The TEAM

Michela del Vicario
Matematics

Fabiana Zollo
Informatics

Walter Quattrociocchi
Computer Science

Antonio Scala
Statistical Physics

Computational Social Science

Social Sciences

Traditional Empirical Research

?

Data-driven Computational Social Science

Quantitative Methods

Data Science Skills

Computer Science

ASSET
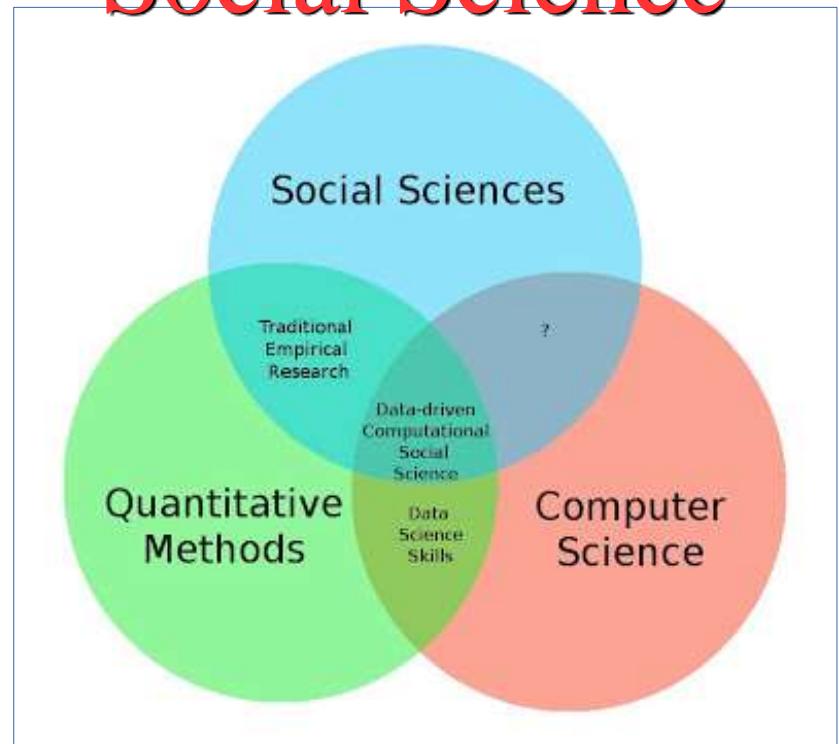
Big Data

Facebook : 376M users, more t

YouTube : 3,5M users

facebook

Classic Approach:

– Experiment design & data acquisition

Big Data:

– Select data according to the

www.asset.com

Misinformation

Figure 11: Digital Wildfires in a Hyperconnected World Constellation
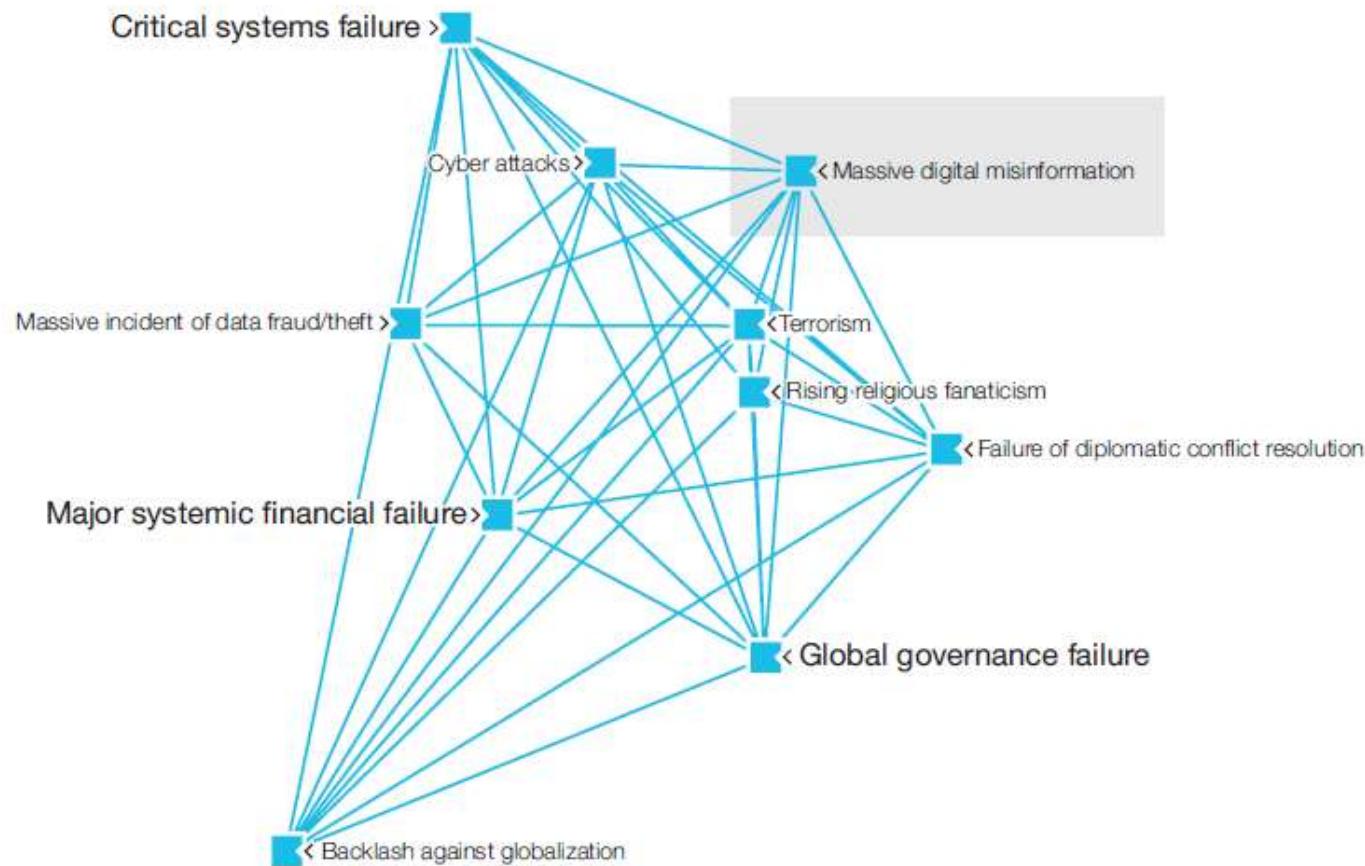

Source: World Economic Forum

Scientific Method

Historically, a successful approach to unders

Given the barriers to acquire adequate comp

COMPLEX NARRATIVES, DIFFICULT TO SHARE
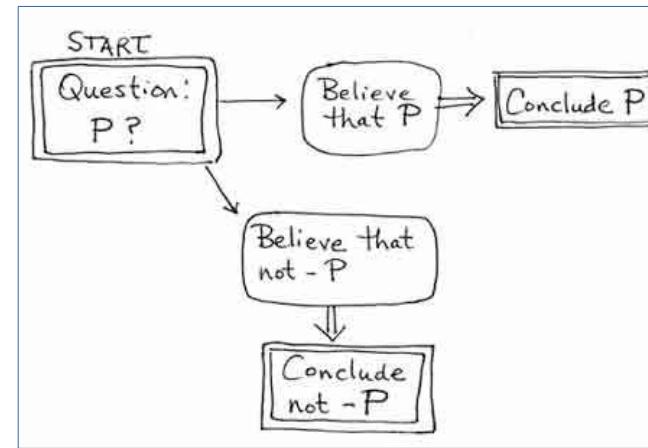
Conspiracy Theory

Secret organizations that manipulate societies. Their aims:

- Hide secret technologies
- Weather Control
- Unify the world under a single government
- Manipulate public opinion via main-stream media

MYTHOLOGICAL NARRATIVES
TO SIMPLIFY WORLD'S COMPLEXITY

Omophily, Confirmation Bias and Polarization:
the birth of Echochambers
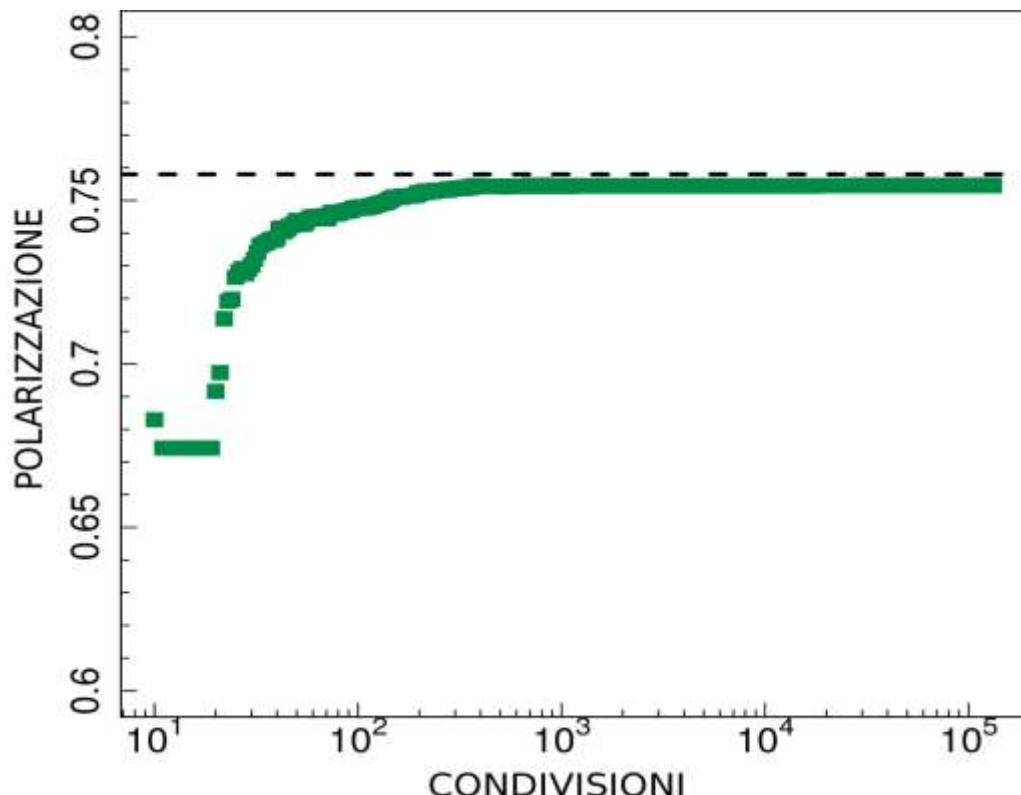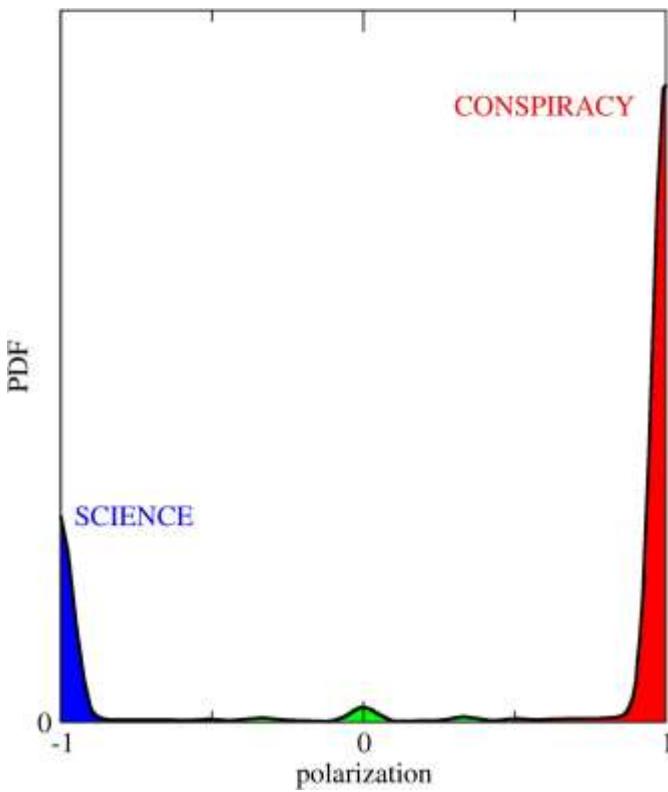
- Users are highly polarized
- The higher the online activity, the higher the polarizzation (both science and conspiracy)
- User locked in **ECHOCHAMBERS**

Facebook vs YouTube

Users are "indistinguishable" (without looking at the contents)
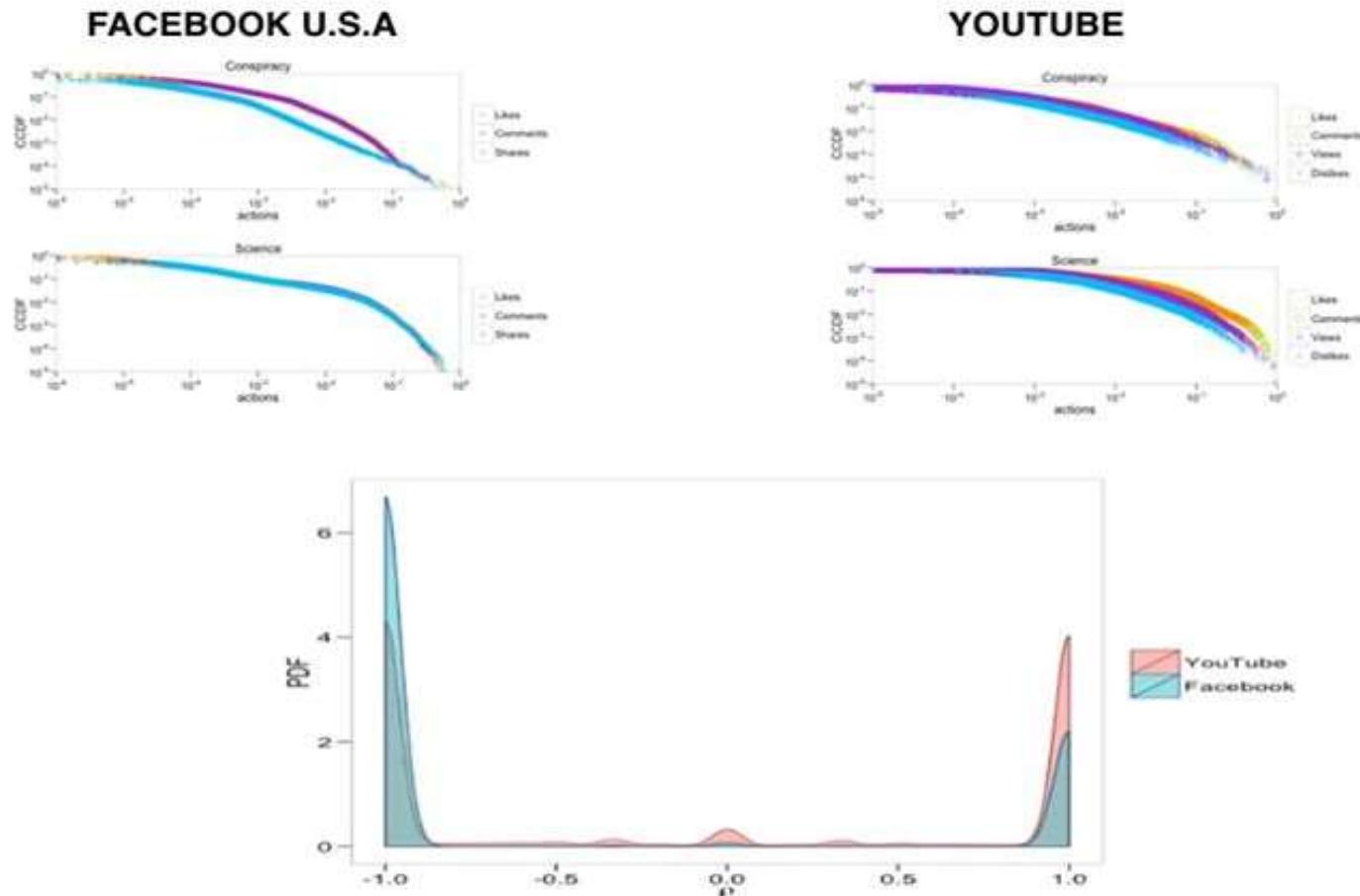
Same polarization on different media

Debunking & Backfire
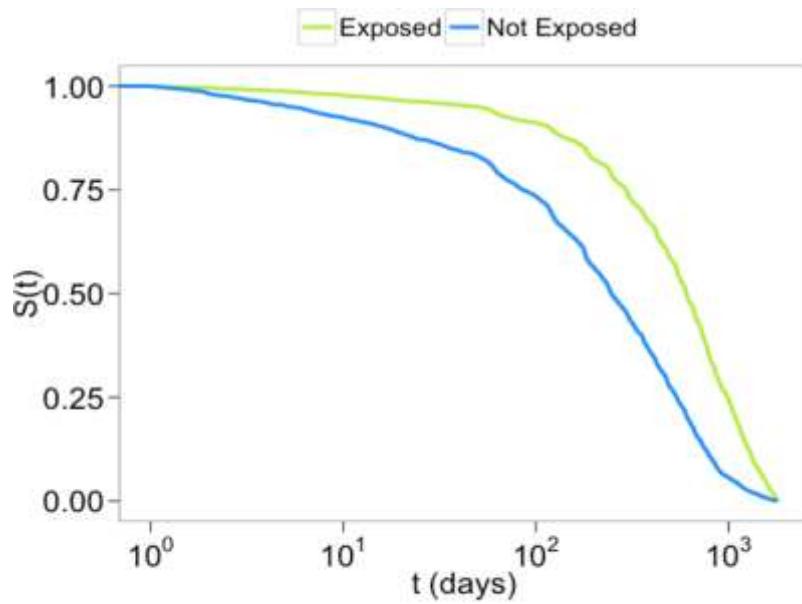
Likes
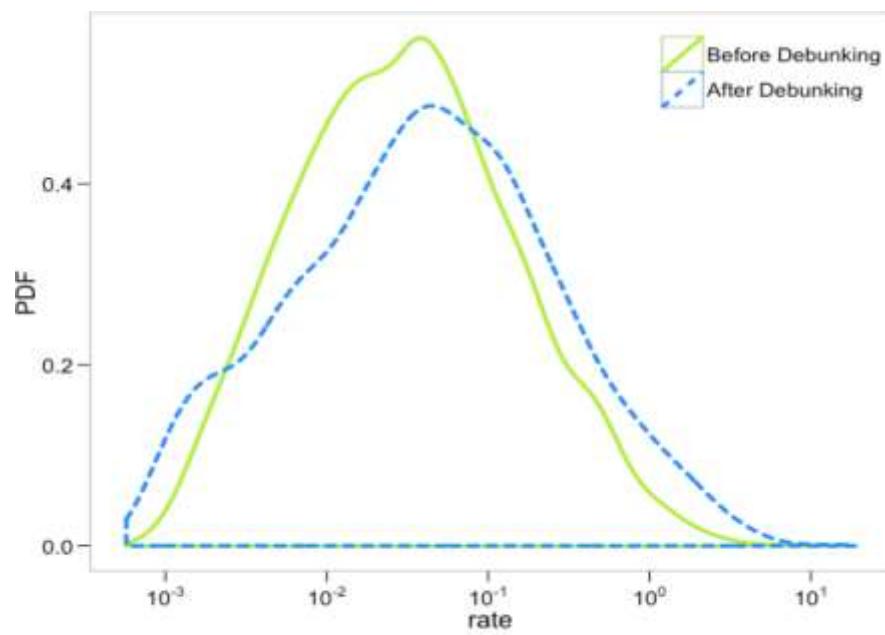
Likes

- The lifetime of false news increases for users exposed to debun
- The interactions with false news increases for users exposed to

Conspiracy's paradox

2788	posts from troll page
7430	unique users
1279	users *labeled*
39098	actions
18212	likes
11337	comments
9549	likes of comment

- 18%
- 26%
- 56%

- alternative news sources
- mainstream news sources
- political movements
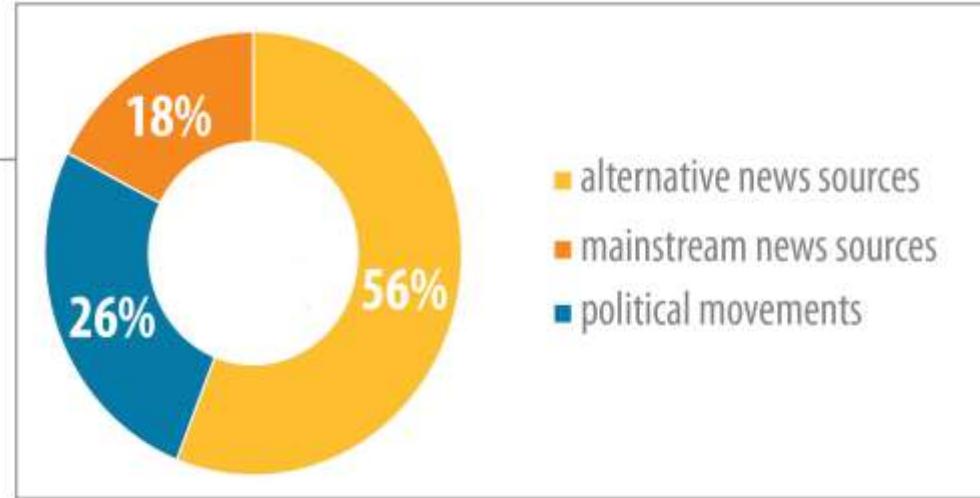
USERS MORE OBSESSED BY THE "MAIN STREAM MEDIA MANIPULATION" ARE EASIER TO BE SCAMMED (TROLLING)

Scienze vs Conspiracy:
the case of Climate Change

|	Denials	Supporters	DIFF
Education	-0.15	0.28	0.43
Australia	-0.18	0.17	0.35
Wind power	-0.14	0.19	0.33
United Nations	-0.24	0.08	0.32
Sun	-0.14	0.17	0.31
Science	-0.19	0.12	0.31
Meteorology	-0.26	0.04	0.3
Renewable energy	-0.1	0.19	0.29
Federal government of the United States	-0.27	-0.01	0.26
Earth	-0.2	0.05	0.25
President of the United States	-0.29	-0.04	0.25
United States	-0.28	-0.05	0.23
United Kingdom	-0.17	0.06	0.23
New York City	-0.24	-0.01	0.23
Scientific method	-0.21	0.01	0.22
Bill Clinton	-0.3	-0.12	0.18
Climate	-0.21	-0.03	0.18
European Union	-0.21	-0.04	0.17
Temperature	-0.25	-0.08	0.17
Weather	-0.31	-0.14	0.17
Ocean	-0.21	-0.06	0.15
Intergovernmental Panel on Climate Change	-0.21	-0.07	0.14
Precipitation	-0.32	-0.19	0.13
United States Senate	-0.31	-0.18	0.13
Barack Obama	-0.29	-0.16	0.13
Climate change	-0.23	-0.11	0.12
Kyoto Protocol	-0.19	-0.07	0.12
Fossil fuel	-0.14	-0.03	0.11
Carbon dioxide	-0.19	-0.08	0.11
George W. Bush	-0.32	-0.22	0.1
Greenhouse gas	-0.2	-0.1	0.1
Democratic Party	-0.31	-0.22	0.09
Nuclear power	-0.12	-0.03	0.09
Water	-0.24	-0.15	0.09
Global warming	-0.24	-0.16	0.08
Republican Party	-0.3	-0.22	0.08
Antarctica	-0.19	-0.12	0.07
Arctic Ocean	-0.2	-0.15	0.05
United States Environmental Protection Agency	-0.21	-0.16	0.05
Coal	-0.18	-0.15	0.03
Petroleum	-0.21	-0.19	0.02

Conspiracy and Topics

# Echo Chambers in mainstream media
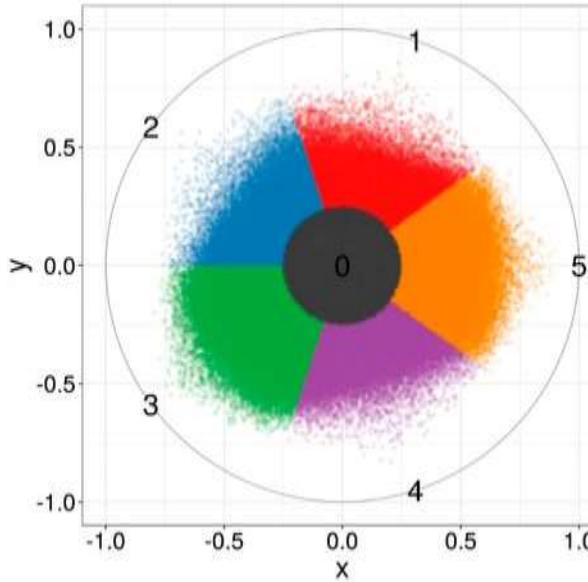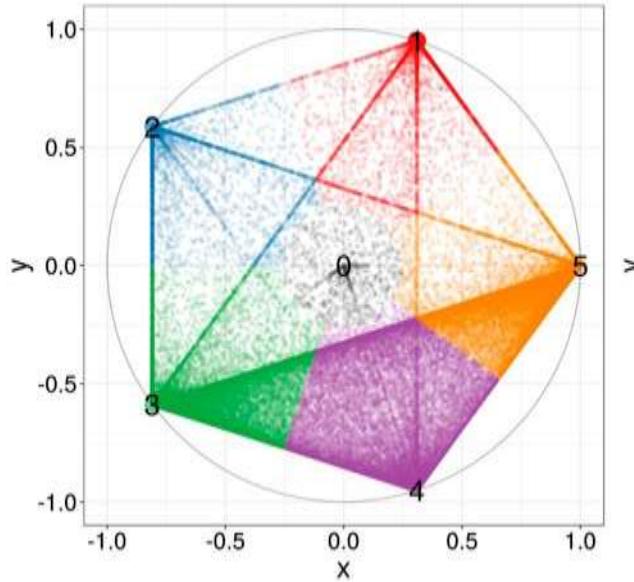
- Several echo-chambers
- "Bridge" users among two or even three echocham

The pages-users divide

User Likes
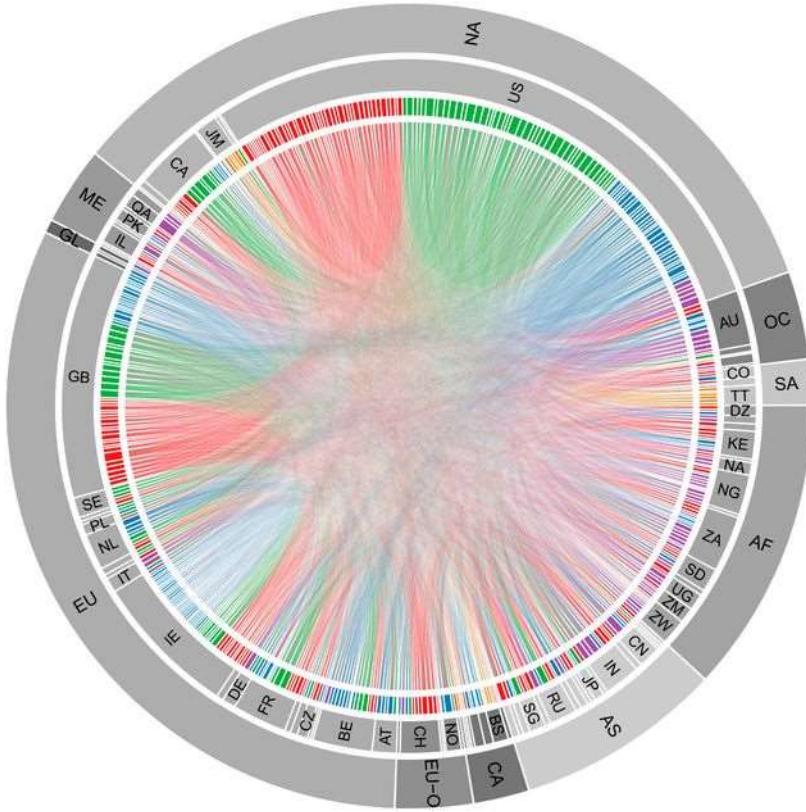
Page Likes
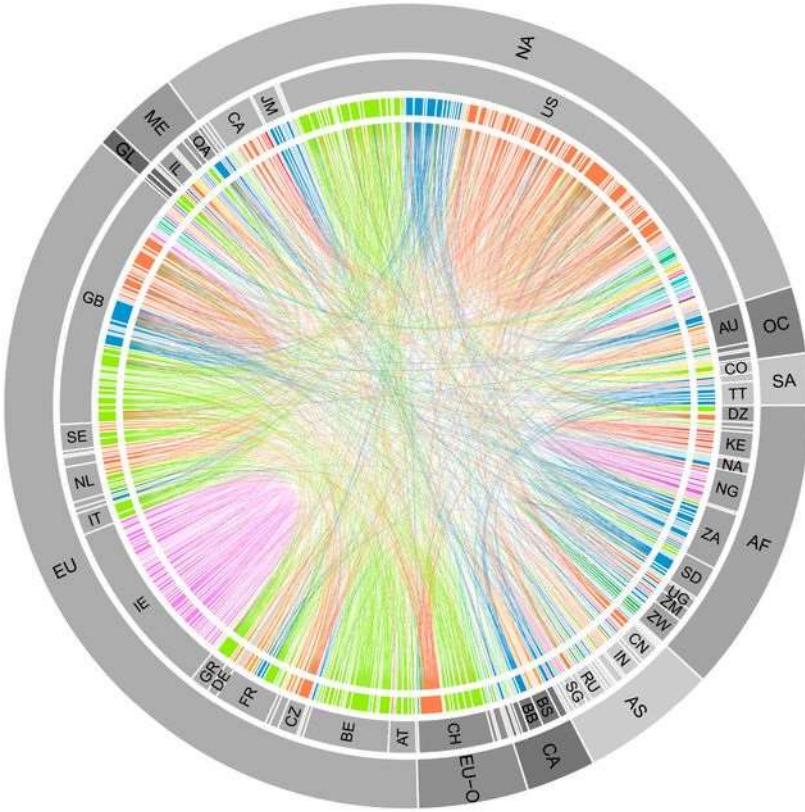
Conclusions

- Anxiogenous topics (like health) can trigger strong polarization

- Polarizzation splits the online comunity in isolated echo-chambers

- Polarised debates are centered on irrational and emotional issues

- "Aggressive" debunking enhances polarization

- In an healty sistem echo-chambers interacts and contribute to a kind of "biodiversity" **THANKS !!!**

- The media and the users have a different