



**ASSET**

share and move to face nasty bugs

# VACCINATION HESITANCY 2.0

Roberta VILLA (ZADIG)  
Lay public engagement

**The ASSET FINAL EVENT**

*Share and move for mobilization and mutual learning at local,  
national and international levels on Science in Society related issues  
in epidemics and pandemics  
Rome, 30-31.10.2017*

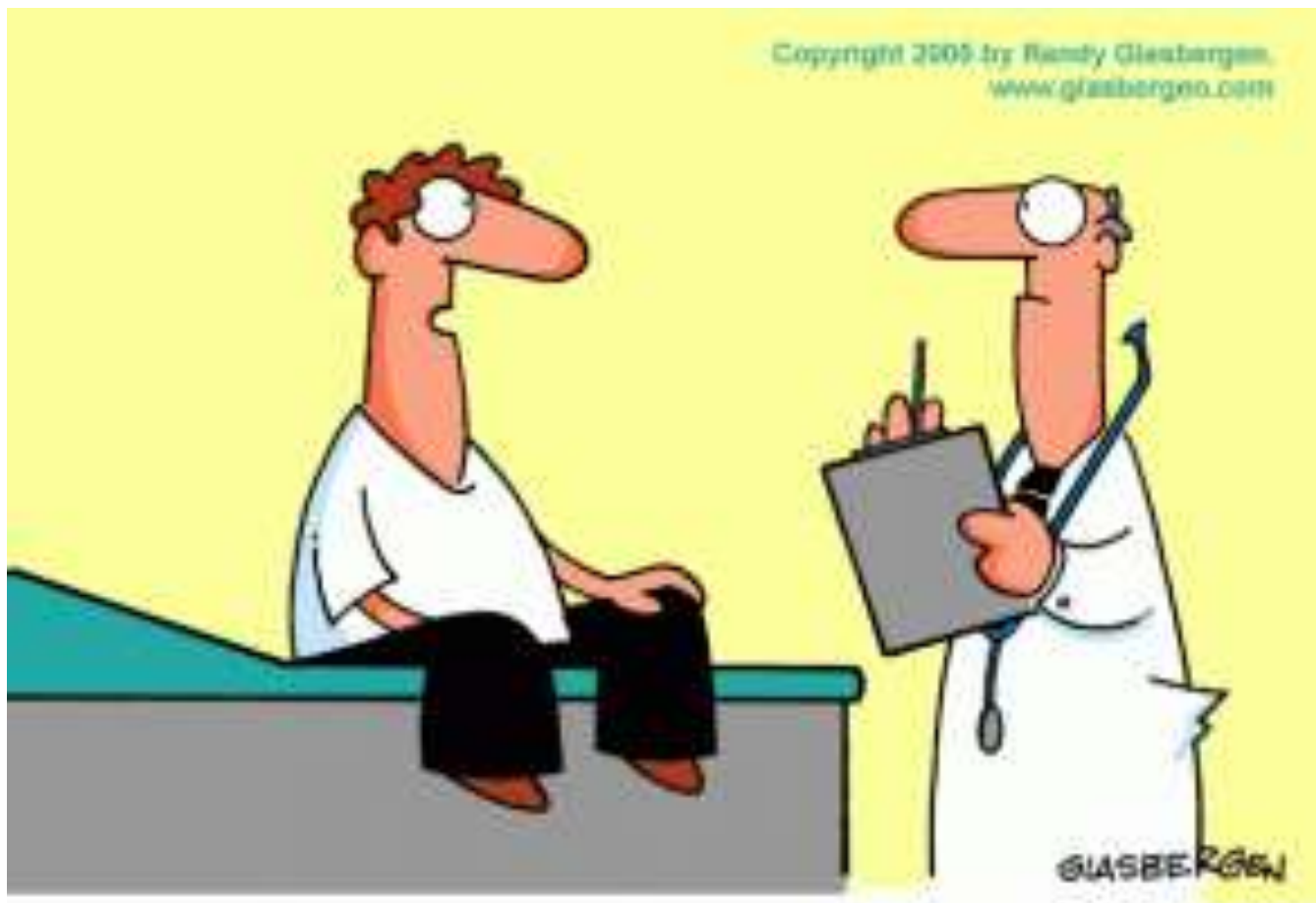
[www.asset-scienceinsociety.eu](http://www.asset-scienceinsociety.eu)



co-funded by the EU. GA: 612236



# DOCTOR GOOGLE



**“I already diagnosed myself on the Internet.  
I’m only here for a second opinion.”**





# WEB 2.0

## Benefits

- Engage and involve the public
- Advocay
- Widen audience
- Inform in real time
- Choose one's own source



## Risks

- Get fake or contradictory information
- Easy misunderstanding
- Difficult transmission of complexity
- Choose one's own source





# 2009: 1st Pandemic 2.0







RESEARCH ARTICLES

# Dramatic change in public attitudes towards vaccination during the 2009 influenza A(H1N1) pandemic in France

P Peretti-Watel ([patrick.peretti-watel@inserm.fr](mailto:patrick.peretti-watel@inserm.fr))<sup>1,2,3</sup>, P Verger<sup>1,2,3</sup>, J Raude<sup>4,5</sup>, A Constant<sup>2,1</sup>, A Gautier<sup>5</sup>, C Jestin<sup>5</sup>, F Beck<sup>5,6</sup>

- 1. INSERM, UMR912 Economics and Social Sciences Applied to Health and Analysis of Medical Information (SESSTIM), Marseille, France
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Peretti-Watel P, Verger P, Raude J, Constant A, Gautier A, Jestin C, Beck F. Dramatic change in public attitudes towards vaccination during the 2009 influenza A(H1N1) pandemic in France. Euro Surveill. 2013;18(44):pii=20623. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20623>

Article submitted on 14 January 2013 / published on 31 October 2013

## 3 PHONE SURVEY IN FRANCE ANTIVACCINE ATTITUDES

1) 2000 (12.000 p)	8,5%
2) 2005 (24.000 p)	9,6%
3) 2010 (8.500 p)	38,2%

[www.eurosurveillance.org](http://www.eurosurveillance.org) 31/10/2013





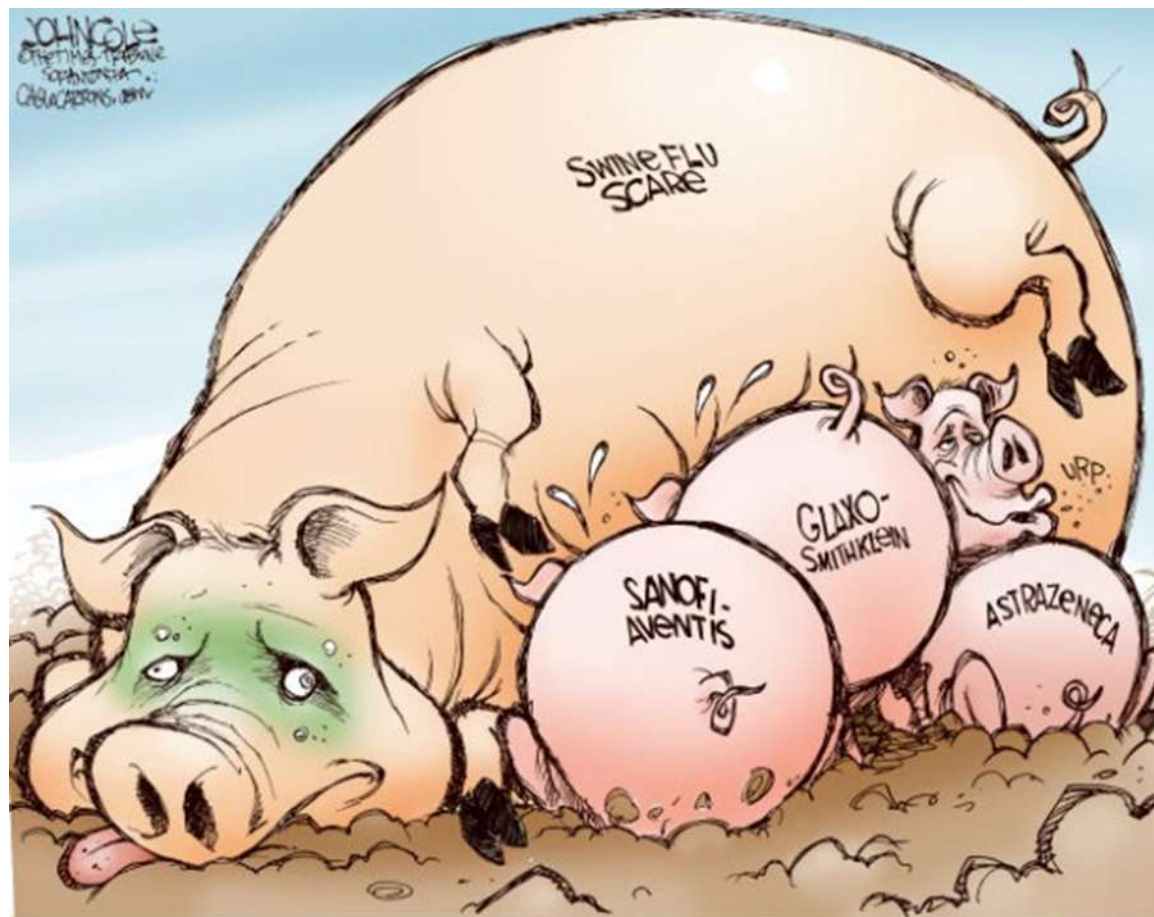
# MISTAKES

- Lack of internal communication
- Lacking awareness of social media relevance, scarce monitoring and reluctance to enter the game
- Lack of transparency and adaptation



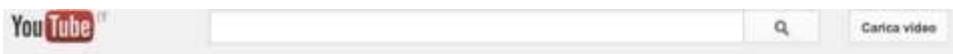


# Conspiracy theories





# USA



GUIDA / NOVITÀ



### Symptoms of H1N1 (Swine Flu)



CDCStreamingHealth - 554 videos



iscriviti 11.210

2.134.364

5.360 800

## @CDCemergency

CDC's Swine Flu website was viewed half a million times on Friday: <http://bit.ly/10lkO>

*about 7 hours ago from web*

Add the CDC Swine Flu RSS Feed to your news reader: <http://bit.ly/UejRW>

*about 8 hours ago from web*

New CDC video podcast on swine flu helps you learn signs/symptoms & how to protect yourself: <http://bit.ly/19zsJQ>

*about 12 hours ago from mobile web*

Corrected link for transcript for 04/24 CDC press conference on swine flu: <http://bit.ly/7VZvX>

*about 15 hours ago from mobile web*

Health departments: please use CDC interim case definition for swine flu: <http://bit.ly/h6IwD>

*about 15 hours ago from mobile web*







# EUROPE

- **Only 5 countries** used social media in pandemic communication





# ITALY





# IMPACT OF SOCIAL NETWORK

ARTICLE

## The Impact of Social Networks on Parents' Vaccination Decisions

**AUTHOR:** Emily K. Brunson, MPH, PhD

*Department of Anthropology, Texas State University, San Marcos, Texas*

**KEY WORDS**

immunizations, decision-making, social network analysis

**ABBREVIATIONS**

AIC—Akaike Information Criterion

CI—confidence interval

OR—odds ratio

[www.pediatrics.org/cgi/doi/10.1542/peds.2012-2452](http://www.pediatrics.org/cgi/doi/10.1542/peds.2012-2452)

doi:10.1542/peds.2012-2452

Accepted for publication Jan 29, 2013

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**WHAT'S KNOWN ON THIS SUBJECT:** Previous studies have suggested that health care providers, family members, friends, and others play a role in shaping parents' vaccination decisions. Other research has suggested that the media can influence whether parents decide to vaccinate their children.



**WHAT THIS STUDY ADDS:** Through the application of social network analysis, this study formally examines and quantifies how parents are influenced by the people and sources around them. Its findings suggest that social networks are important, particularly for parents who do not completely vaccinate.

Pediatrics, 2013





# Global Concern

“With ever increasing access to Internet-based information, an unsubstantiated rumour about vaccines can rapidly circle the globe and undermine immunization services, sparking outbreaks of disease and untold deaths.”

*State of the World's Vaccines and Immunization*  
WHO, Unicef and the World



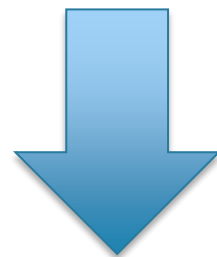
6th August, 2013





# SOCIAL NETWORKS

- Interactions in real time
- Control of contents



## DIFFICULT FOR INSTITUTIONS





# Institutional use of social networks



*“When was your last tetanus shot? Tetanus vaccines can prevent this disease in children, teens and adults. Without the vaccine, you can get tetanus (“lockjaw”) just by getting cuts, especially puncture wounds, that become infected with the bacteria.”*

Centers for Disease Control and Prevention (CDC)





# COME ON!

75% of public trust more  
institutions engaging  
on Twitter and Facebook

Building trust, ECDC 2012





# VACCINE HESITANCY

## didn't start with social networks

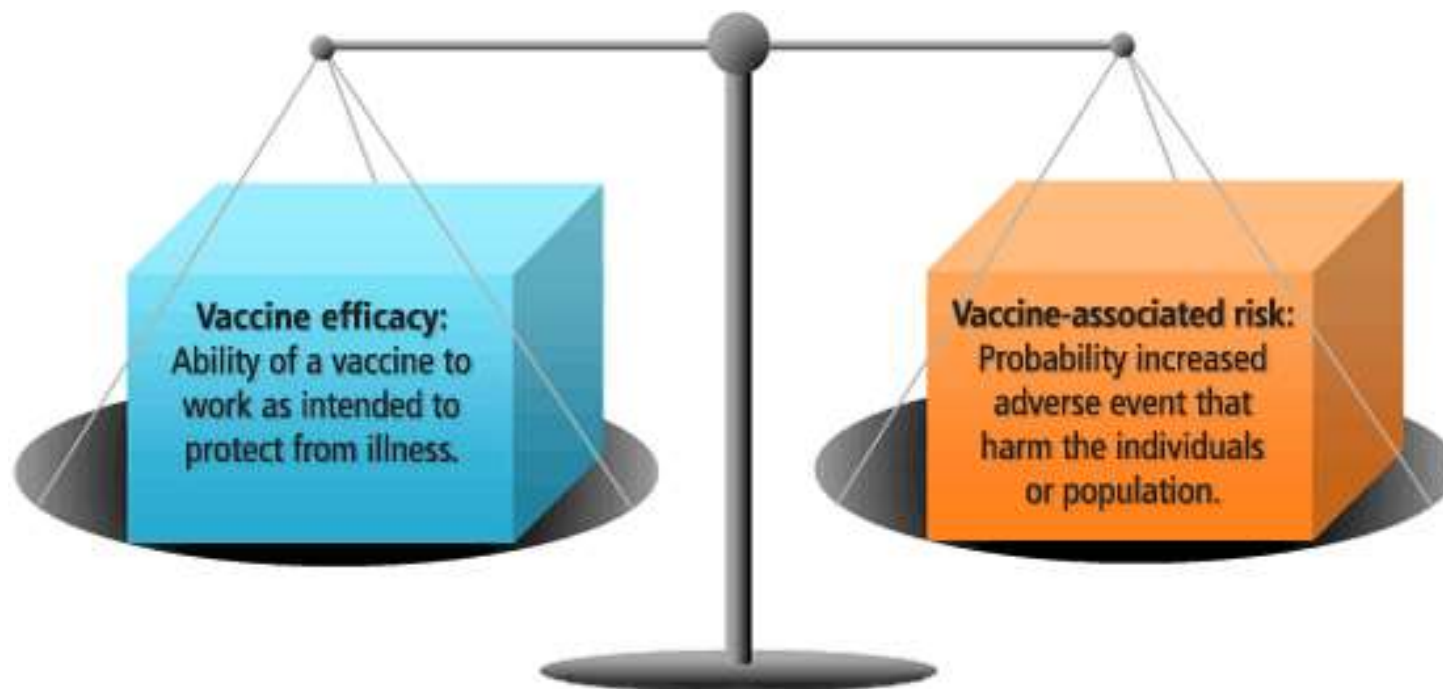
- '700 – '800 oppositions against Dr. Jenner in UK e President Jefferson in USA
- 1879 Anti-Vaccination Society of America
- 1882 New England Anti-Compulsory Vaccination League
- 1885 Anti-Vaccination League of New York City
- '900 Brazil riots







# VACCINES ADVANTAGES ARE COUNTERINTUITIVE

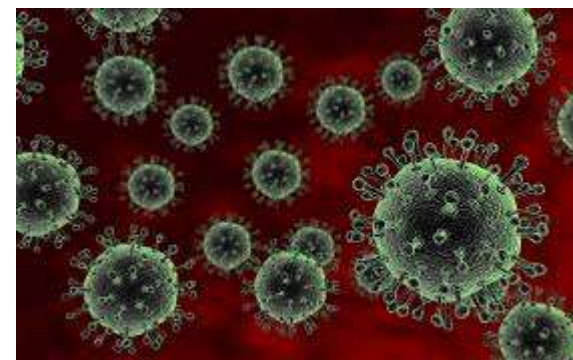
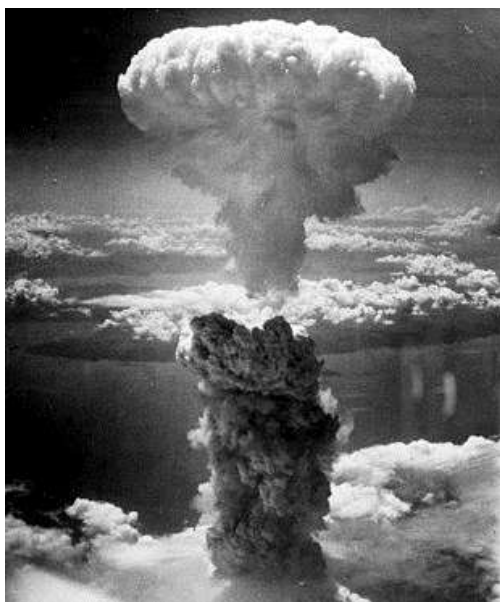




# RISK PERCEPTION

“The risks that kill people and the risks that alarm them are completely different”

Covello & Sandman, 2001





# PETER SANDMAN'S FORMULA

- Effective risk is different by its perception

$$R=H+O$$

R= Perceived risk  
H= Hazard, effective risk  
O= Outrage, what makes «offensive» the risk



"This new mandatory STD vaccine shouldn't hurt a bit."





# Some components of OUTRAGE

## MORE ACCEPTABLE

- Voluntary/controlled
- Natural
- Familiar/known
- Not memorable/  
Chronic
- Fair
- Morally irrelevant
- Trustworthy sources

## LESS ACCEPTABLE

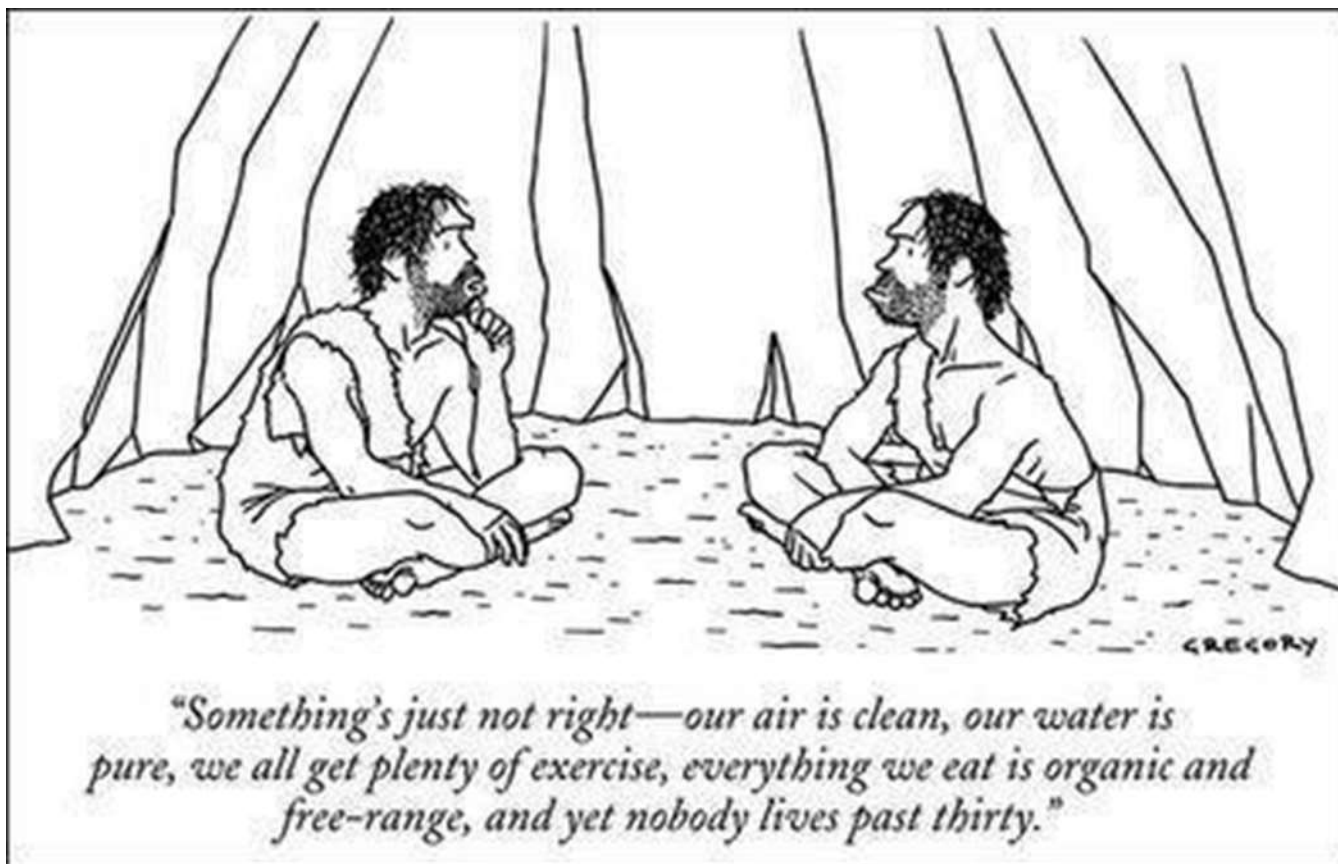
- Coerced/controlled by others
- Industrial
- Exotic/unknown
- Memorable/  
Catastrophic
- Unfair
- Morally relevant
- Untrustworthy sources







# THE MYTH OF NATURE





# NEGATIVE DOMINANCE

- In front of a risk people put greater value on losses and other negative information or outcomes than on gains or positive information and outcomes

**N=3P**

**CONTERBALANCE**

**in risk communication!!**





# NEGATIVE DOMINANCE: A MATTER OF SURVIVAL





# OTHER COGNITIVE BIAS

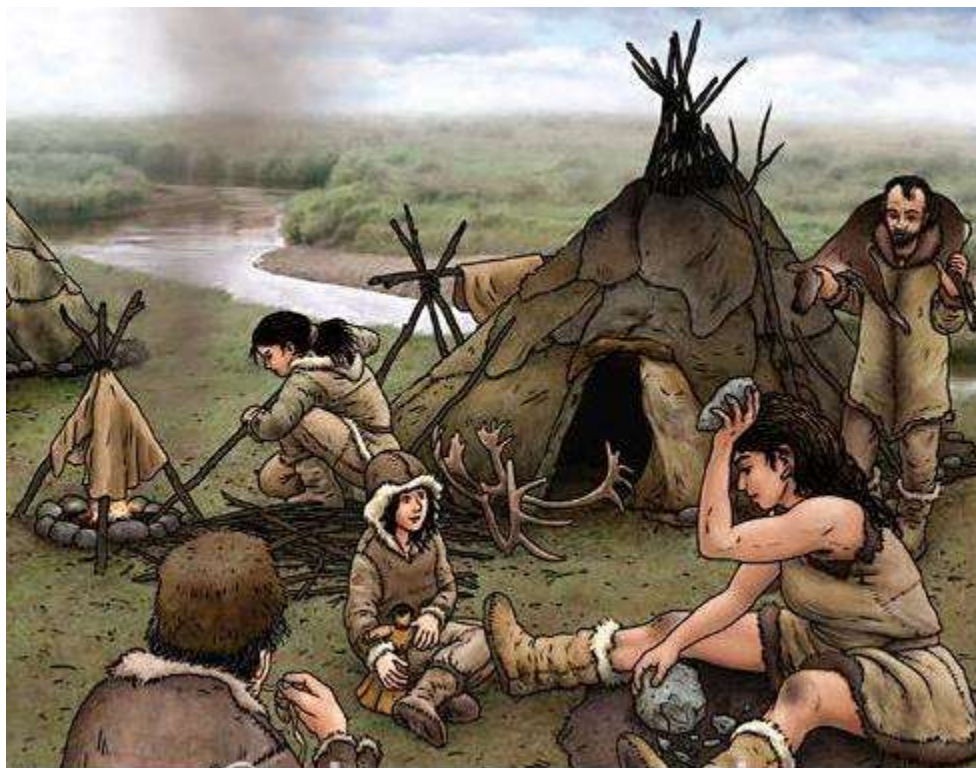
- Omission bias
- Neglecting probability
- Correlation and causation
- Confirmation and in-group bias  
(social networks) (see Nyhan, Pediatrics 2014)







# CORRELATION AND CAUSATION: A MATTER OF SURVIVAL





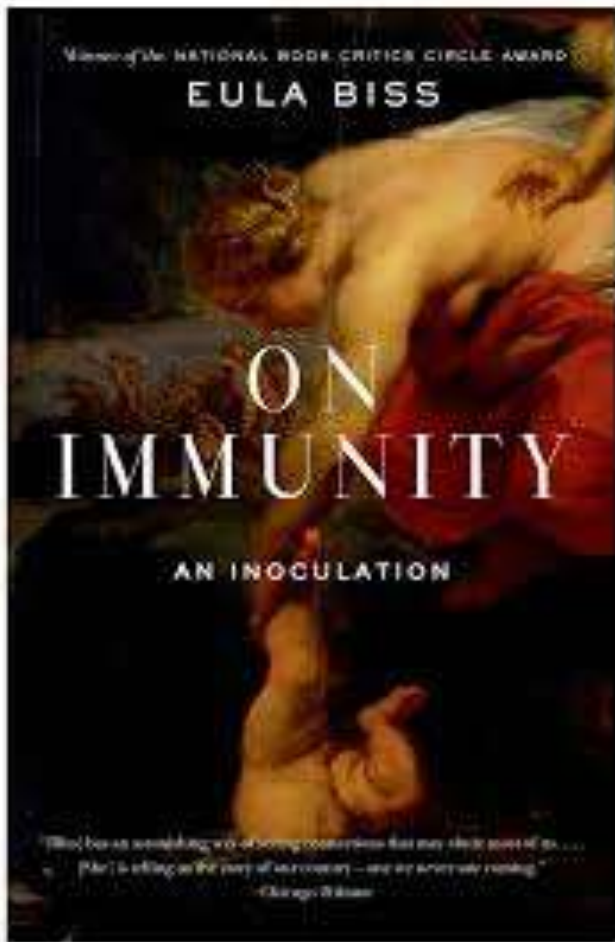


# INFORMATION IS NOT ENOUGH





# BIAS AND EMOTION PREVAIL





# WE CANNOT IGNORE THEM!







# THE ROLE OF DEBUNKING





# Communication on immunisation – Building trust /ECDC 2012

1.

**COMMUNICATE:  
LISTEN BEFORE  
ANSWERING**



2.

**FOCUS ON  
PROTECTION  
N**

**3. MAKE ACCESS EASIER**







# IN DOC WE TRUST





CHAINSAWSUIT.COM



# THANK YOU!

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