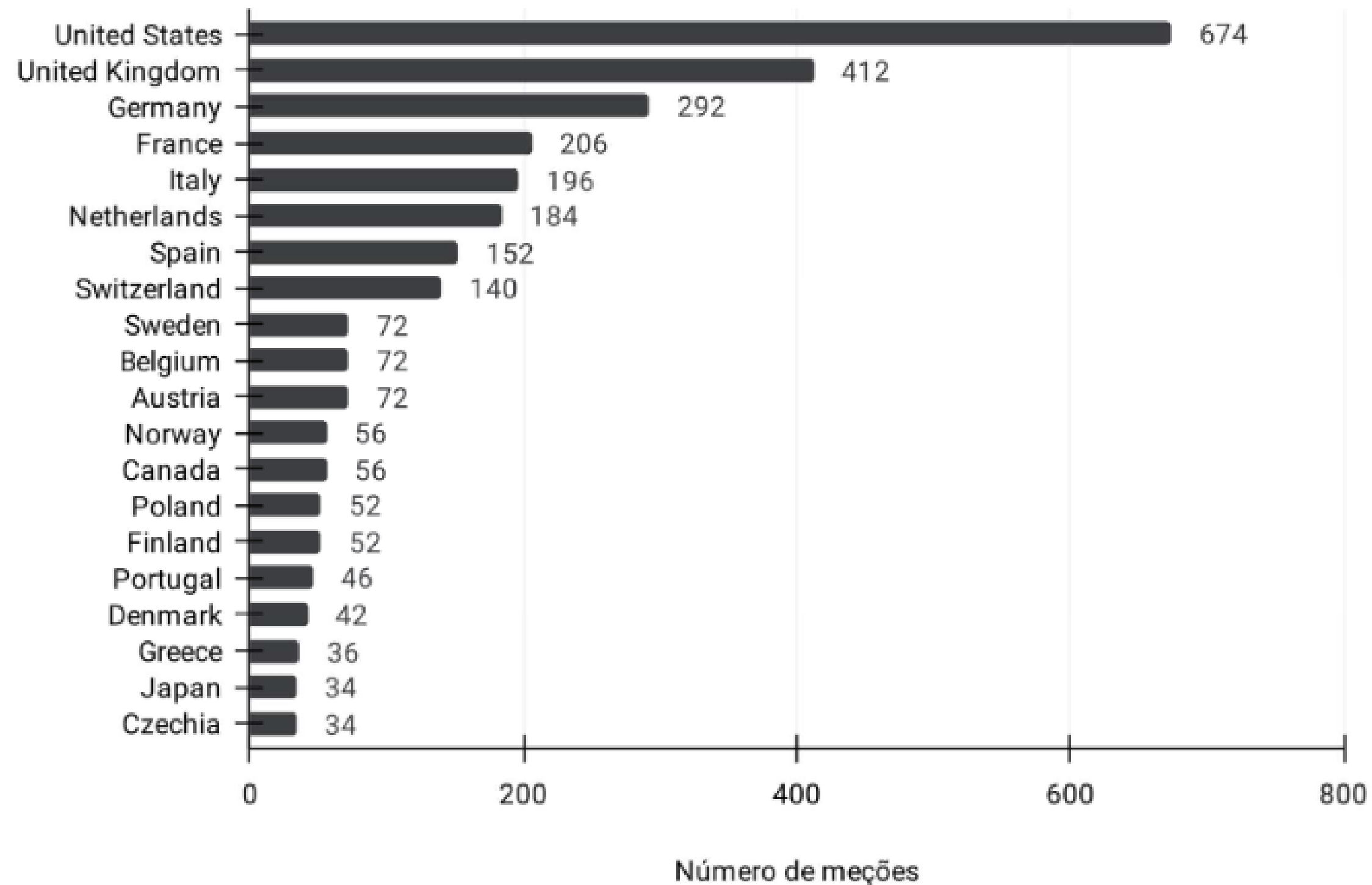
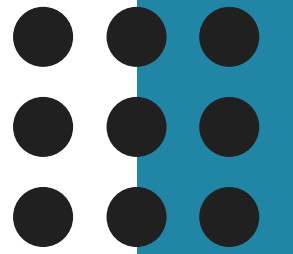




**Current debates and actions on Open science are dominated by Westerns that focus on tools, infrastructure, and cost models.**



# Open science research funding

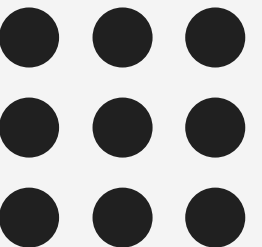


# DECOLINIZING OPEN SCIENCE

These decolonizing practices foreground:

- data sovereignty,
- community ownership
- and public ownership of knowledge resources

as the bases of resistance to the colonial-capitalist interests of hegemonic Open Science



# Changes in the international scientific circuits: Lessons from Latin America

## The decline of Latin American critical research

The new system create da structural asymmetry benefiting the USA and other anglophone countries to the disadvantage of other countries.

"Centers of excellence" built without the participation of peripheral scientific communities (Beigel, 2016; Vessuri, Guédon & Cetto, 2014)

Consequences: English as lingua franca  
Under-representation in editorial circuits  
scientific policies legitimatizing the top-ranked journals and international rankings

## Regional Circuits

As an alternative to circuits of hegemonic prestige (Beigel, 2016), regional initiatives have provided a solid example of decentralized infrastructures and non-commercial solutions for academic publishing.

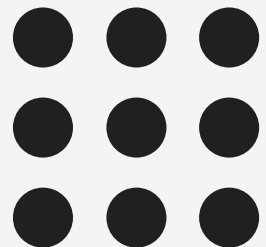
Cooperative efforts in Latin America based on Open Access

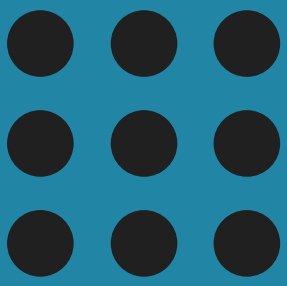


## MORE THAN AN ACCELERATED SCIENCE WITH PRODUCTIVIST VALUES, WE NEED TO TALK ABOUT THE URGENCY OF A DEMOCRATIC SCIENCE



No matter how important the issue of access, acceleration of scientific production publication, transparency and replicability are at this moment, the population wants to be heard, or feel part of the research centres and universities, spaces already very elite and privileged for a small part of the population. It is, therefore, necessary to invest in open science models that emphasize the democratization of knowledge, social justice, data sovereignty, knowledge communities, especially at times when democracy is threatened under the banner of an imminent war to combat disinformation.

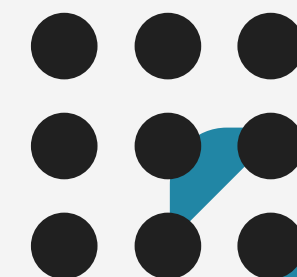


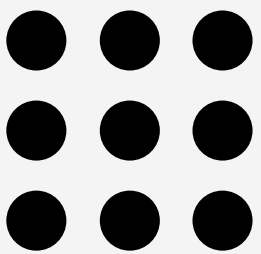


# Final considerations

## WHAT OPEN SCIENCES DO WE WANT?

Scientific policies that preserve us from economic interests in appropriating important Open Science agendas or that reinforce agendas of distrust and discrediting of science in times of epistemic crisis





**Science as a public good must be open, accessible and promote equity and no longer asymmetries. However, it must also be sustainable! This is our biggest challenge, especially for Global South countries**

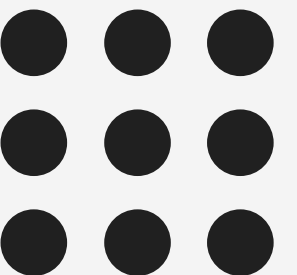




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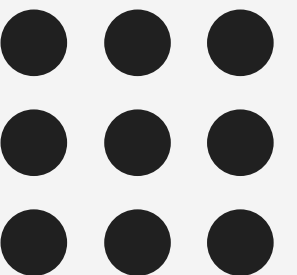
OLIVEIRA, Thaiane Moreira et al. Como enfrentar a desinformação científica? Desafios sociais, políticos e jurídicos intensificados no contexto da pandemia. Liinc em Revista, v. 16, n. 2, p. e5374-e5374, 2020.

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impactofthecurrentcompetitionregimeonscienceandscientificpublishinginLatinAmericaanditsimplications for development.Current sociology, 62(5),647-665

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**THAIANE OLIVEIRA**

<http://citelab.sites.uff.br/>

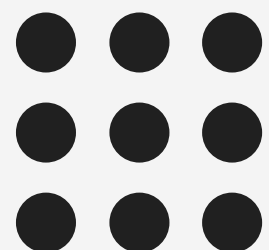
Fluminense Federal University  
SCiteLab

**EMAIL**

thaianeoliveira@id.uff.br

**RESEARCHGATE**

@Thaiane\_Oliveira2



**Thanks!**

