• What is fake news?
  • Identifying the problem

• Consequences for Social Cohesion:
  • Evaluating the social consequences

• A Psychological Vaccine Against Fake News
  • Finding (practical) solutions
What is “fake news”? 

INVASION OF FAKE NEWS!
What is “fake news”?

Report

#FakeNews: innocuous or intolerable?
What is “fake news”?

- **Misinformation**
  - “False or incorrect information” (including human error).

- **Disinformation** (misinformation + intent)
  - “The purposeful spread of false or incorrect information with the explicit intent to cause harm or to confuse and deceive others”.

- **Political Propaganda** (disinformation + political agenda)
  - “Institutionalized or state-run public indoctrination campaigns”.
Social contagion: The spread of false memes

Michelle Obama Deletes Hillary Clinton From Twitter

‘You’re fake news’
Group Consensus and Polarization
Explaining Brexit

Britain’s immigration paradox

Areas with lots of migrants voted mainly to Remain. Or did they?
Social Echo Chambers

- Greater access to information via online news and social media fosters selective exposure to ideological content, resulting in a so-called “echo chamber” of like-minded opinions that promote social extremism and political polarization.
Clinton and Trump supporters live in their own Twitter worlds

Hillary Clinton supporters in this user group are not as cohesive as Trump supporters and they interact more frequently with users who follow both or neither candidate. They have few mutual follower networks in common with the far-right conservative cluster.

This large cluster of Trump supporters on Twitter have little mutual follower overlap with other users and are a remarkably cohesive group. They exist in their own information bubble.

Source: The Electome | The Laboratory for Social Machines at the MIT Media Lab
Concerted disinformation campaign

**prop-a-gan-da**
prä-pə-'gan-da noun 1. Derogatory information, especially of a biased or misleading nature, used to promote or publicize a particular political cause or point of view.

A FILM BY
ROBERT KENNER

MANUFACTURE DOUBT
STRATEGIES & TACTICS OF THE TOBACCO INDUSTRY HEALTH CARE VACCINATIONS CLIMATE CHANGE

SHIFT THE BLAME
DELAY REGULATION

OFFICIAL SELECTION
TELLURIDE FILM FESTIVAL
OFFICIAL SELECTION
TORONTO FILM FESTIVAL
OFFICIAL SELECTION
NEW YORK FILM FESTIVAL

FROM THE DIRECTOR OF “FOOD, INC.”
Promoting “fake experts” to manufacture doubt about science

Sometimes, inconvenient scientific facts threaten the interests of industry groups and organisations. For example, the scientific evidence linking smoking with lung cancer threatened the profits of the tobacco industry. Similarly, scientific evidence linking fossil fuel emissions with global warming threatens the profits of the fossil fuel industry.

According to a recent nationwide survey:

**More Doctors Smoke Camels than Any Other Cigarette**

Your “T-Zone” Will Tell You...
- T for Taste...
- T for Throat...

That’s your proving ground for any cigarette. See if Camels don’t suit your “T-Zone” to a "T."

Camels Costlier Tobaccos

In these cases, a common tactic for industry groups and organisations is to manufacture doubt about the science through the promotion of “fake experts”. Fake experts are spokespersons who convey the impression of expertise in a given area without possessing actual relevant experience. Groups wishing to cast doubt on science often use fake experts to convince the public that the science isn’t settled.
According to Bill O'Reilly, 80% of all the shootings in New York City are blacks—if you add Hispanics, that figure goes to 98%. 1% white.
A “psychological vaccine” against fake news

Inoculating the Public against Misinformation about Climate Change

Sander van der Linden,* Anthony Leiserowitz, Seth Rosenthal, and Edward Maibach
A psychological vaccine against fake news
A psychological vaccine against fake news

Cambridge scientists consider fake news 'vaccine'
The biological “inoculation” metaphor

Antigen triggers antibody production in the body
The process of psychological “inoculation”

- **Affective basis:** “Warning of impending threat”
- **Cognitive basis:** “Refutational preemption”

**Triggers production of mental “antibodies”**

**Increased resistance to future exposure and persuasion attempts**

The vaccine

Through internal rehearsal

Psychological Inoculation
A Psychological Vaccine Against Fake News

Note: CT = Consensus Treatment, CM = Counter-Message, In1 = General Inoculation, In2 = Detailed Inoculation. Error bars represent 95% confidence intervals.
Nazi indoctrination was most effective where it could tap into pre-existing prejudices (Voigtländer & Voth, 2014).

German General Social Survey (2006)
“Jews living in Germany should have equal rights with Germans in all respects”

10% Disagreed in Hamburg
48% Disagreed in Lower Bavaria
Archival studies have shown that people exhibit heightened authoritarian propensities and behaviors during periods marked by social, economic, and political threat, including toughness, aggression, cynicism, and submission to power and authority (e.g., see Lavine et al., 1999).

Prejudiced individuals were 40% more likely to oppose racially egalitarian policies compared to non-prejudiced individuals after ad campaign exposure (Mendelberg, 1997).
Fake News Policy?

Truth seekers: inside the UK election's fake news war room

In an office in London, fact checkers part-funded by Google and Facebook are hard at work attempting to stem the endless flow of fake stories

Inquiry launched into targeting of UK voters through social media

Information commissioner’s investigation to go further than current exploration of practices used in EU referendum

- General election 2017 - latest updates
Policy and population behavior in the age of Big Data

Kai Ruggeri1, Hojeong Yoon2, Ondřej Kácha3, Sander van der Linden4, Peter Muennig5

https://doi.org/10.1016/j.cobeha.2017.05.010

Highlights

• Policies increasingly utilize Big Data to target sub-groups of populations.
• Big Data studies may not reflect psychological insights from traditional research.
• If done appropriately, Big Data may produce high-power, nuanced policy insights.
• Ethical and scientific topics call for legislative and professional guidance.
• A simple test may promote appropriate use leading to ideal population outcomes.
Thank you