

Joined for vaccination

Addressing vaccine hesitancy
and increasing uptake in EU
A multi-stakeholder perspective



Francesco Gesualdo
Bambino Gesù Children's Hospital
f.gesualdo@gmail.com



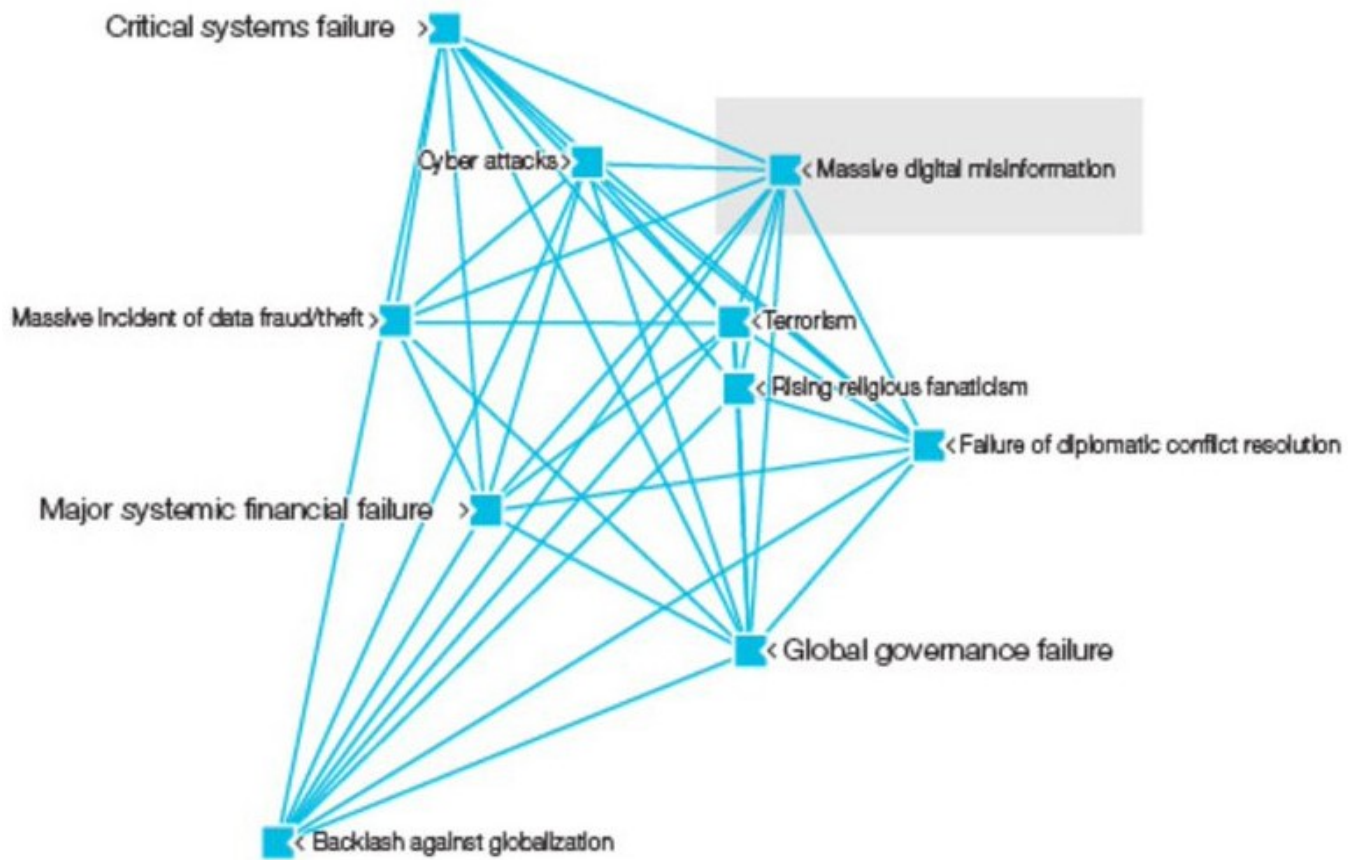
These are the 10 biggest threats to global health in 2019

Based on rankings from the World Health Organization

1. Air pollution and climate change
2. Noncommunicable diseases
3. Global influenza pandemic
4. Fragile and vulnerable settings
5. Antimicrobial resistance
6. Ebola and other high-threat pathogens
7. Weak primary healthcare
8. Vaccine hesitancy
9. Dengue fever
10. HIV



Source: World Health Organization



Source: World Economic Forum



THE OBJECTIVE OF EU-JAV IS

To foster a **sustainable cooperation between European countries** and implement best practices in national vaccine policies in order to **fight vaccine preventable diseases** and improve population health.



WP 8

WP 8

VACCINE HESITANCY

Develop a systematic analysis to monitor vaccine hesitancy and disseminate best practices, lessons learned and research-based knowledge to promote vaccine confidence.





Bambino Gesù
OSPEDALE PEDIATRICO



epidemiologists

data scientists

physicians

paediatricians

journalists

informatics

design

communication experts



Platform for real-time
monitoring of data on
conversations on vaccines
on the web and social media

data from social media and web resources

topics

opinions

sentiment

collective behaviour

barriers to vaccine uptake

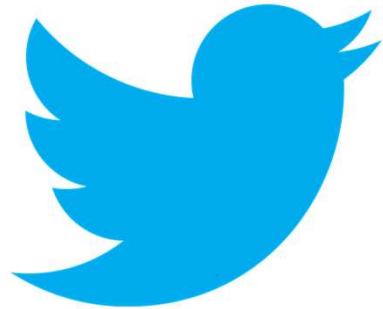
enablers to vaccine uptake

determinants of vaccine hesitancy

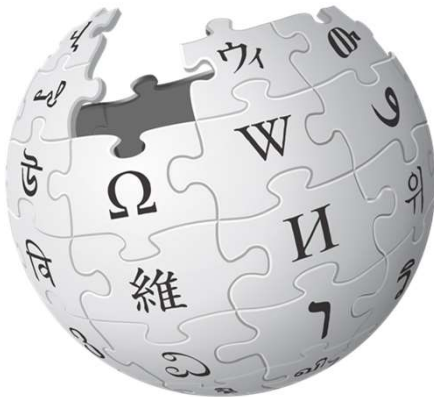
assessment of online conversations on vaccinations

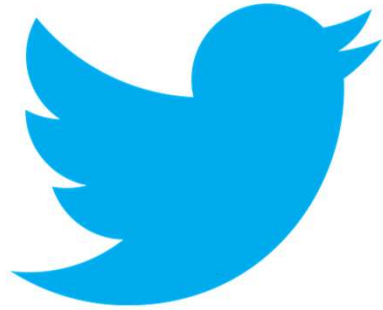
European vs country specific

Open access vs credentials



Google Trends





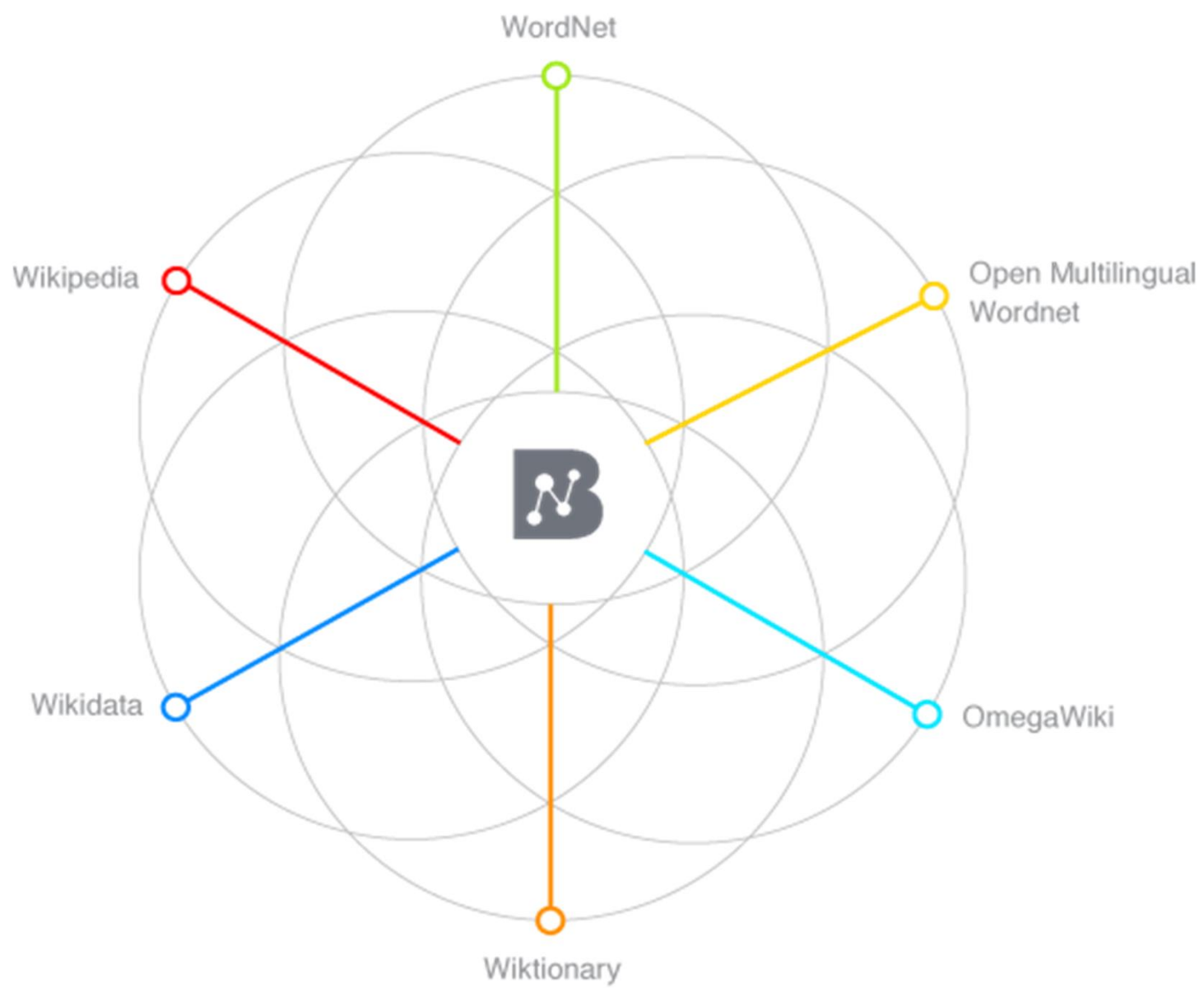
500 million tweets/day



11 million post/month
2.8 million comments/day

Natural language processing





Framework for multilingual keyword validation

- vaccine-related keywords
- vaccine preventable diseases
- vaccine safety issues

Identification of influencers





Top users group 2:

Mr_Ozymandias
FaberVonCastell
gael99
byoblu
MinervaMcGrani1
MyRedmoon77
BarillariM5S
NonVaccinato
angycocco
tiecolino



Top users group 1:

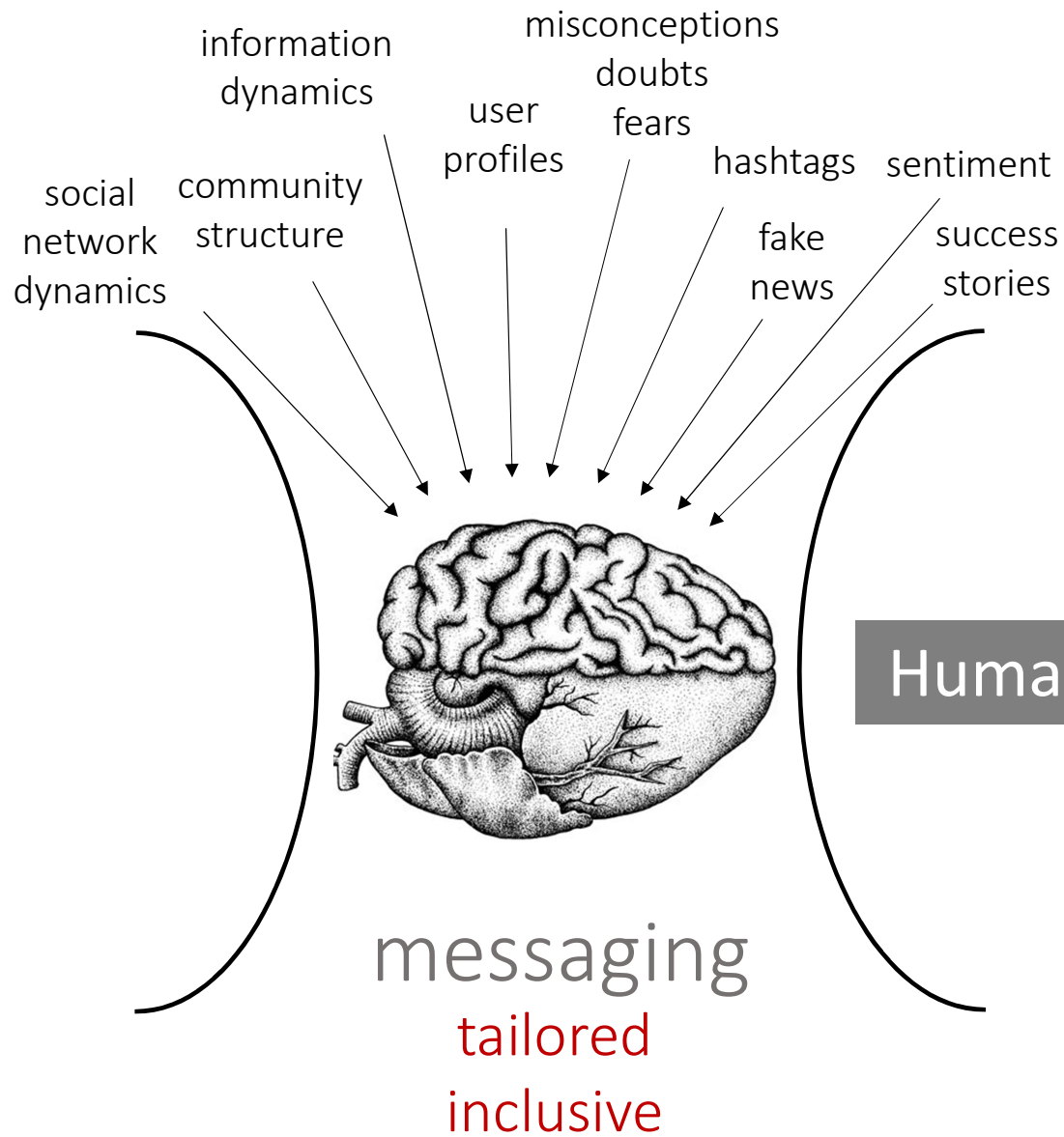
RobertoBurioni
manginobrioches
MedBunker
DarioBallini
AngeloBraga2
TopaM79
myrtamerlino
DottorWatson
LiaCeli
PamelaFerrara



predicting vaccine leaning
from non vaccine-related posts

Potentials

- Identification of influencers
- Identification and analysis of vaccine hesitant communities
- Characterization of subgroups of users (eg. adolescents)
- Models for information spreading
- Longitudinal monitoring of community organisation based on vaccination campaigns
- National level vs European level



Quantitative research
Qualitative research
AI (NLP)

Human-Centered Design



f.gesualdo@gmail.com
francesco.gesualdo@opbg.net
caterina1.rizzo@opbg.net