



Misinformation, Conspiracy Theories, and 5G in the Age of COVID-19

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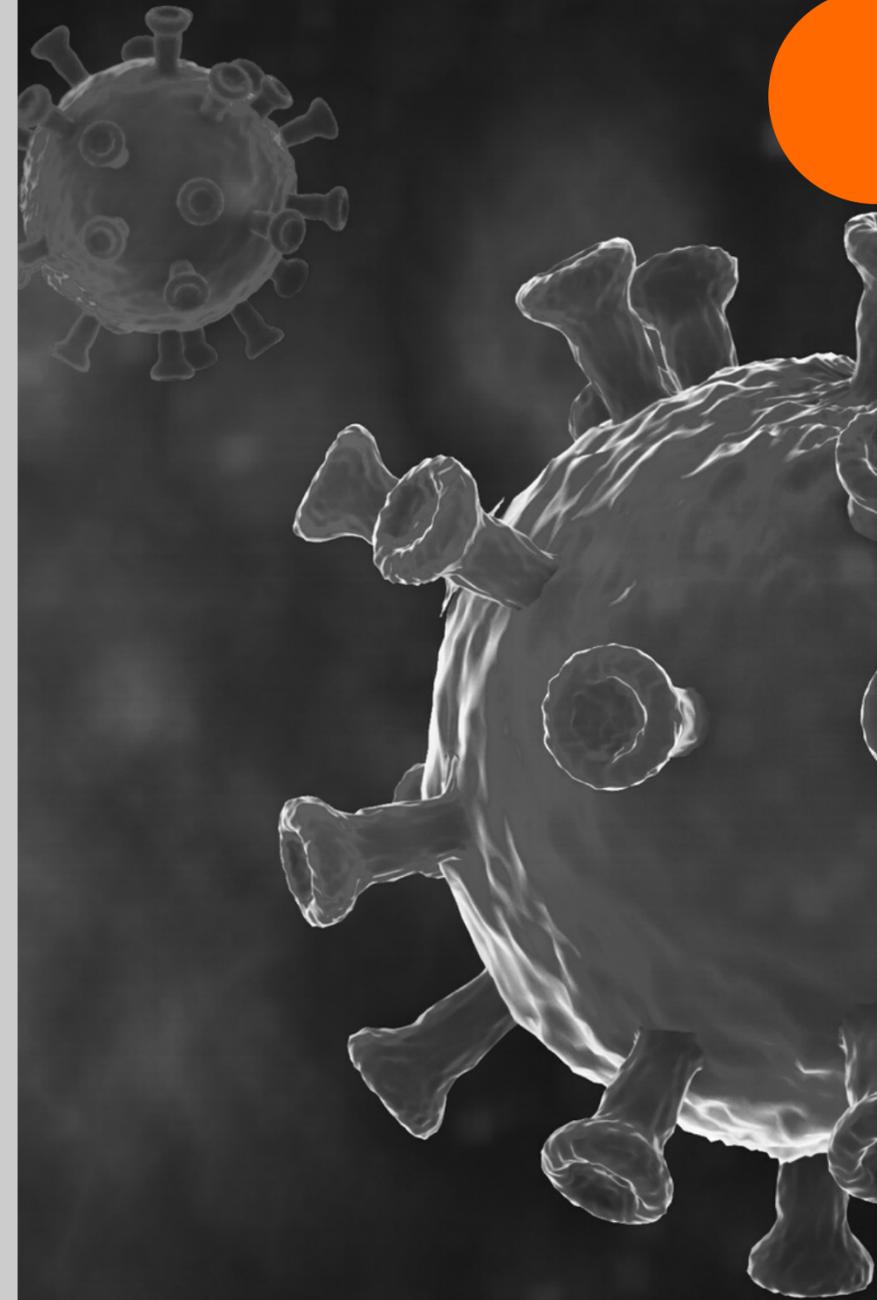
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01.



The Age of COVID-19

→ "Infodemic"



Infodemic (e.g., Freeman et al., 2020)

- 25% OF U.K. PUBLIC CONSISTENTLY OR STRONGLY ENDORSED CONSPIRATORIAL CORONAVIRUS BELIEFS
- 20% AGREE THAT “VIRUS IS A HOAX”
- 10% AGREE COMPLETELY THAT THE “VIRUS IS MANMADE”





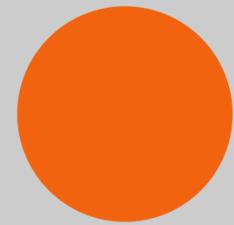
Why Conspiracy Theories?

- When people feel threatened, they become vulnerable to believing in conspiracies
- Pandemics always lead to conspiracy theories
- Black Death in 14th century led to anti-Semitic hysteria
- Russian cholera in 1892 was blamed on doctors, crowds chased anyone in a white coat



Why 5G Conspiracy Theories?





Why 5G Conspiracy Theories?

- When people feel a loss of control, they are particularly prone to detect patterns and correlations where there are none (Whitson & Galinsky, 2008)

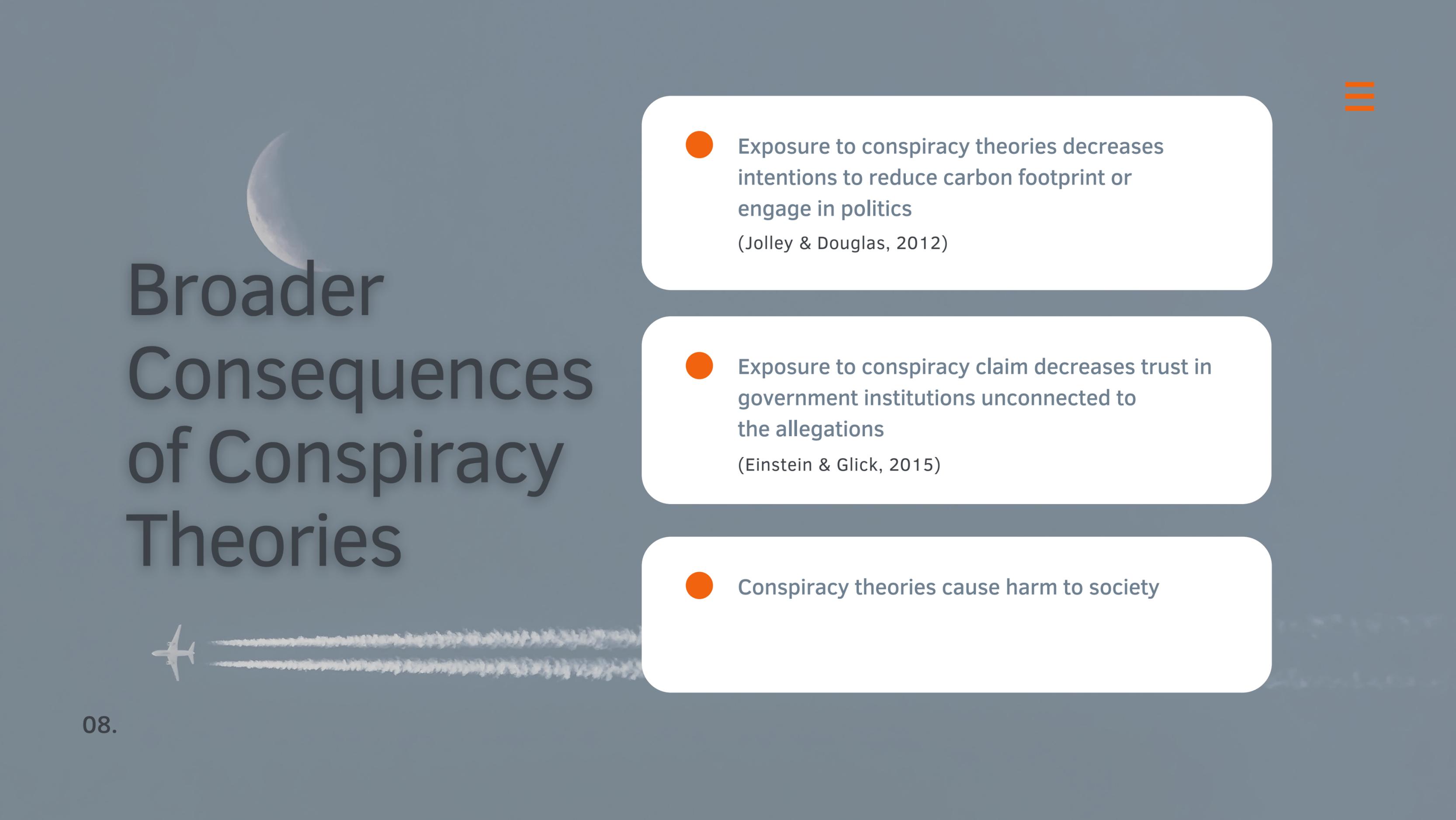
- Spanish Flu in 1918 was also blamed on radio waves

- Replace one invisible cause with another invisible cause

Fallout From Conspiracist Beliefs



- Reliance on social media positively associated with conspiratorial attitudes (Allington et al., 2020)
- Conspiratorial thinking is associated with reduced compliance, intention to vaccinate (Allington et al., 2020; Freeman et al., 2020)
- Conspiratorial beliefs are associated with willingness to engage in violence (e.g., vandalism of 5G installations; Jolley & Paterson, 2020)



Broader Consequences of Conspiracy Theories

- Exposure to conspiracy theories decreases intentions to reduce carbon footprint or engage in politics

(Jolley & Douglas, 2012)

- Exposure to conspiracy claim decreases trust in government institutions unconnected to the allegations

(Einstein & Glick, 2015)

- Conspiracy theories cause harm to society

COVID-19 and Science

→ "Infodemic"

→ Greater trust
in scientists



Soaring Trust in Scientists (Germany, April-May 2020)



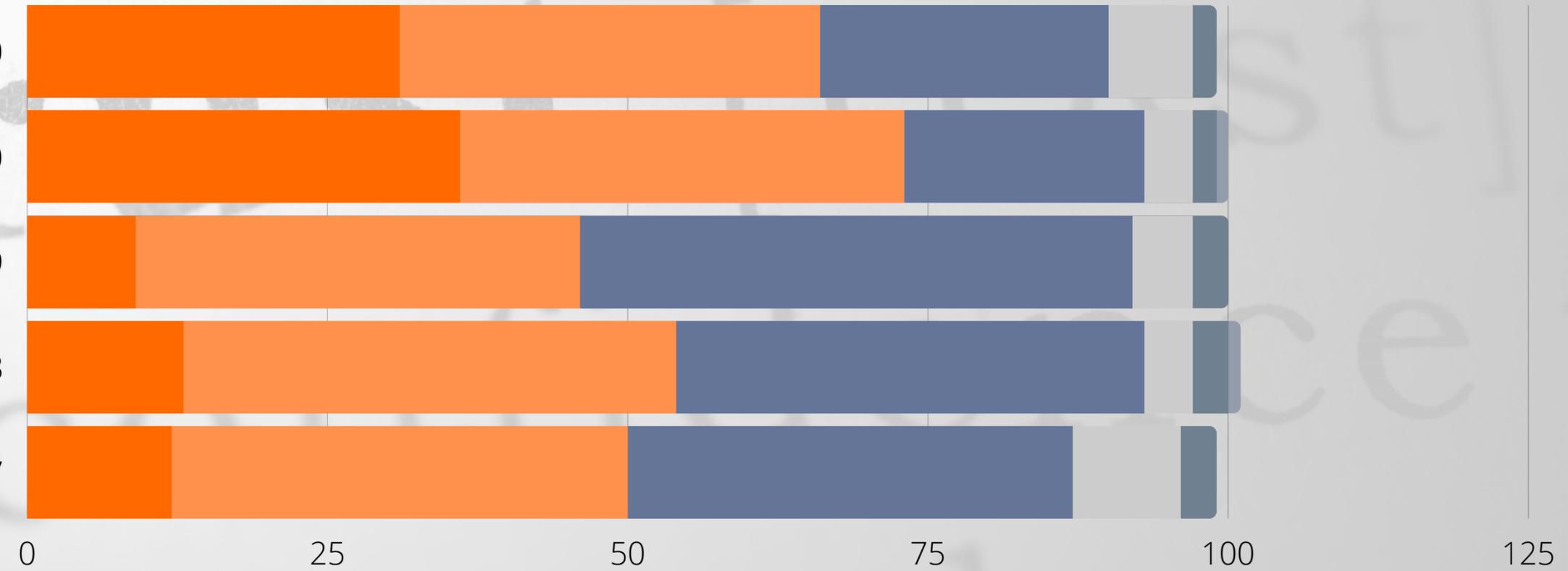
25./26. Mai 2020

15./16. April 2020

2019

2018

2017



Trust completely or partially

Undecided

Distrust

Uncertainty and Expertise (Germany, May 2020)



Controversies between scientists regarding Corona are helpful because they help ensure that the correct results ultimately prevail



Most scientists who currently speak out differentiate clearly between things they know for sure and open questions regarding Corona



Agree completely or partially **Undecided** **Disagree**

Source: Wissenschaftsbarometer



Soaring Trust in Scientists (U.K., May 2020)

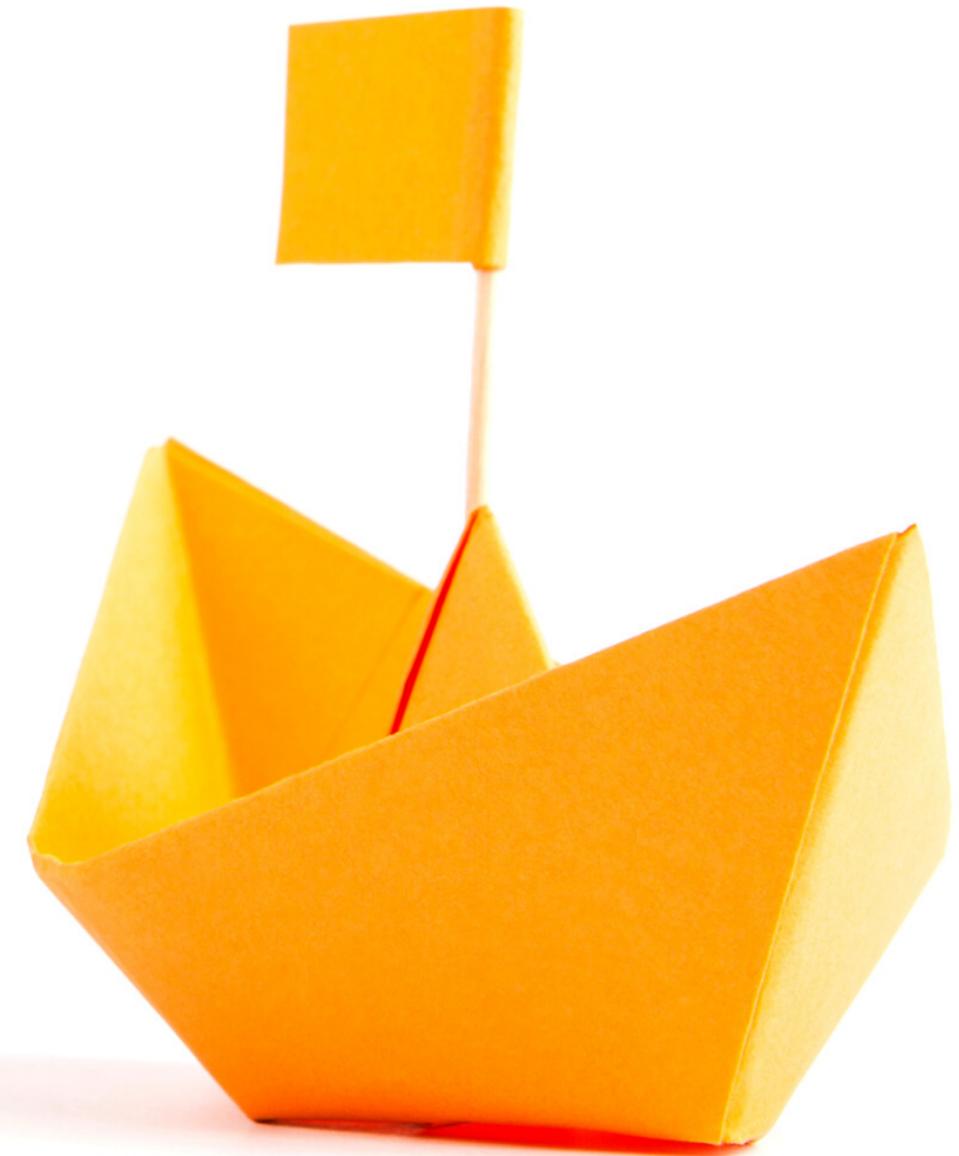


- - 64% are now more likely to listen expert advice from qualified scientists and researchers
 - Some people resort to conspiracy theories in times of uncertainty, but not everybody does

Source:



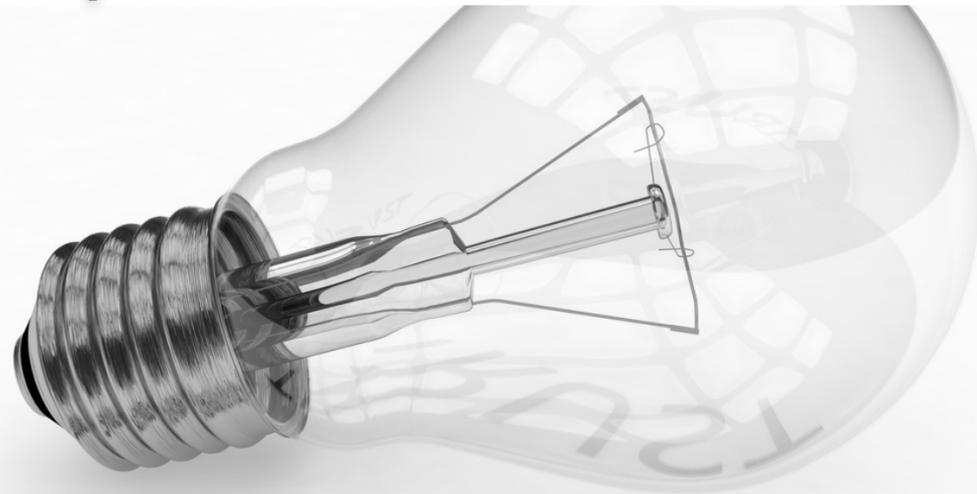
**Open Knowledge
Foundation**





● A Striking Bifurcation

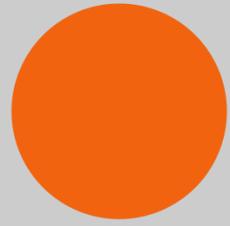
Accept and trust science



TRUST



Endorse conspiratorial alternatives



Questions

- How widespread is the association between conspiratorial beliefs and rejection of science?
- Why do people engage in conspiratorial thinking?
- Why do they cling to their beliefs when challenged?
- What can we do about it?



Conspiracies vs. Science

- Conspiracy theorizing is the antithesis to scientific reasoning
 - scientists test hypotheses, conspiracy theorists confirm them
- Science denial is generally associated with endorsement of conspiracies



The Pervasive Role of Conspiracy Theories in Science Denial



Lewandowsky et al. (2013) PLOS ONE; Lewandowsky et al. (2013) Psychological Science; Uscinski & Olivella (2017) Research and Politics; Hornsey et al. (2018) Nature CC; Hornsey et al. (2018) Health Psychology.

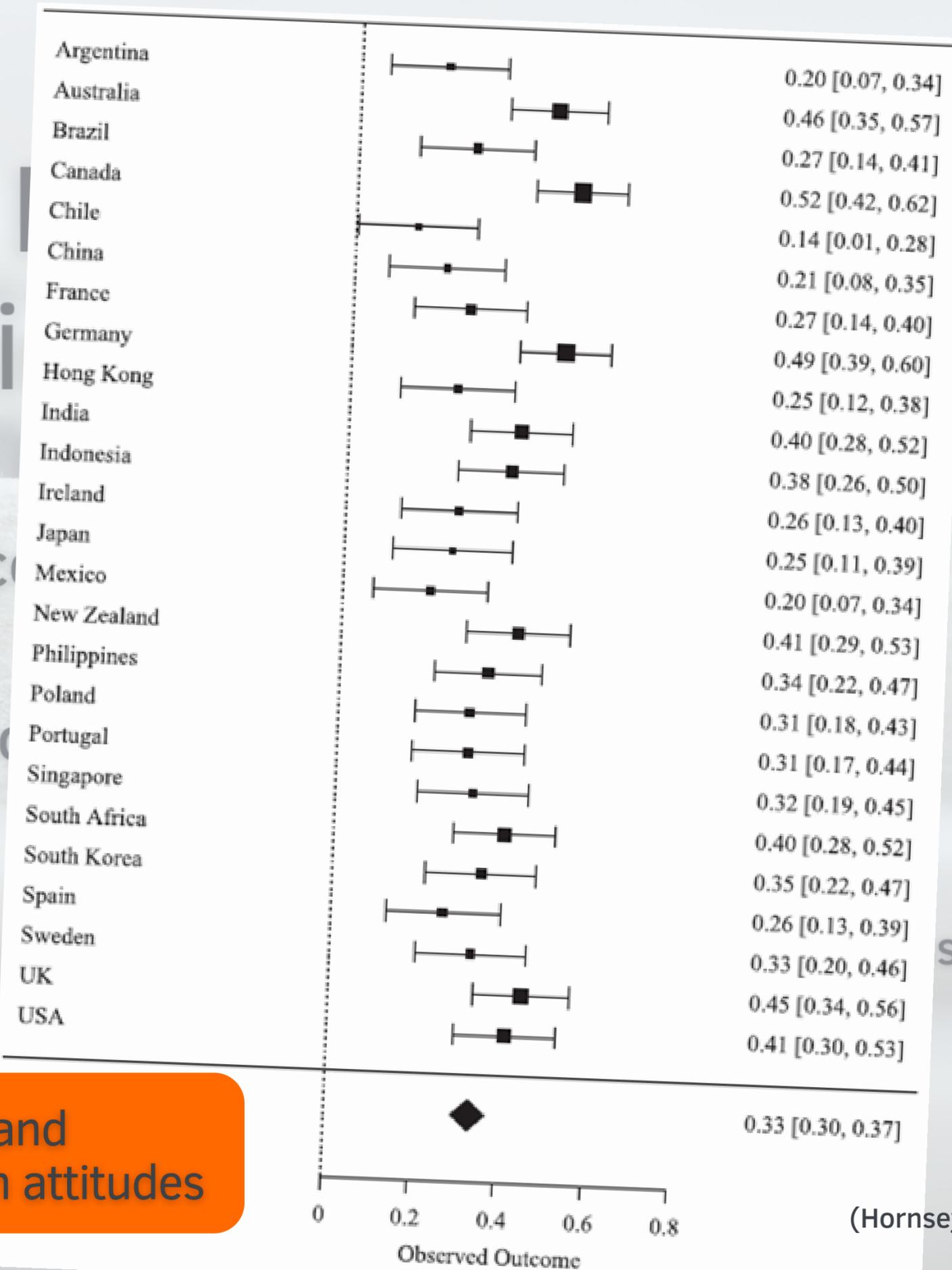
The Pervasive Impact of Conspiracy Theories in Science

- Vaccinations
- Smoking and lung cancer
- HIV and AIDS
- Genetically modified food
- Climate
- Nanotechnology

Lewandowsky et al. (2013) PLOS ONE; Lewandowsky et al. & Olivella (2017) Research and Politics; Hornsey et al. (2018) Psychology.

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Conspiracism and antivaccination attitudes



(Hornsey et al., 2018)



CONSPI



● Why Conspiracies?

- DISPOSITIONAL: SOME PEOPLE ARE PRONE TO CONSPIRACISM
 - BELIEF IN ONE CONSPIRACY PREDICTS BELIEF IN OTHERS (E.G., SWAMI ET AL., 2011)
 - CONSPIRACISM PREDICTABLE BY OTHER PERSONALITY VARIABLES (E.G., DARWIN ET AL., 2011)
- PRAGMATIC: RESPONSE TO THREAT TO WORLDVIEW
 - FREE-MARKET ENDORSEMENT PREDICTS REJECTION OF CLIMATE SCIENCE $R = -.70$ (E.G., LEWANDOWSKY ET AL., 2013)

Pragmatic Threat Response

Overwhelming Scientific evidence



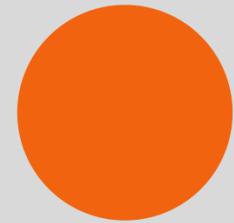
Perceived as a threat to:

- lifestyle
- worldview
- profits

Most Scientists Agree
(climate: 97%)



If virtually all scientists agree that the evidence is overwhelming, then they must be involved in a conspiracy

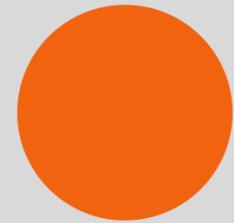


Not All Conspiratorial Rhetoric Reflects Commitment to Conspiracies

- ENDORSE CONSPIRATORIAL ALTERNATIVES



- “I HATE MASKS, SO COVID IS A HOAX”
(LEWANDOWSKY, 2020)



But Some People are Deeply Committed to Conspiracies



- DISPOSITIONAL VARIABLES (DARWIN ET AL., 2011)
- PSYCHOLOGICAL RELIEF: BLAME CAN BE DIRECTED AT SPECIFIC CULPRITS, RESTORING SENSE OF CONTROL AND PROVIDING COPING MECHANISM (FRANKS ET AL., 2013)

Why Stick to Conspiracy Theories?



Conspiracy theories are notoriously difficult to debunk—or are they?



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- DEBUNKING CAN BE VERY CHALLENGING
- DEBUNKING HAS BEEN SHOWN TO BE SUCCESSFUL (FOR REVIEW, SEE LEWANDOWSKY & COOK, 2020)

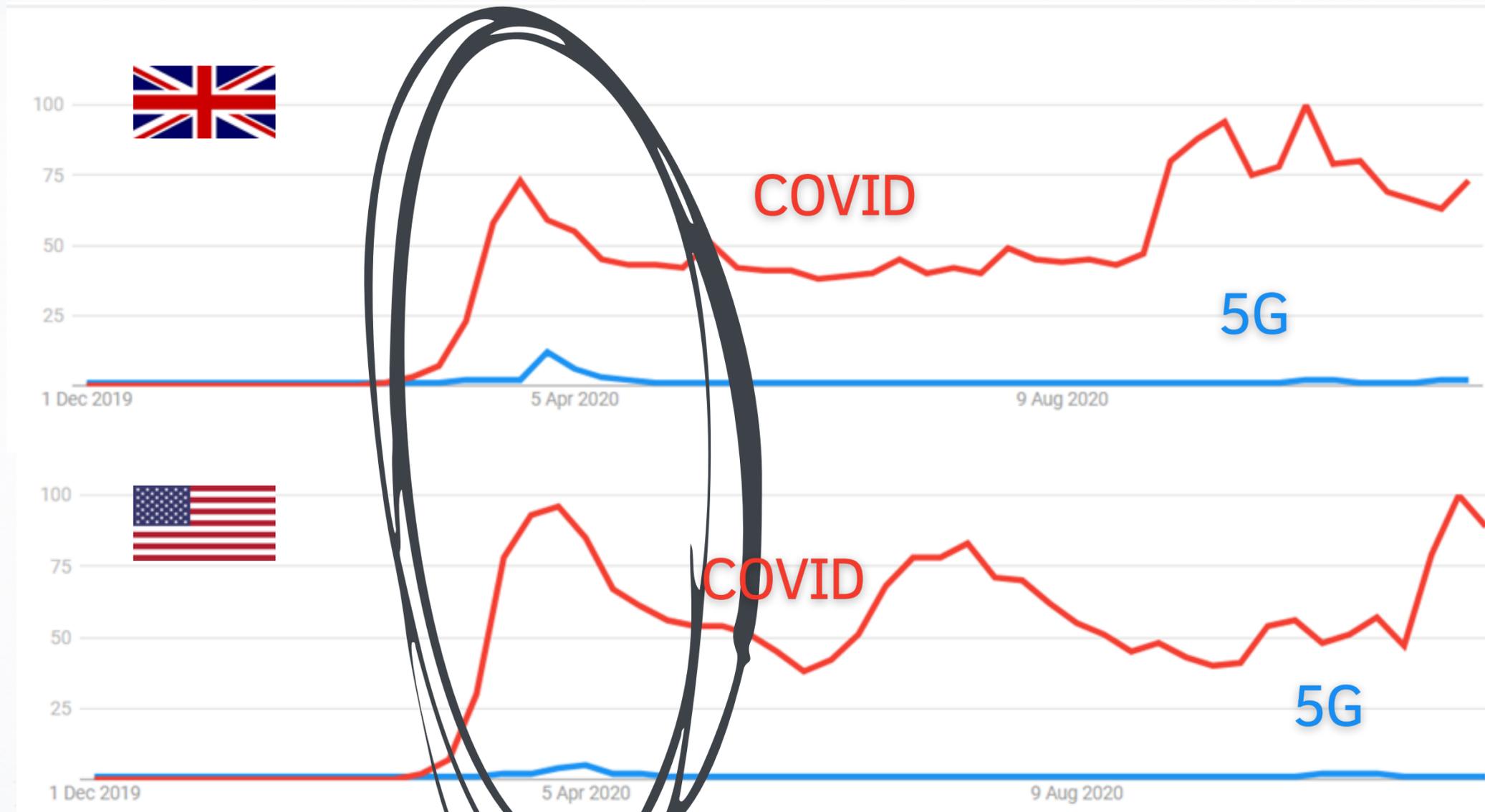


What Can We Do?

- Respond to disinformation and/or wait
- UK government came out strongly against “crazed” 5G conspiracy theory
- Large global corrective effort (Bruns et al., 2020)



Google Trends Data





What Can We Do?

- Misinformation finds less traction
 - if people are warned or inoculated
 - before the information is presented
 - “prebunking”
- Inoculation can protect against radicalization (Lewandowsky & Yesilada, 2020)
- Inoculation also protects against conspiracy theories.



Inoculation Against Conspiracy Theories



Condition	Intention to vaccinate (1-7)
Control	5.50
Conspiracy	4.42
Conspiracy → Anti-conspiracy	4.80

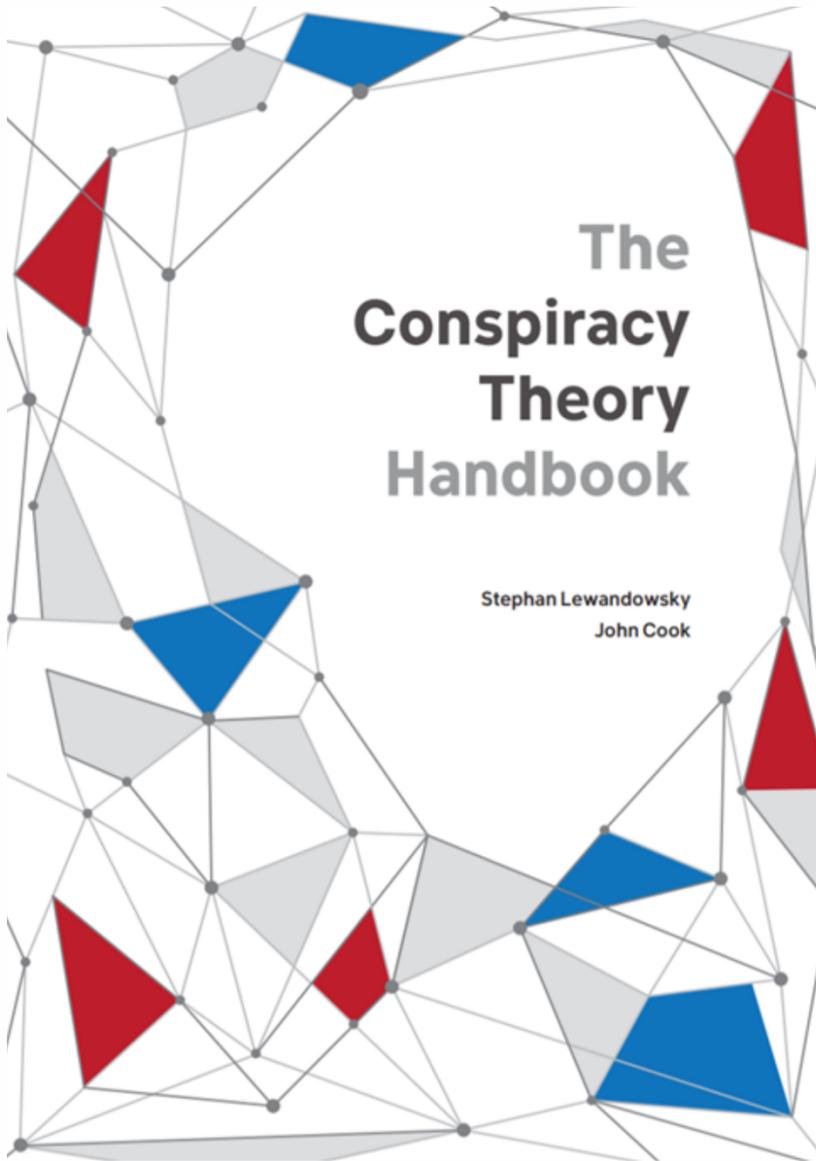
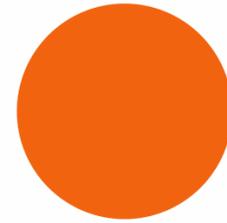


Inoculation Against Conspiracy Theories



Condition	Intention to vaccinate (1-7)
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Conspiracy → Anti-conspiracy	4.80
Conspiracy → Conspiracy	5.04

Similar results obtained with “prebunking” of 9/11 conspiracy theories (Banas & Miller, 2013)



<http://sks.to/conspiracy>