Societal Polarization

vs

{Global Harwell | Collective wellbeing }

in the age of AI & Social Media

Dimitri Ognibene

Università degli Studi di Milano Bicocca

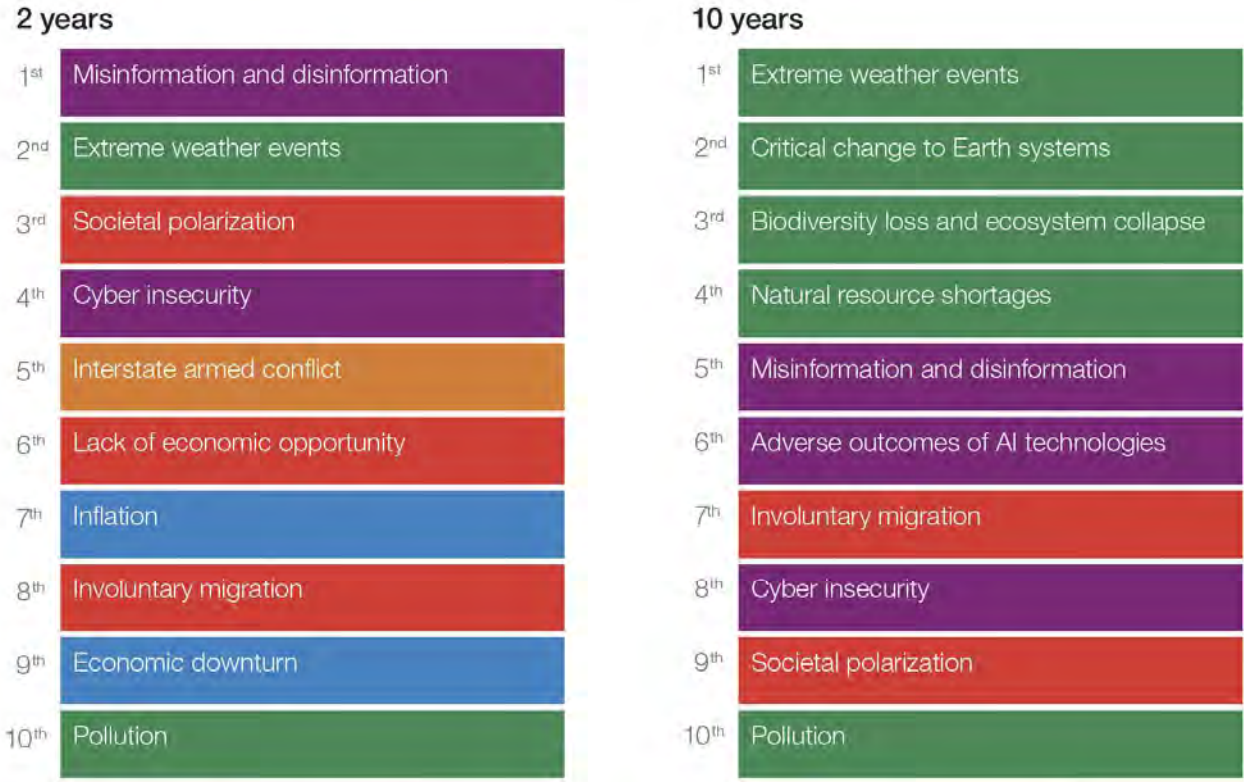
Societal Polarization

Global Risks Report 2024

Top 10 risks

WORLD ECONOMIC FORUM

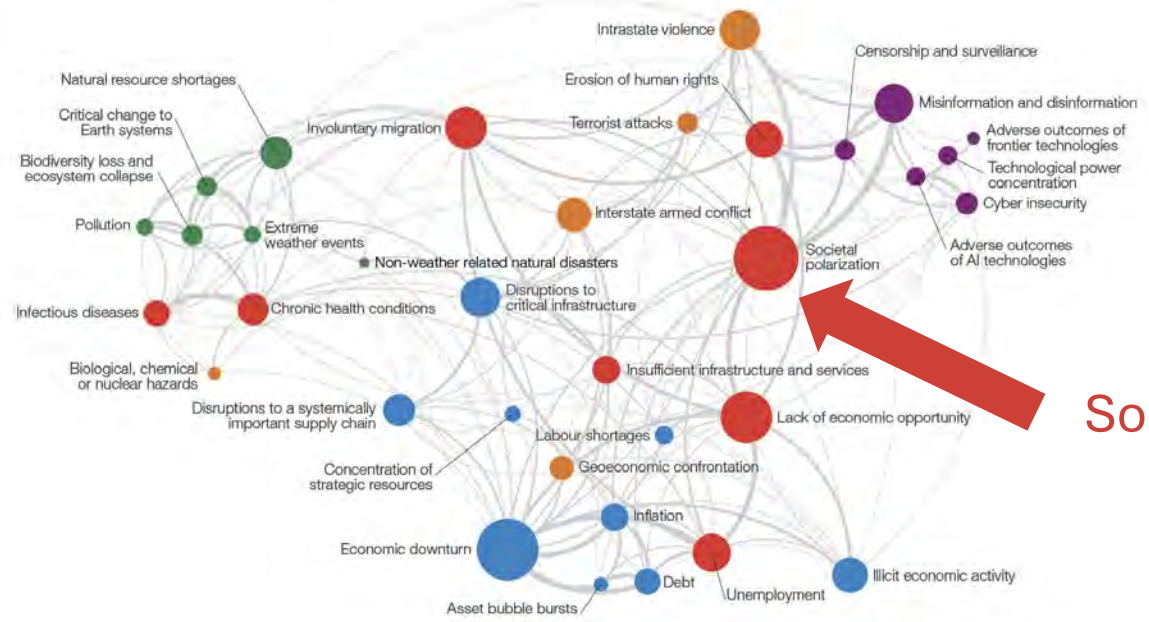
"Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period."



Global Risks Report 2024

Global risks landscape: an interconnections map

WORLD ECONOMIC FORUM



Societal Polarization

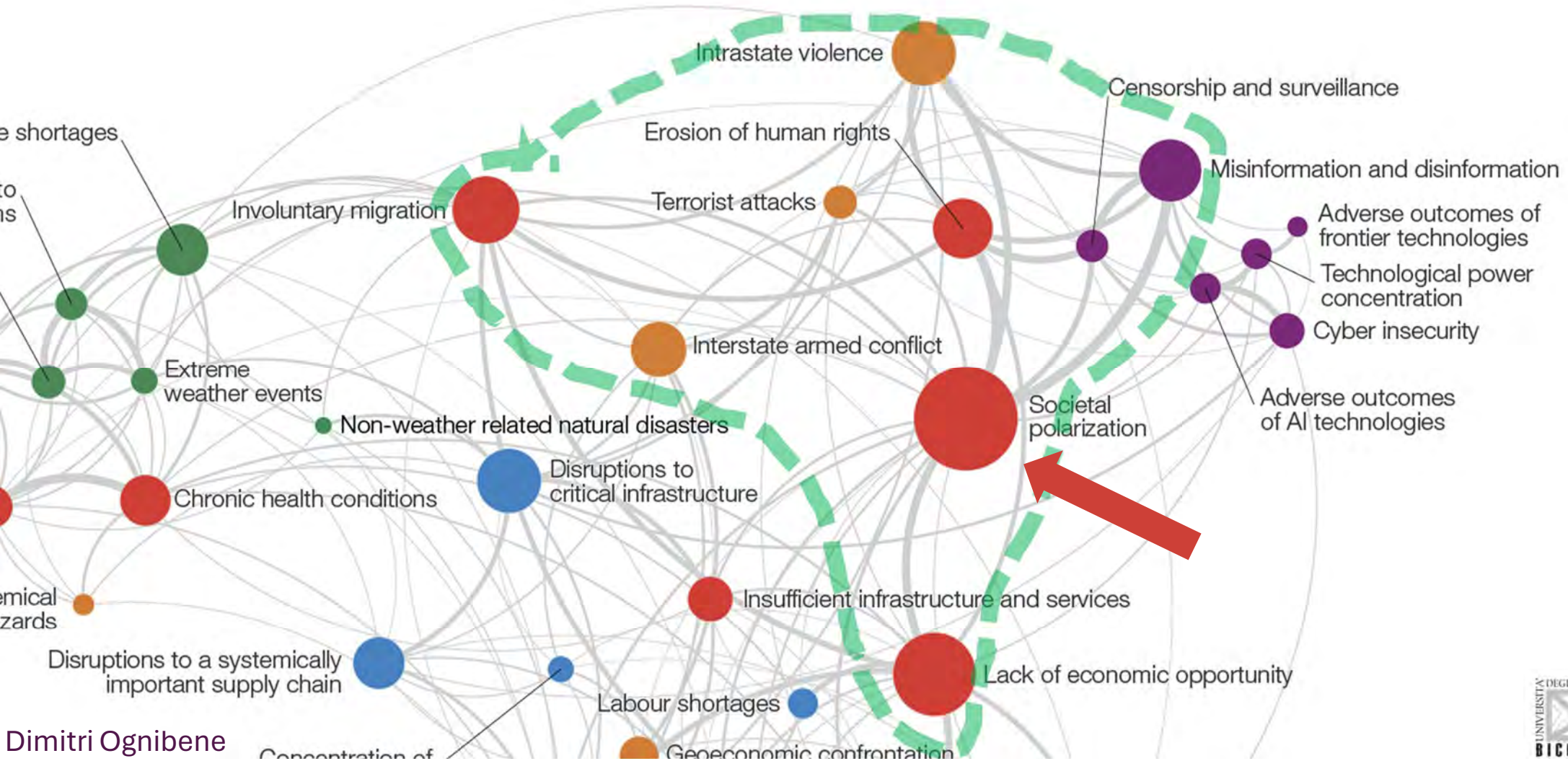
Nodes
Risk influence
High
Medium
Low

Edges
Relative influence
High
Medium
Low

Risk categories
Economic
Environmental
Geopolitical
Societal
Technological

Source: World Economic Forum Global Risks Perception Survey 2023-2024.

onnections map



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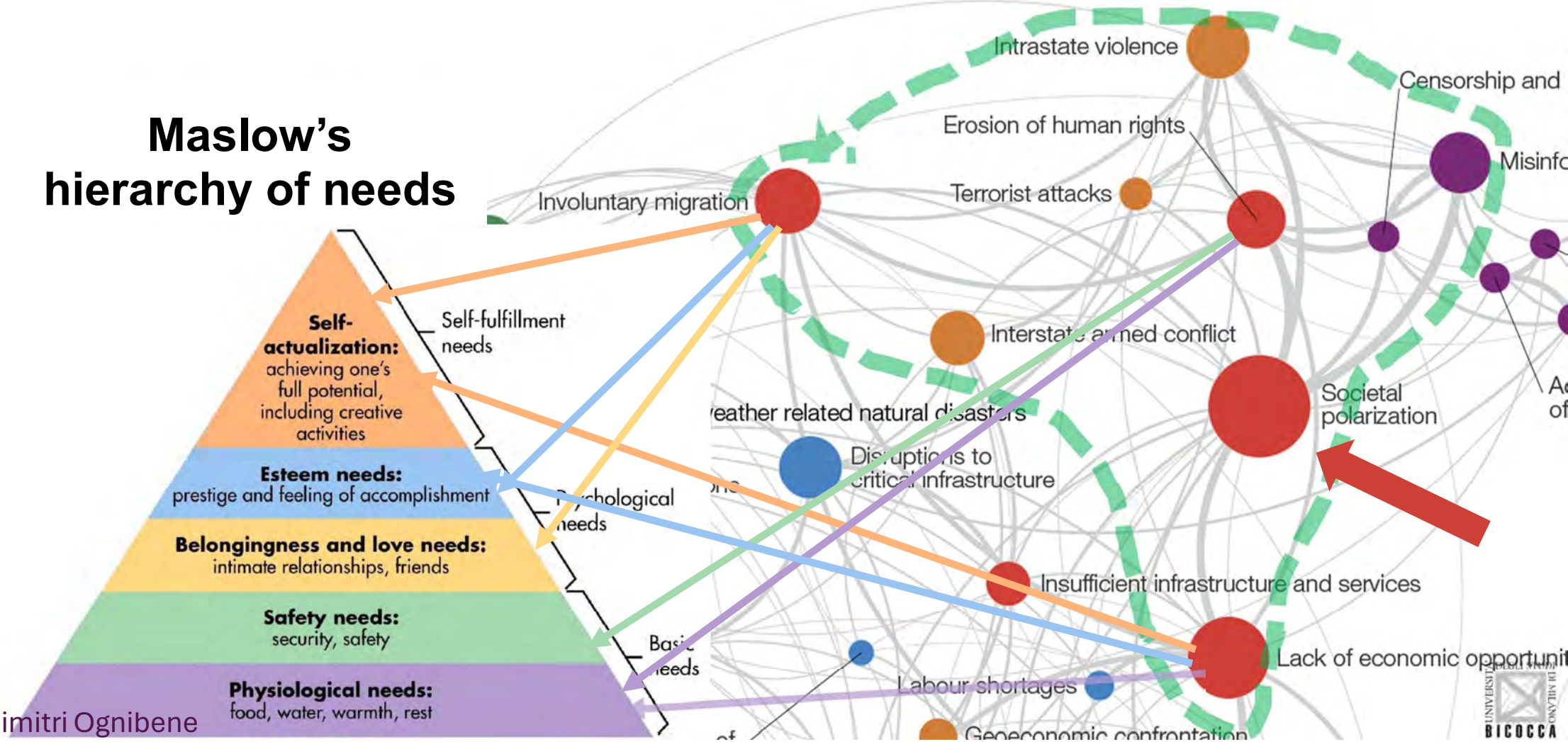
interconnections map

Maslow's hierarchy of needs



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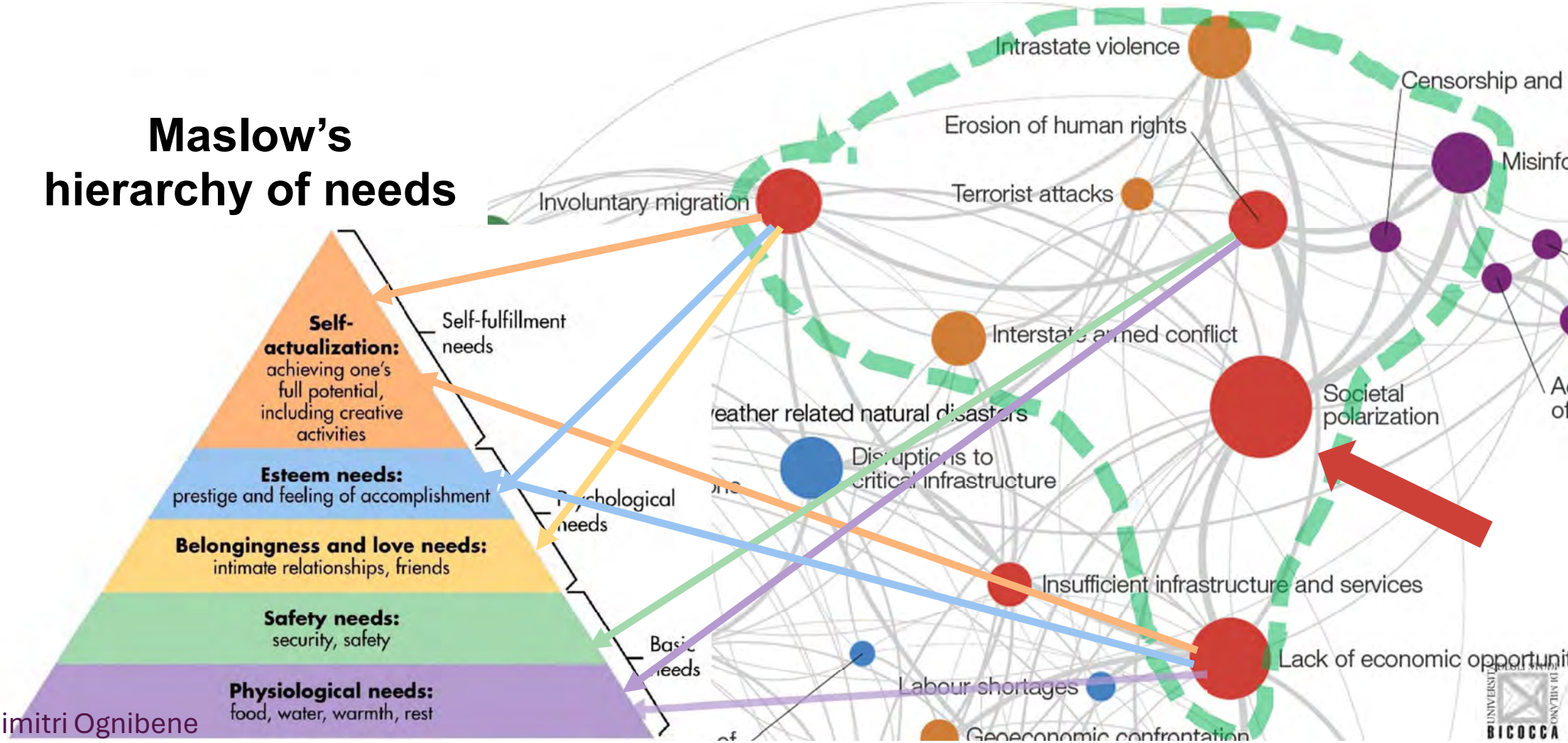
Societal Polarization = – Global Harwell

Maslow's hierarchy of needs



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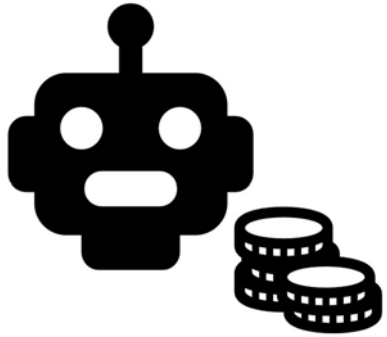
Social Media AI Algorithms and Polarization



- Filter bubbles
  - AI actively confirms one's bias
- Echo Chambers
  - AI actively find same minded people
- Engagement driven business model
  - AI pursues engagement generated both by enjoyment or contrasts
- All these processes may exacerbate Polarization

(More at the end)

Ognibene et al. Frontiers AI, 2023

Design of **social media AI** algorithms may have a strong impact on **social polarization**

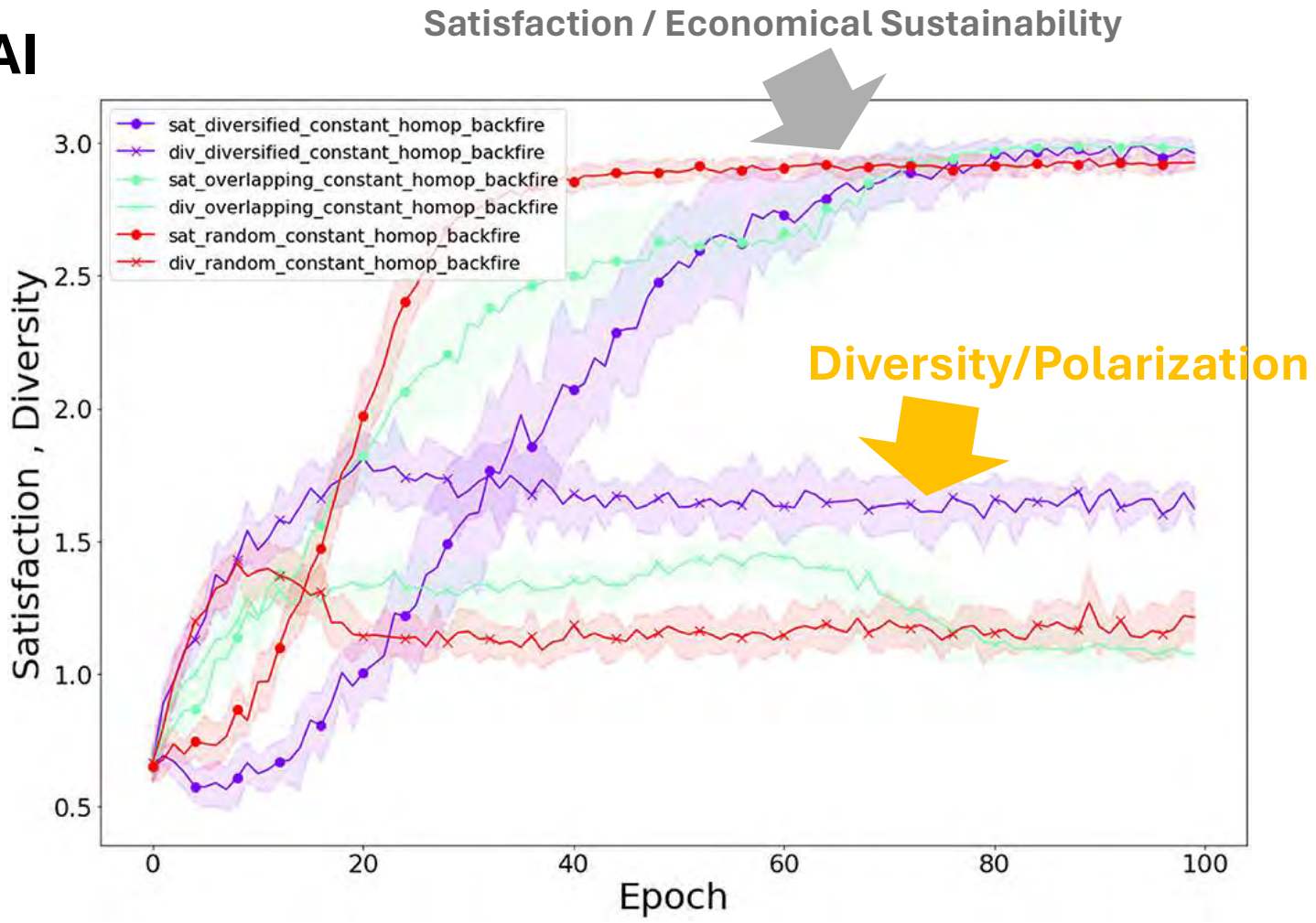


Figure 6. *Simulated impact of different recommender systems on users' satisfaction and content diversity exposure.*

Ognibene et al. Frontiers AI, 2023

Design of **social media AI** algorithms may have a strong impact on **social polarization**

1st problem
Social Media Platforms have **no interest** in **regulating** their **Ais (see what happened to Twitter.. Ehm X)**

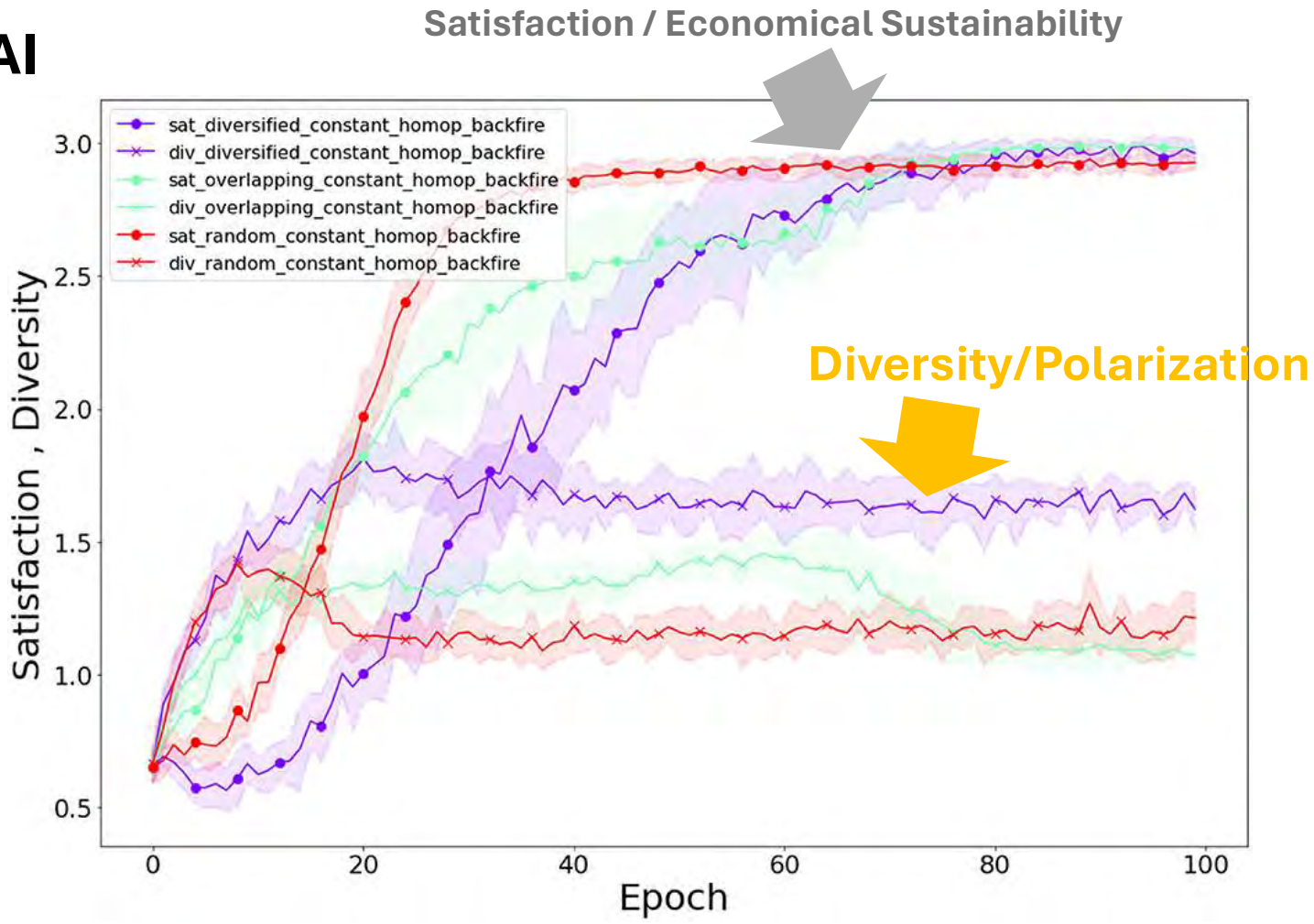
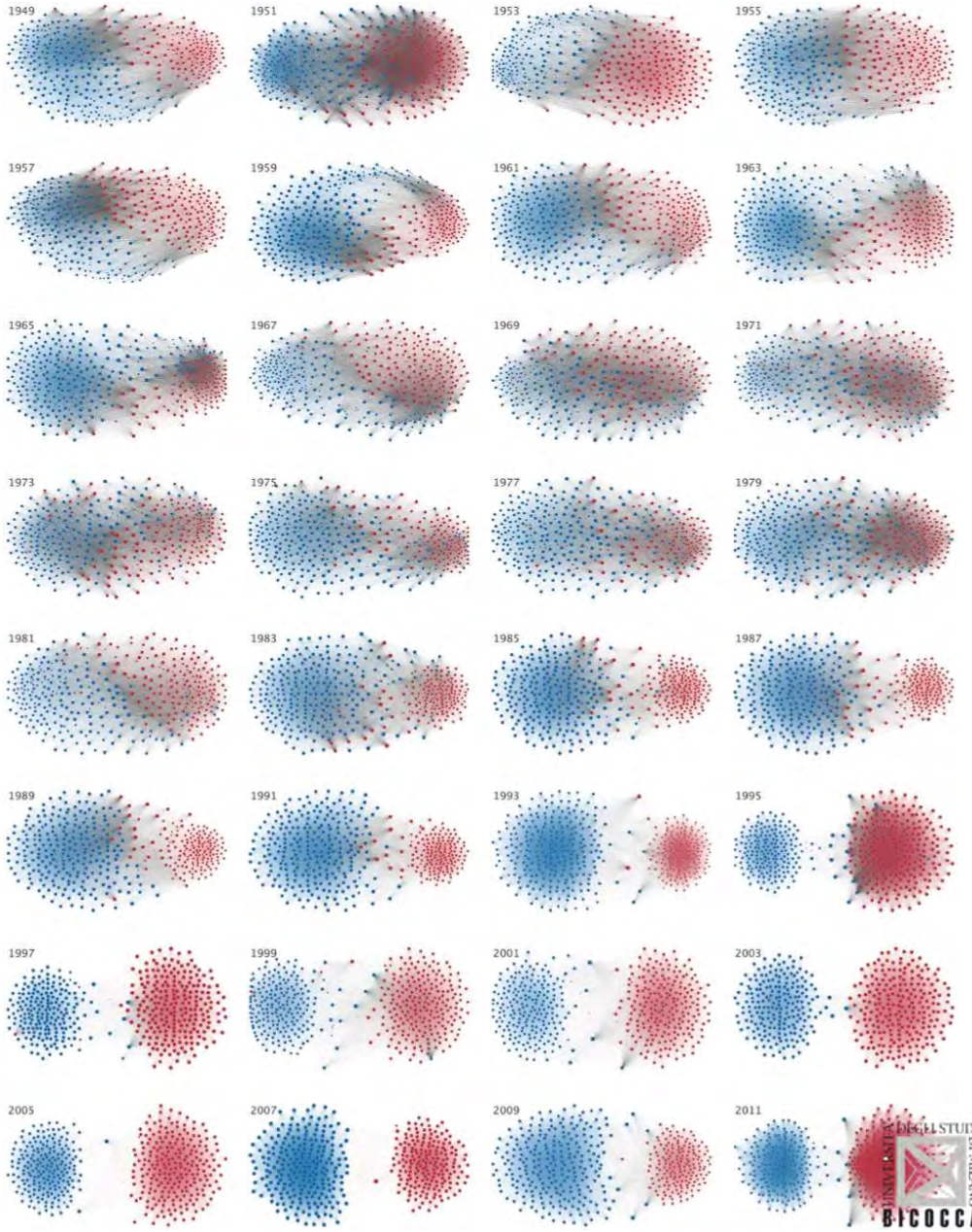


Figure 6. *Simulated impact of different recommender systems on users' satisfaction and content diversity exposure.*

Polarized society or polarizing technology?

partisanship in the U.S. Congress has been increasing exponentially for over 60 years

Andris C, et al. 2015, PLoS ONE 10(4)

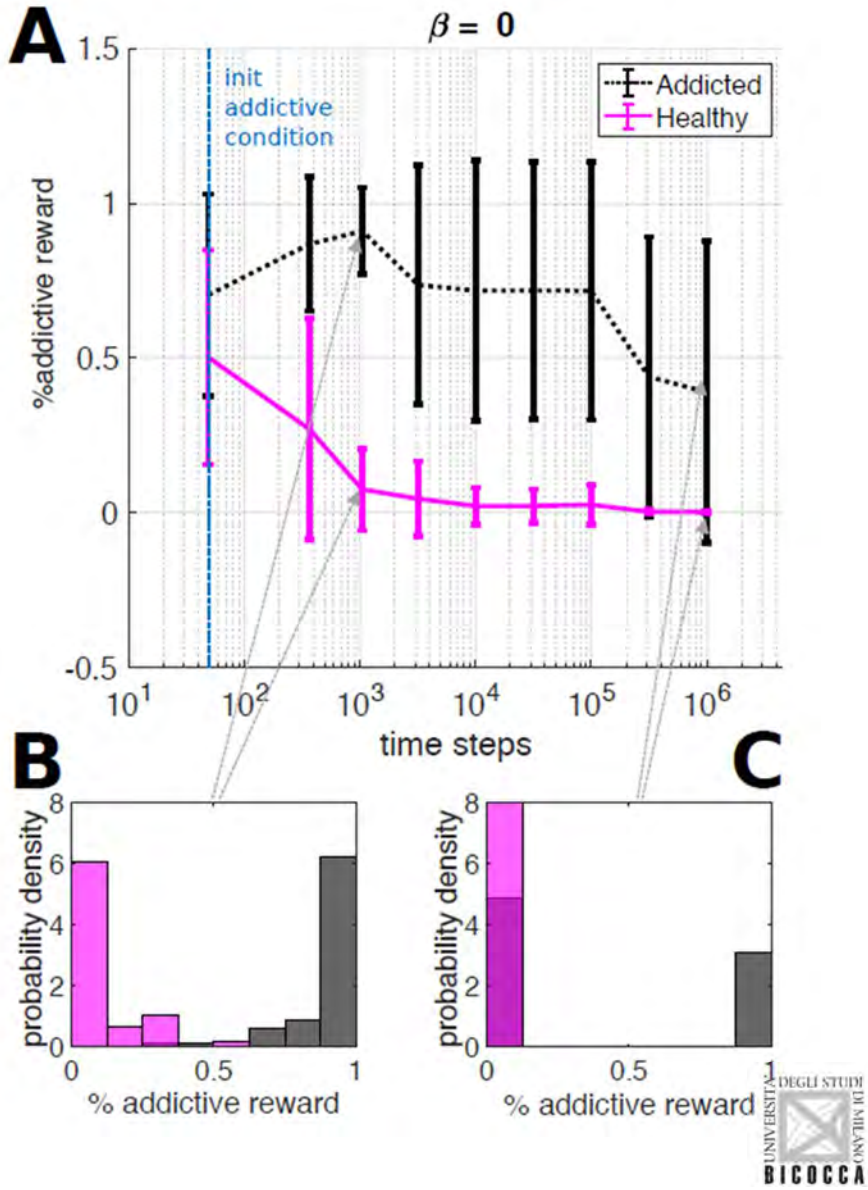


2nd problem

Humans have a natural homophily tendency

Early experience and interventions can have a drastic impact also on problematics (addictive) behavior

Ognibene, Fiore and Gu, Neural Networks, 2019



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Education may help contrasting polarization and progressing toward Global Harwell

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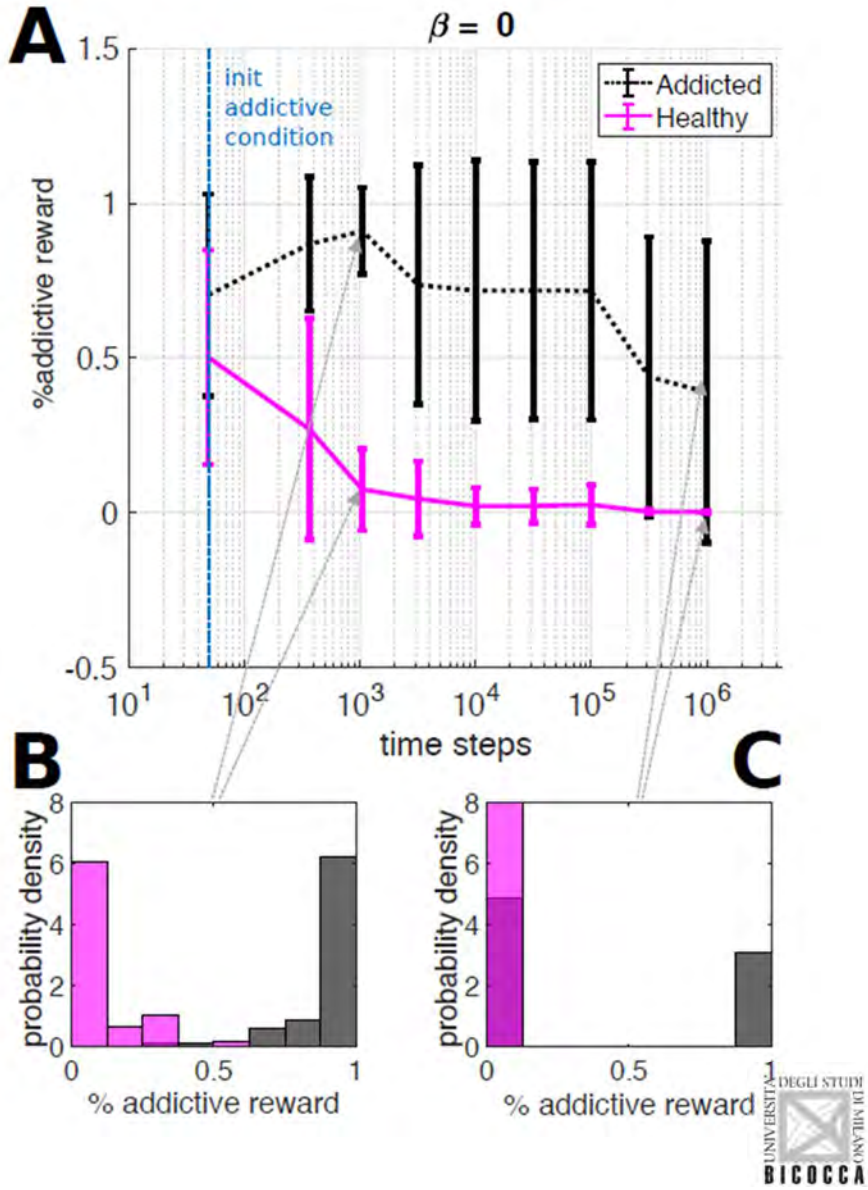
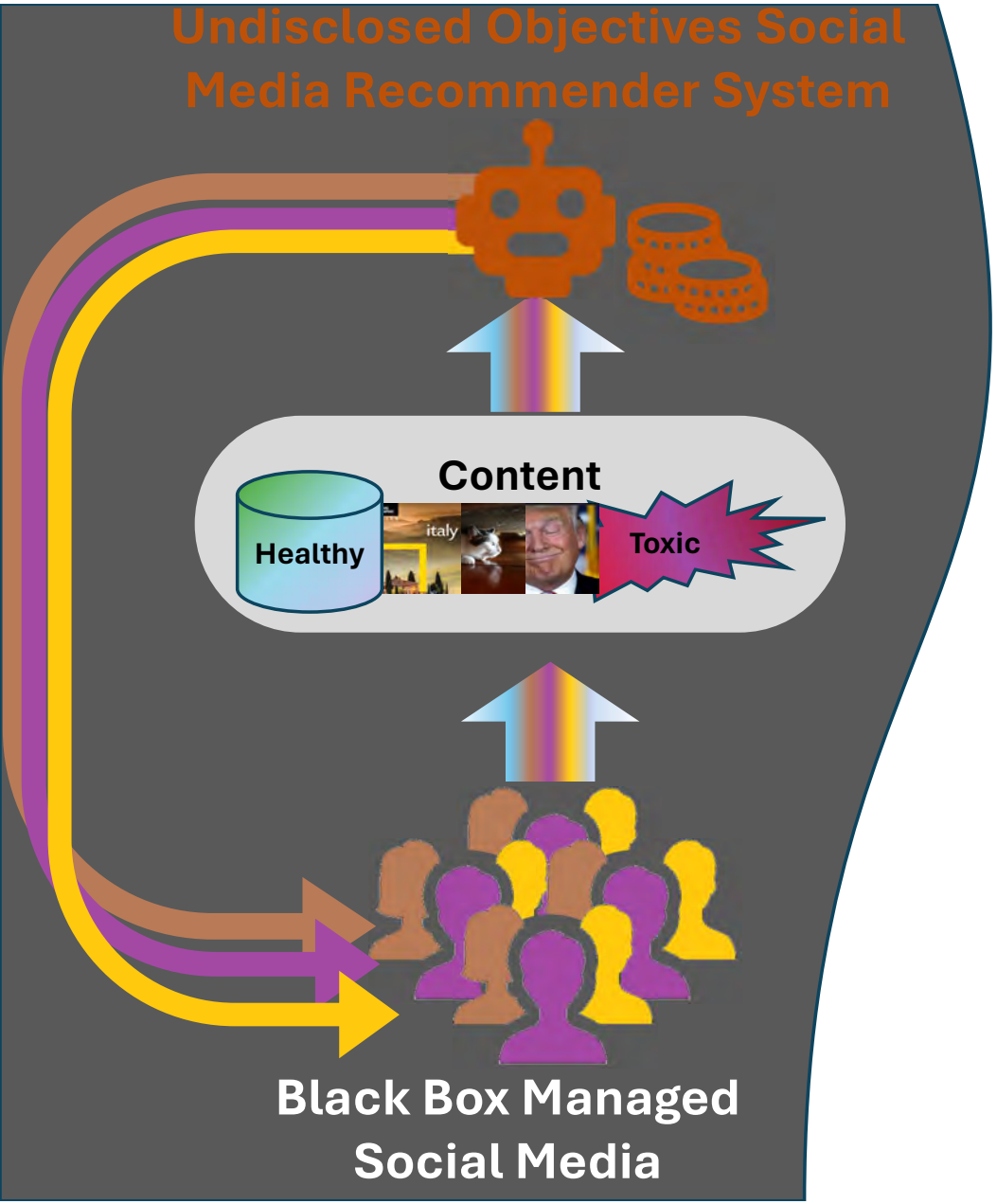
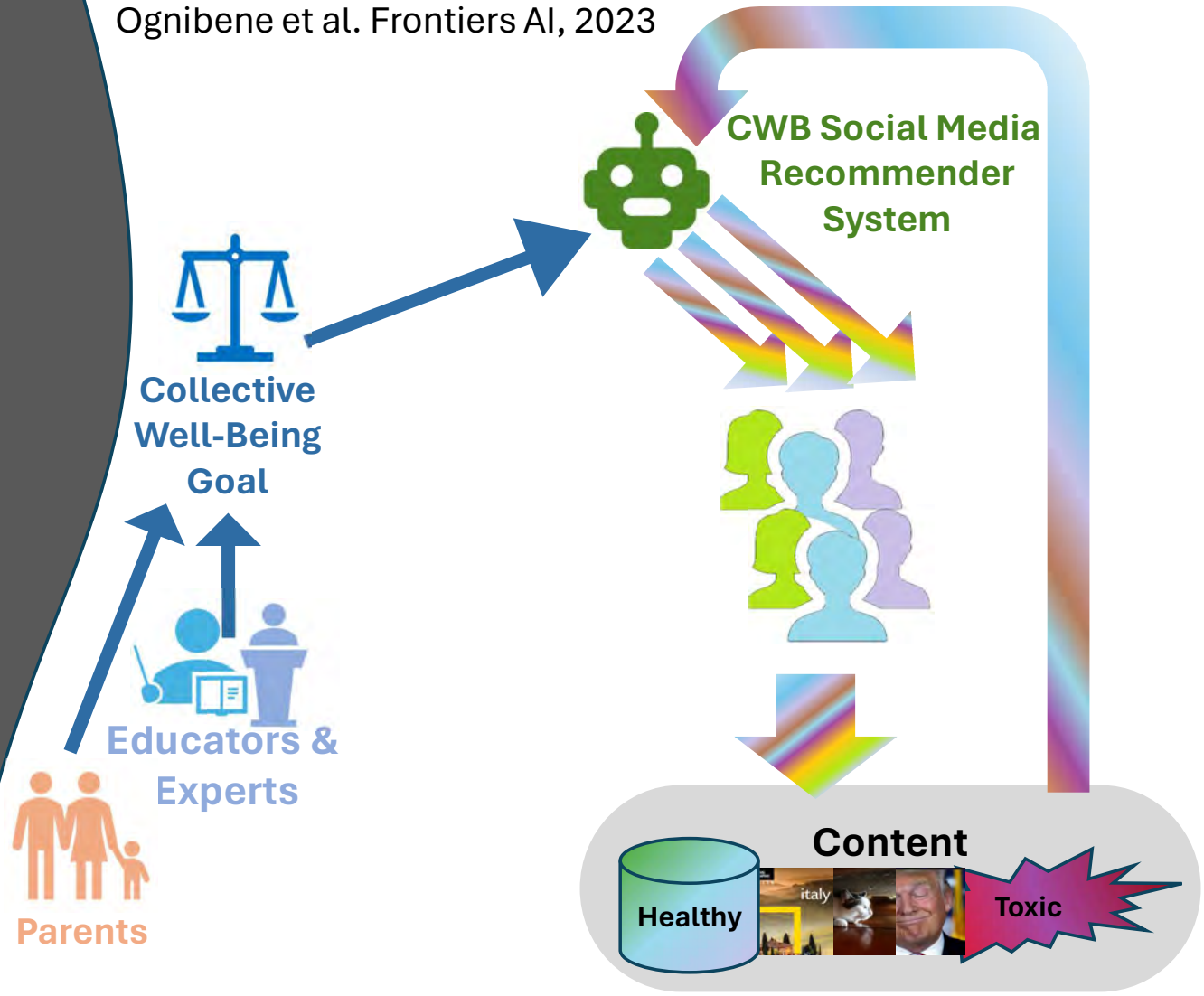


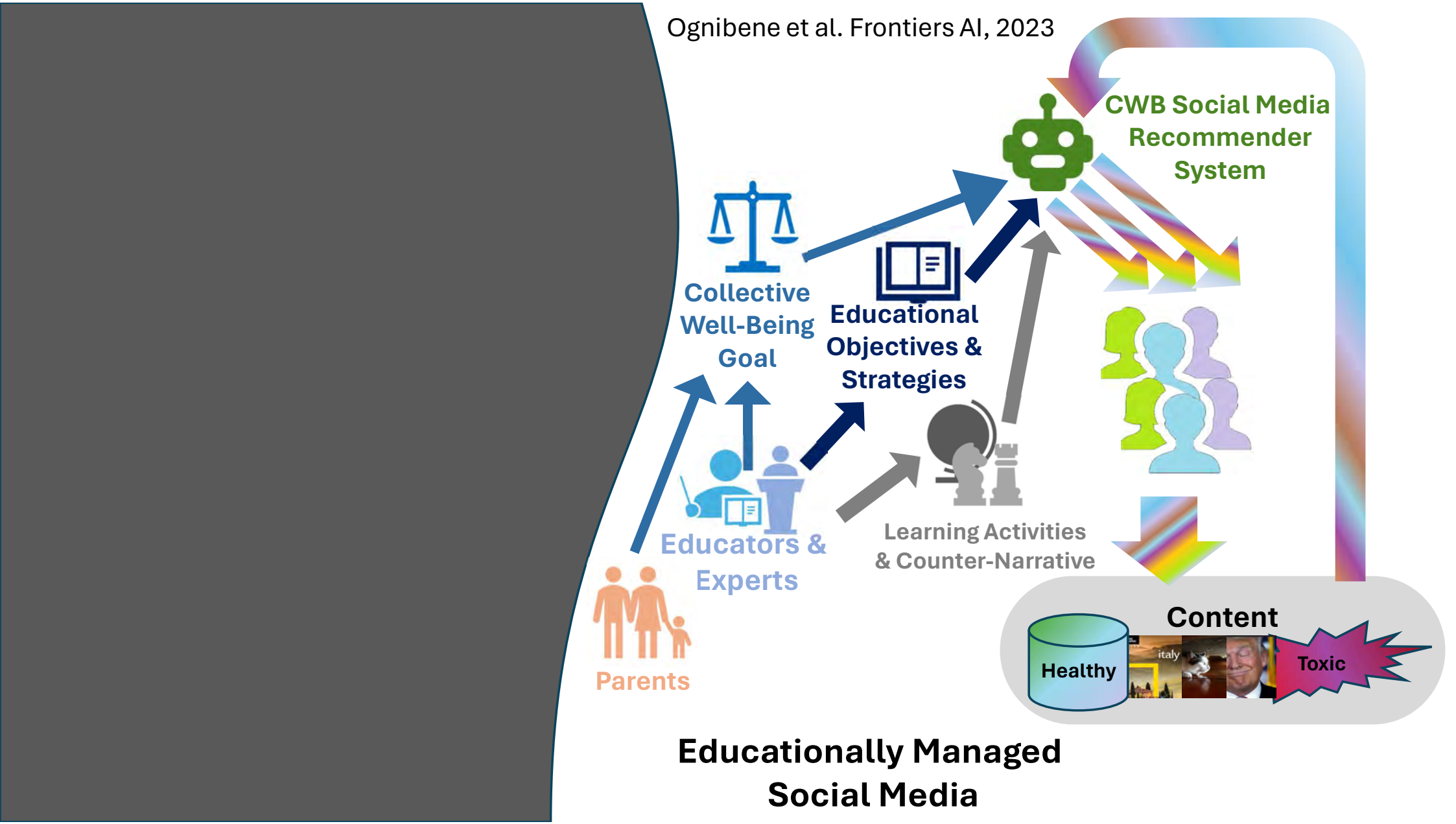

Undisclosed Objectives Social Media Recommender System
Content
Healthy
italy
Toxic
Black Box Managed Social Media

Ognibene et al. Frontiers AI, 2023



Educationally Managed Social Media

Ognibene et al. Frontiers AI, 2023



Educationally Managed Social Media

•An image showing that social media connect different people with different cultures, contrasting values and conflicting perspectives
•Designer|1024 × 1024 jpg|Created now
•Share
•Save
•Download
•Customise
•Content credentials
•**Generated with AI** · 15 January 2024 at 1:30 am

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PATRIOTIC
FRUIT PIZZA
GLUTEN FREE * DAIRY FREE

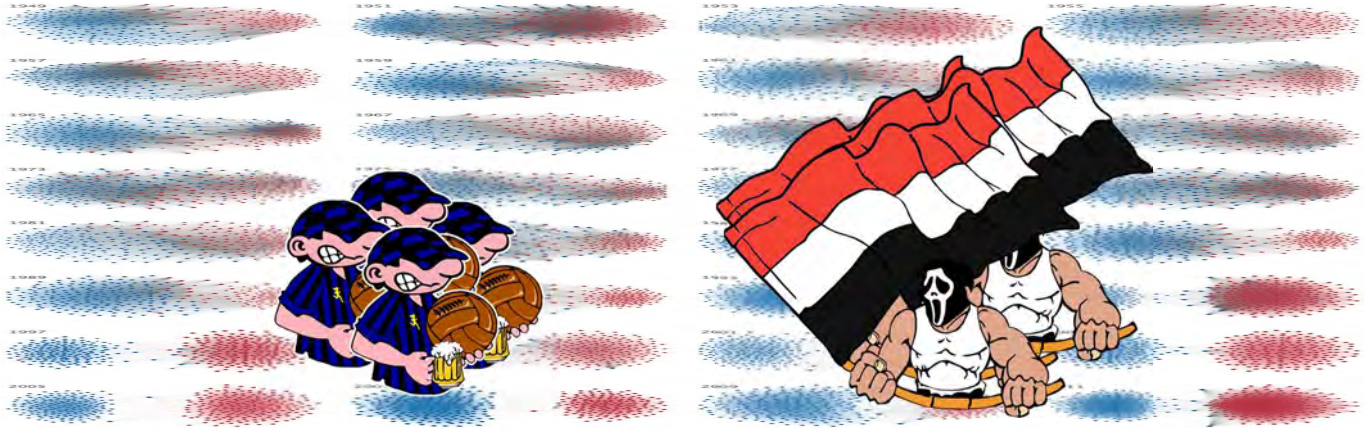
The evolution of Climate Cooling/ Warming/Change
SCAM
IF WE DON'T TAKE IMMEDIATE, DRASTIC ACTION NOW THE WORLD IS DOOMED BY
1975 1985 1990 1995
2000 2005 2010 2024 2030

Backfire

https://www.pnas.org/content/115/37/9216

CONTACT WITH DIAMETRALLY OPPOSITE OPINIONS INCREASES **POLARIZATION** AND ENGAGEMENT (FIGTHS/FLAMES)

Education may help contrasting polarization and progressing toward Global Harwell



3rd problem

How to define global educational objectives in an already polarized and connected world

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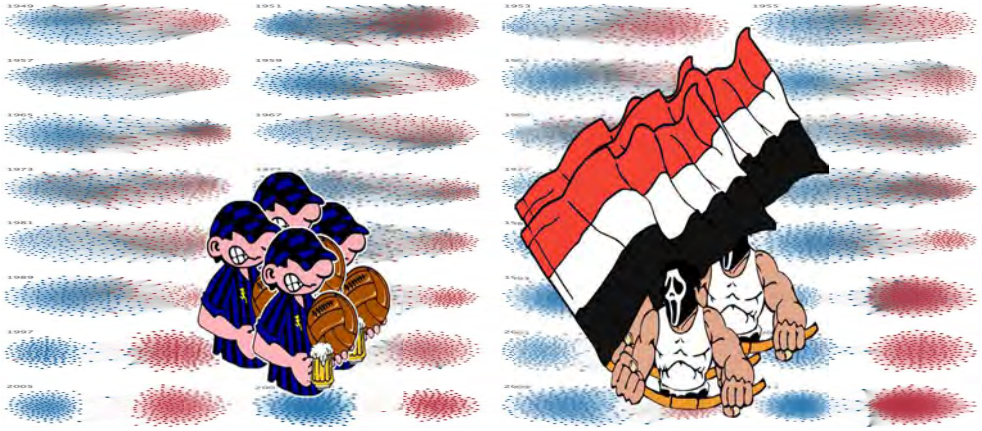
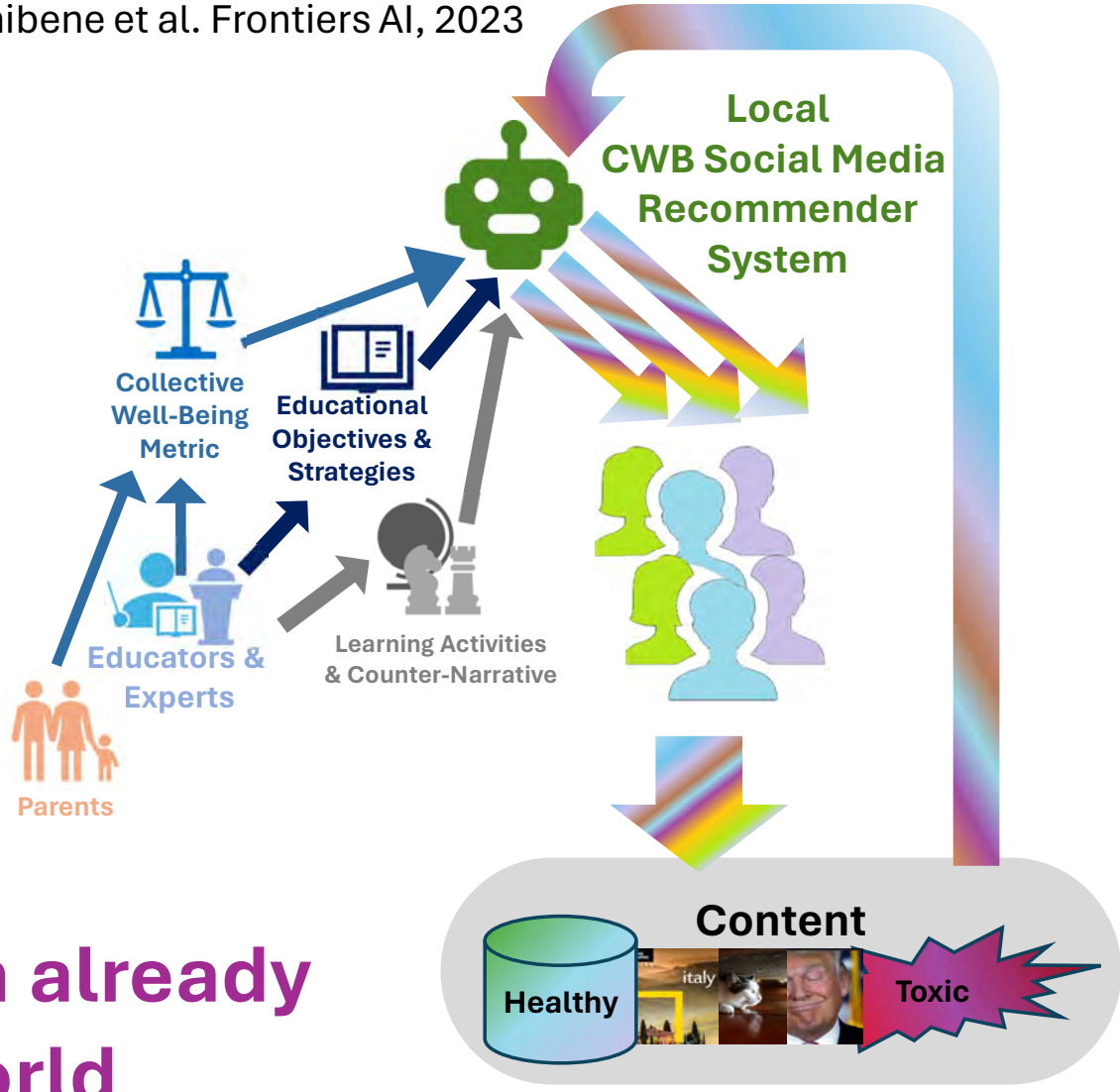


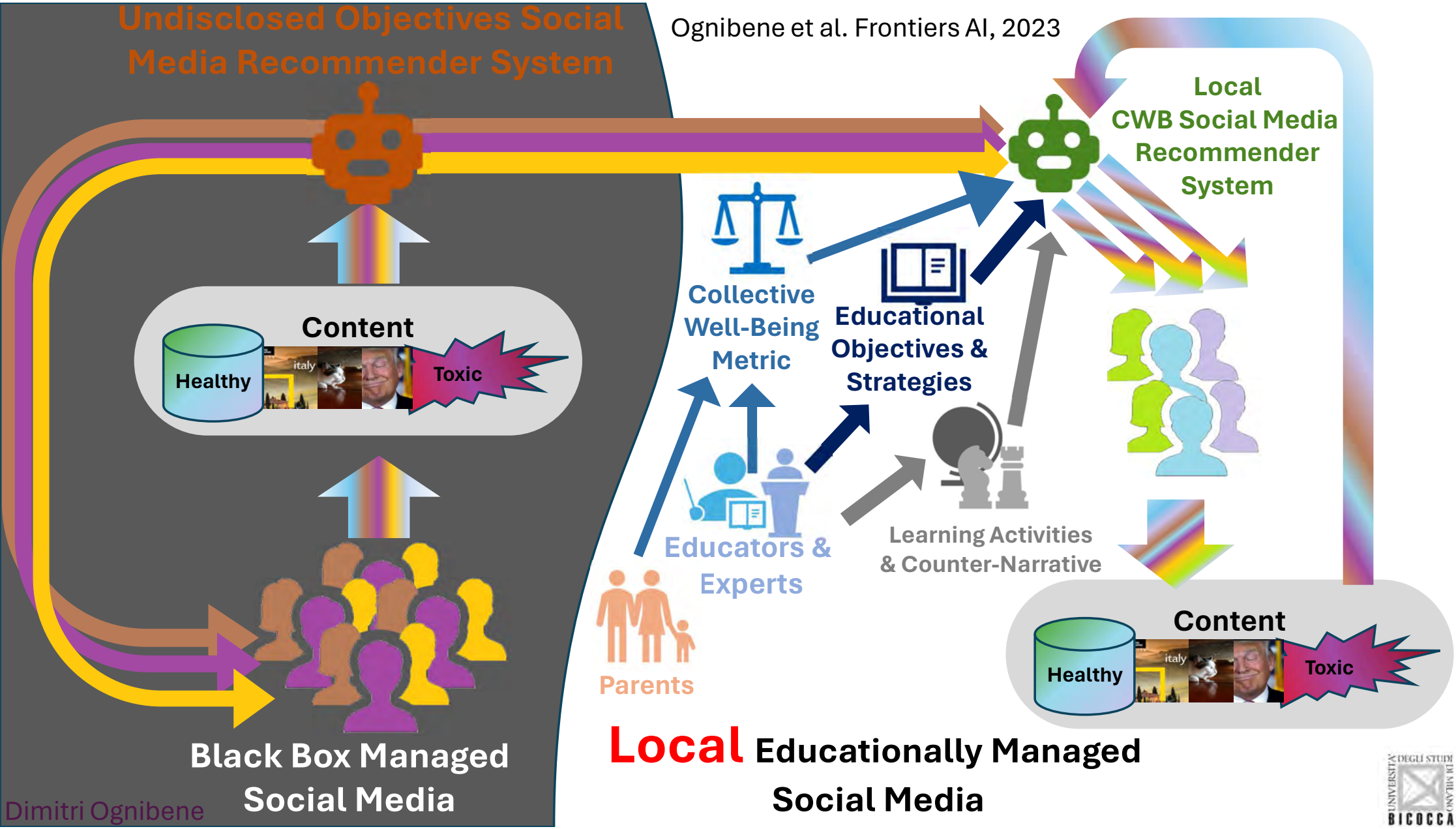
3rd problem

How to define ~~global~~ local educational objectives in an already polarized and connected world

Ognibene et al. Frontiers AI, 2023



Local Educationally Managed Social Media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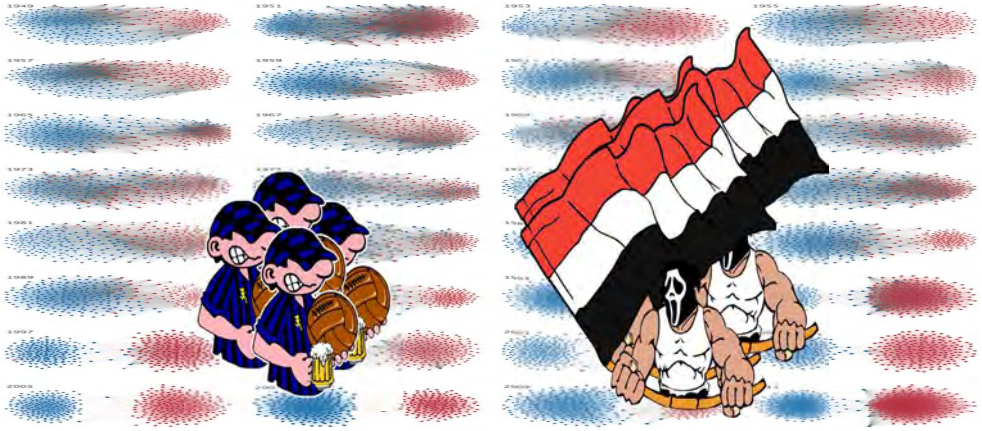

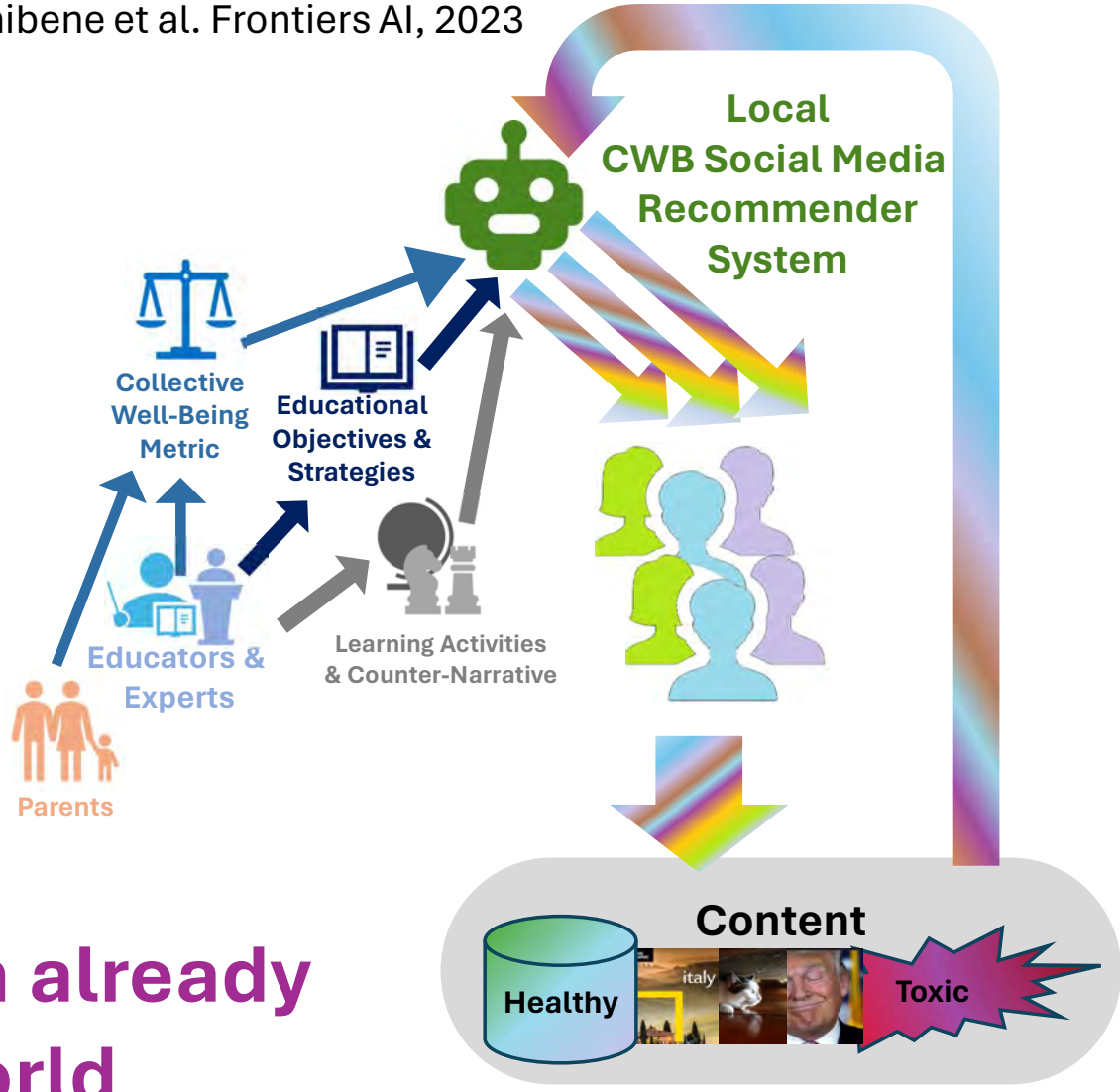

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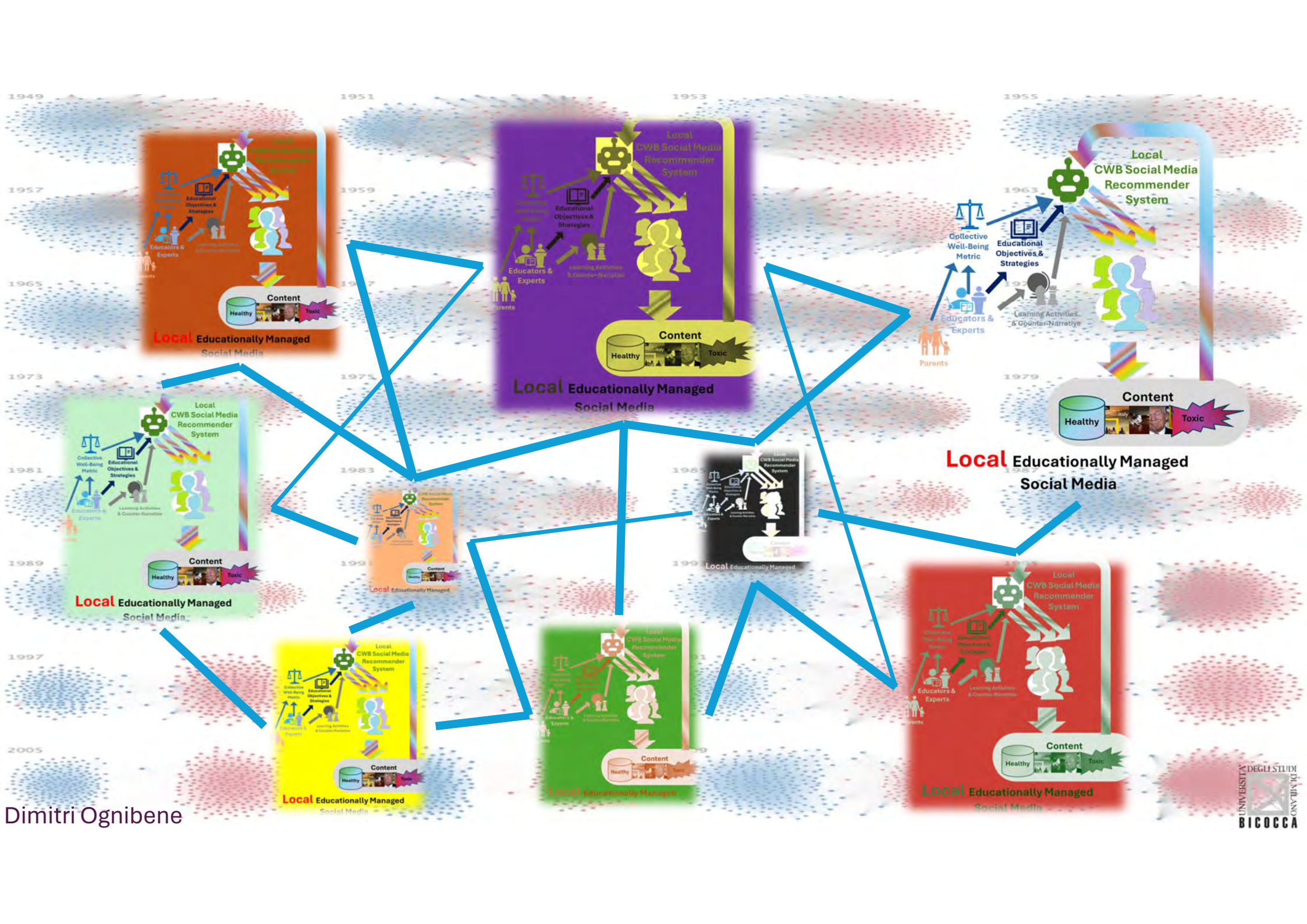

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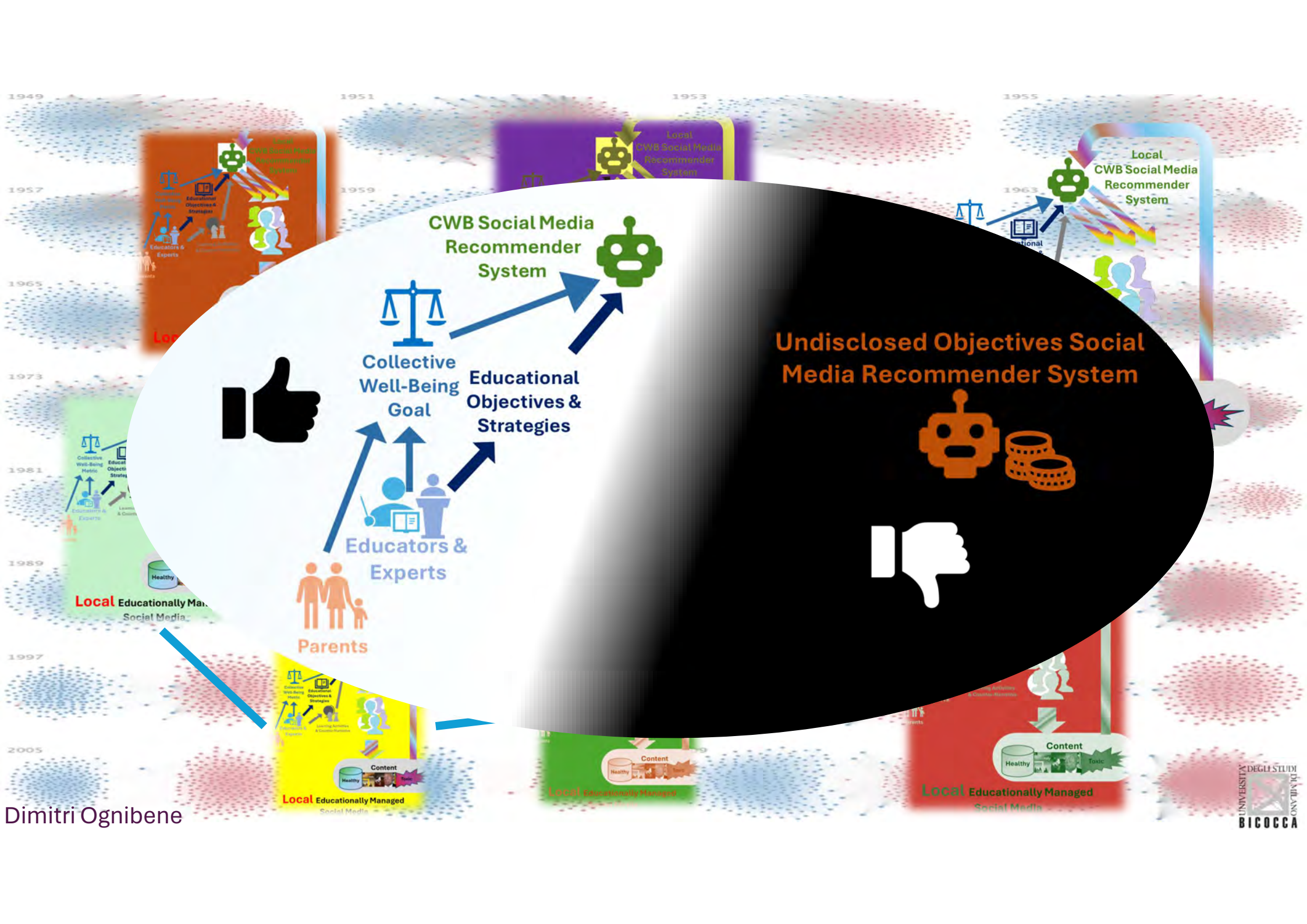

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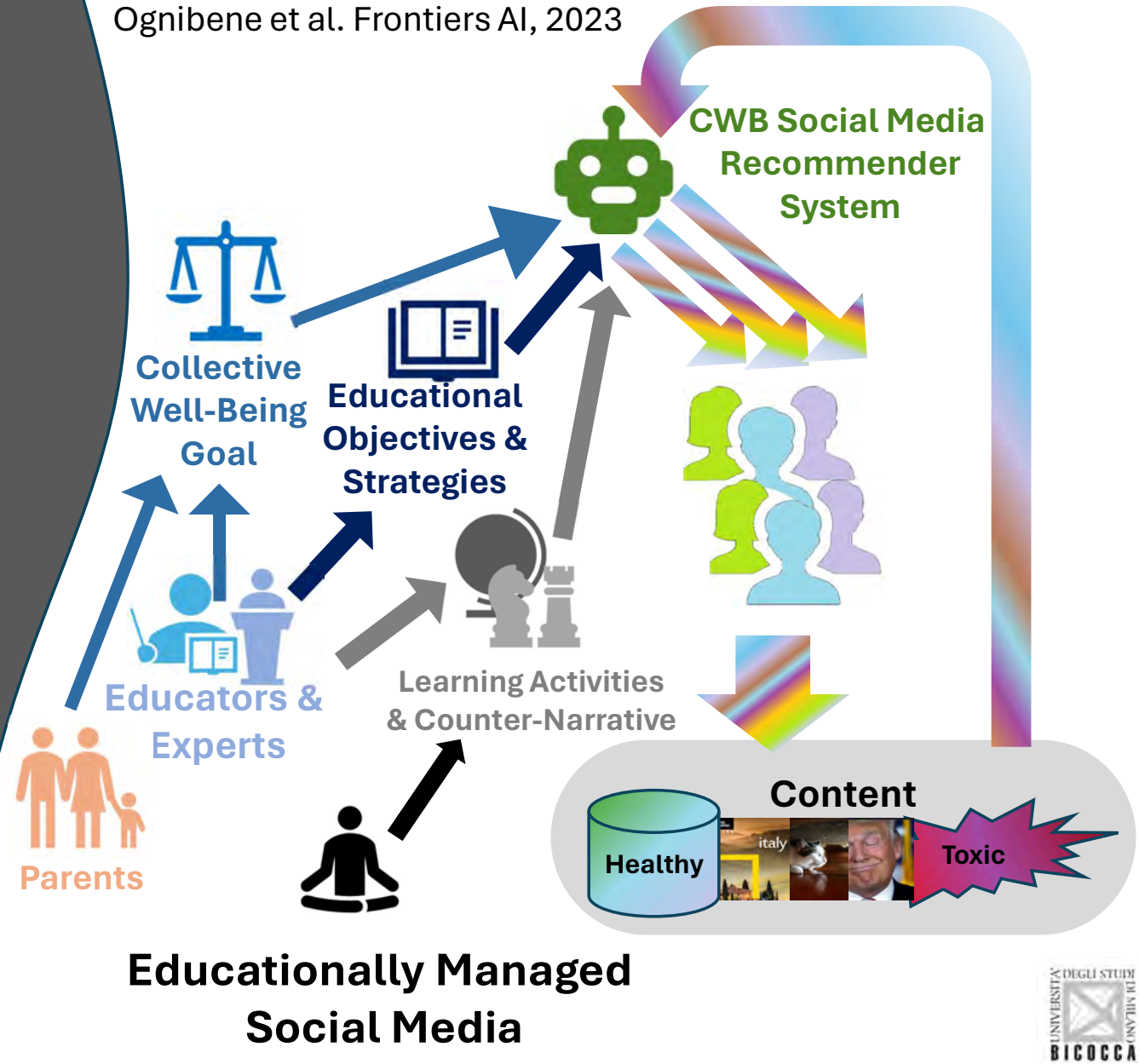
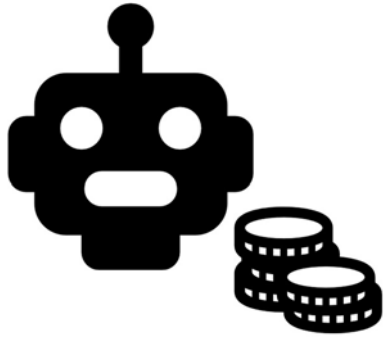
Thanks for your attention!

Today talks by Prof Eimler, Dr Borsting and Prof Nanayakkara about empathy, compassion, and meditation suggest to add it as an educational activity useful to achieve armony and tackle polarization

Ognibene et al. Frontiers AI, 2023



Social Media AI Algorithms and Polarization



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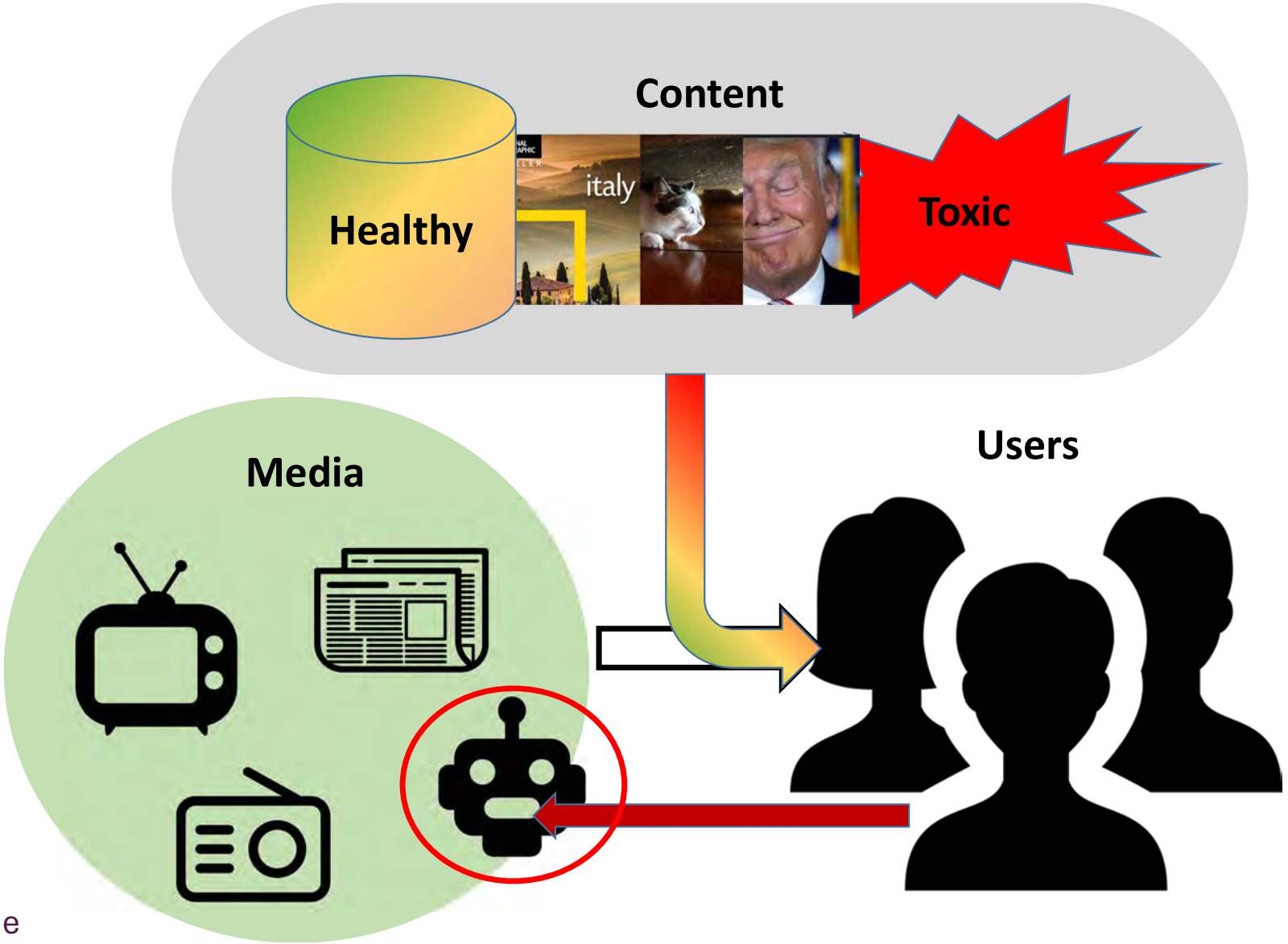
Content
Healthy
italy
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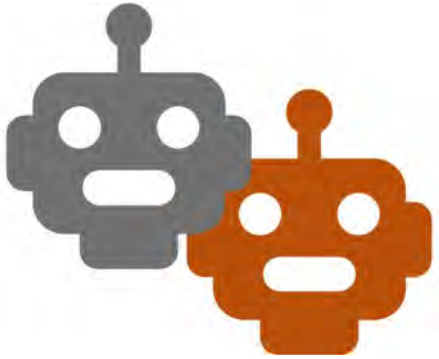
Media
Users

The new ways to the Darkside: unregulated social media and related algorithms



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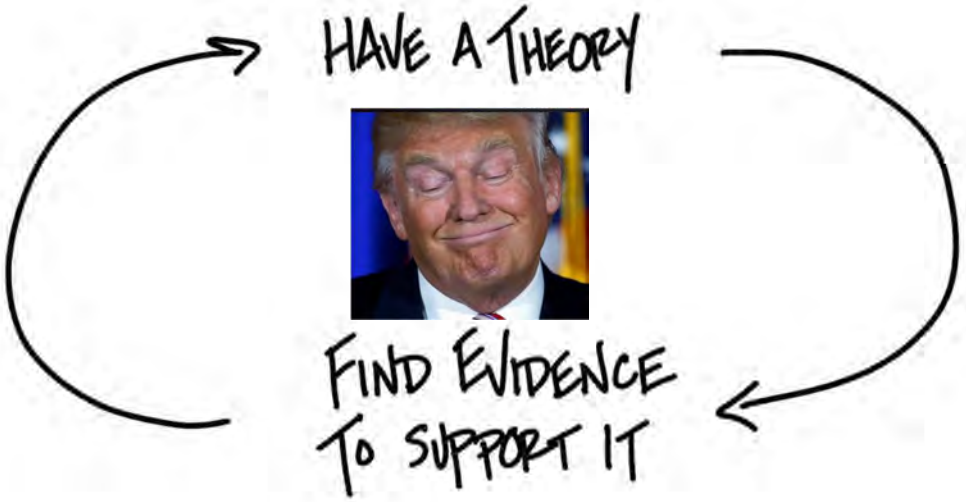
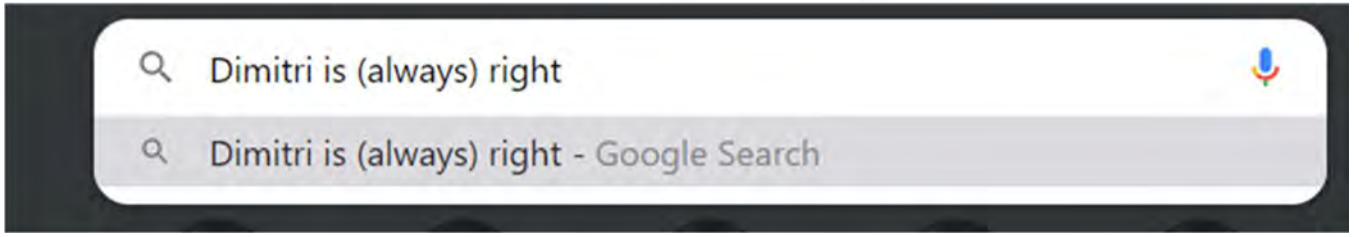
Confirmation Bias

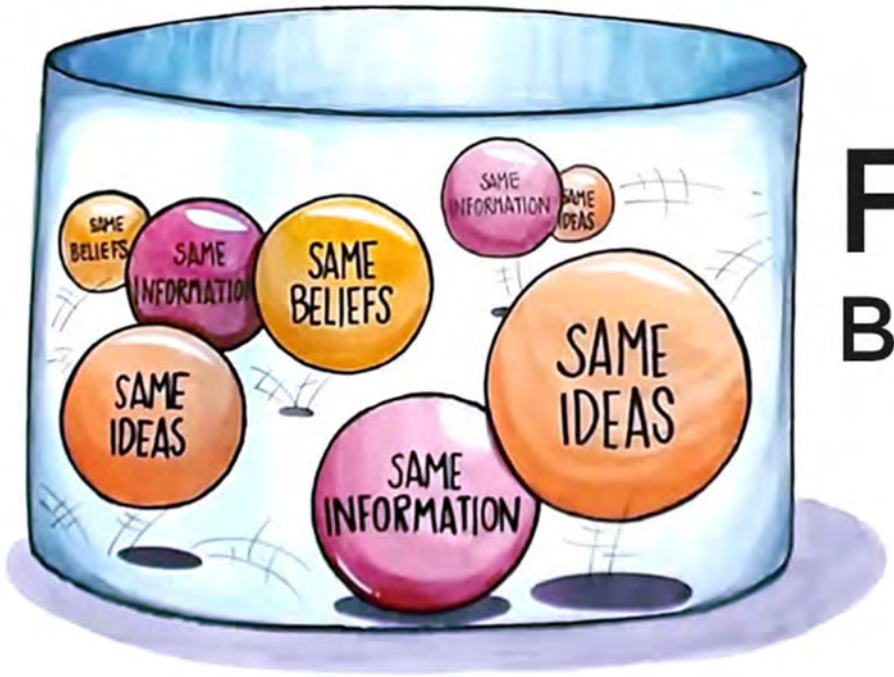


I'll find *what* I need to be right…

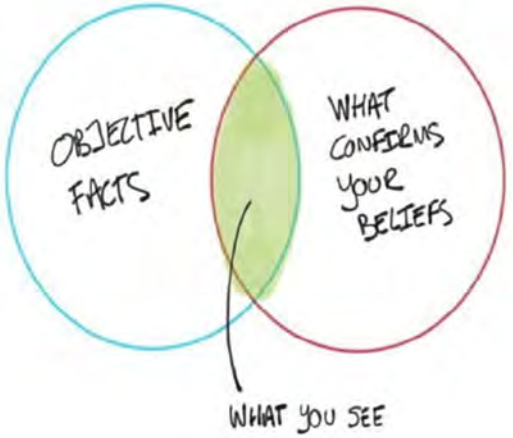


Algorithm personalization

I'll find *what* **you** need to be right
(even before you look for it)



Filter Bubbles

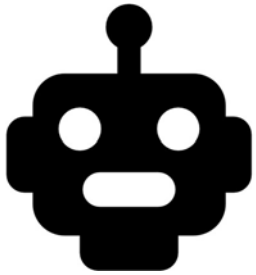


[Schmidt et al., 2017, Del Vicario et al., 2016]

Neumann, 2013

Echo Chamber

I'll find ***who*** **I** need…



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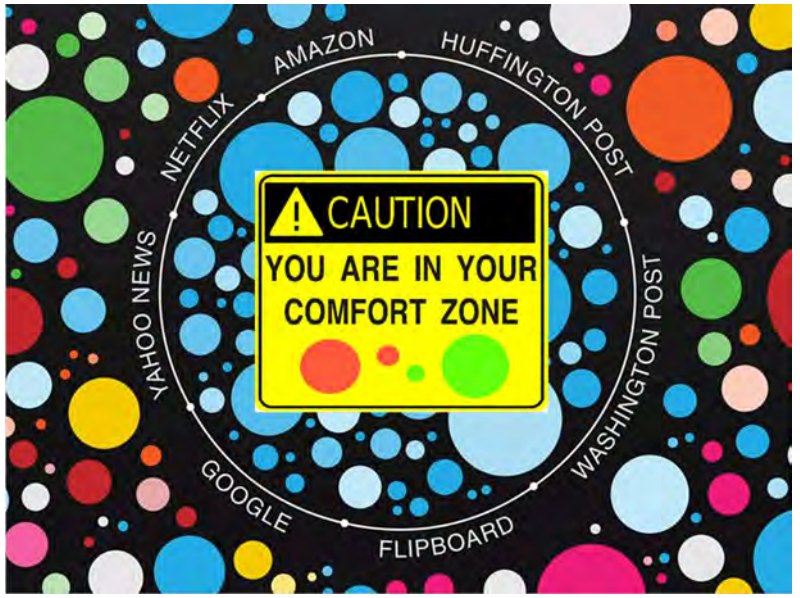
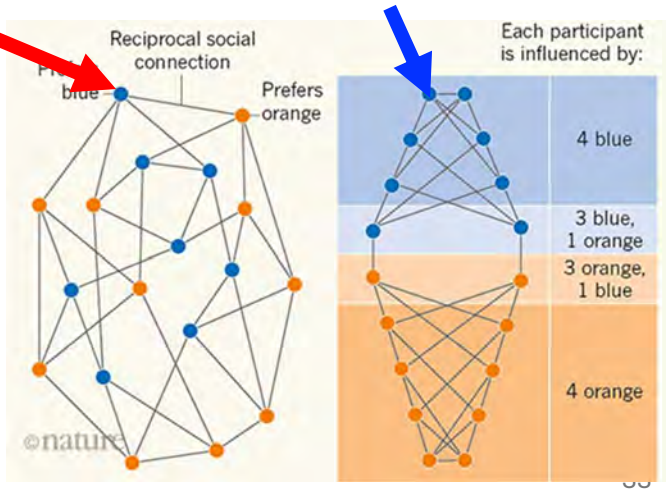
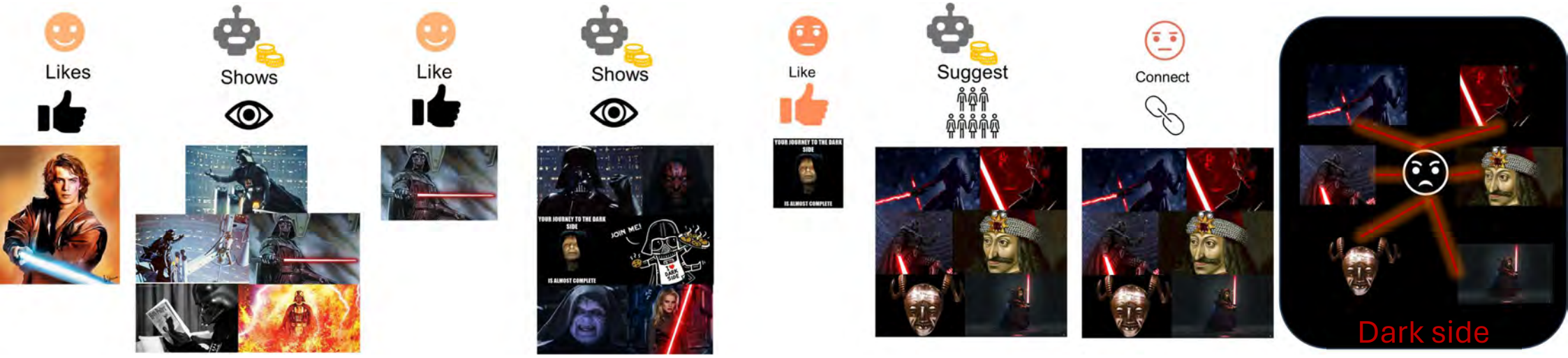


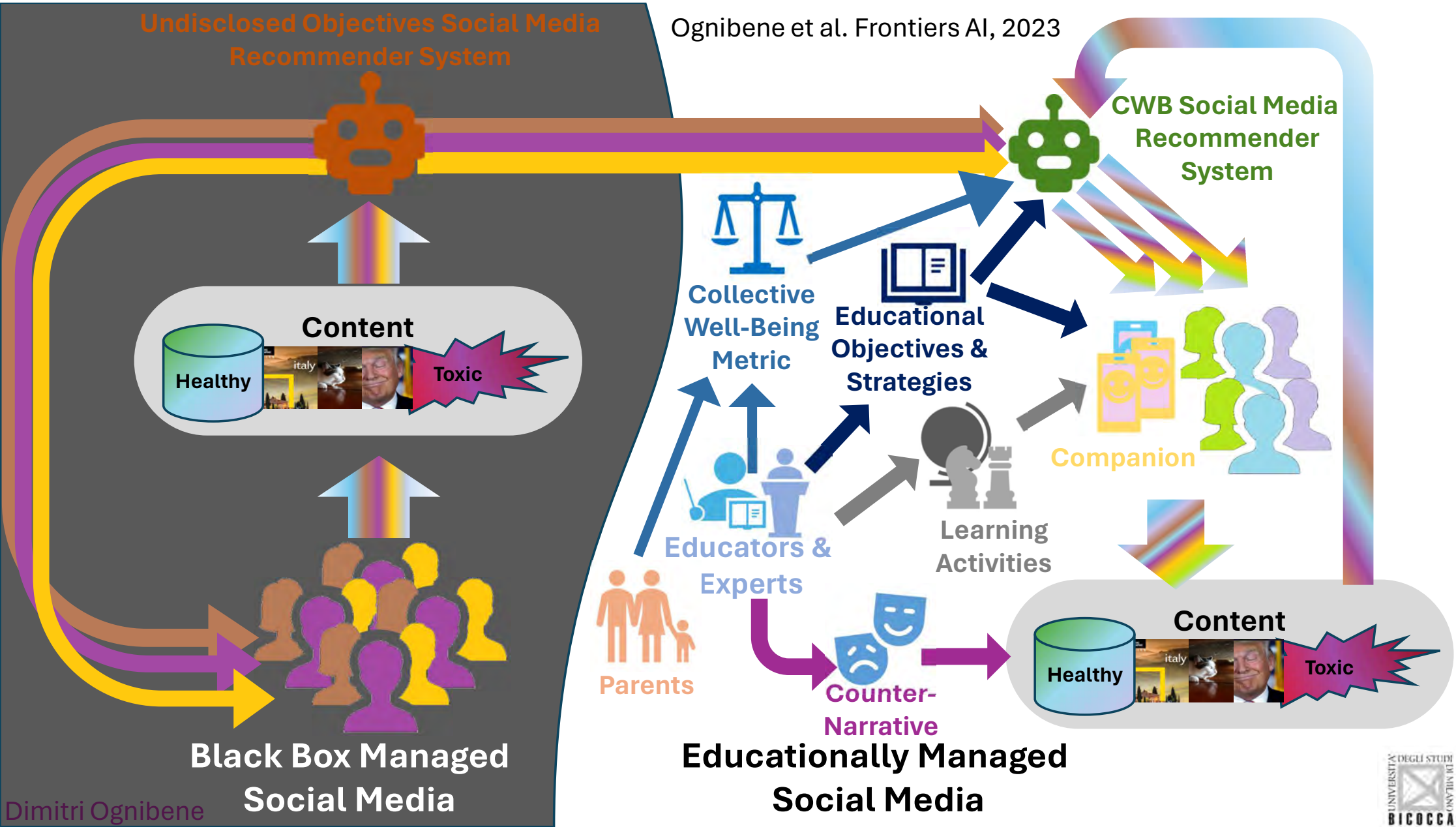
You are here

You are not here



How do Social Media AIs escalate mistakes?

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