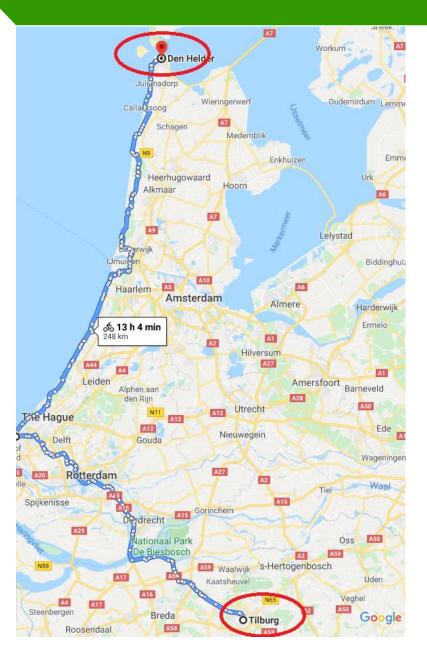
#### Uncertainty in research and its consequences

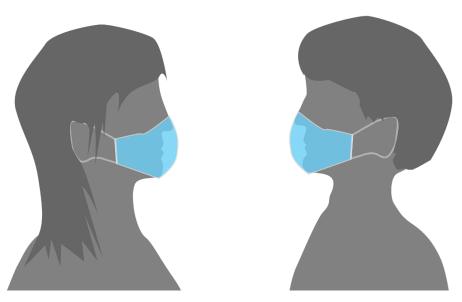
Robbie C.M. van Aert

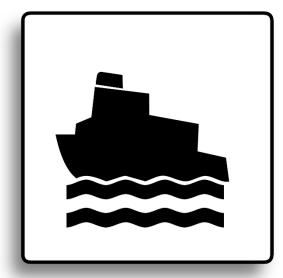
Tilburg University **Department of Methodology and Statistics** 



# My vacation







5

Source: Pixabay

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August 3	WHO: "Keep distance, wear a face mask, clean your hands and coughing safely away from others. Do it all."

Source: Volkskrant, August 21

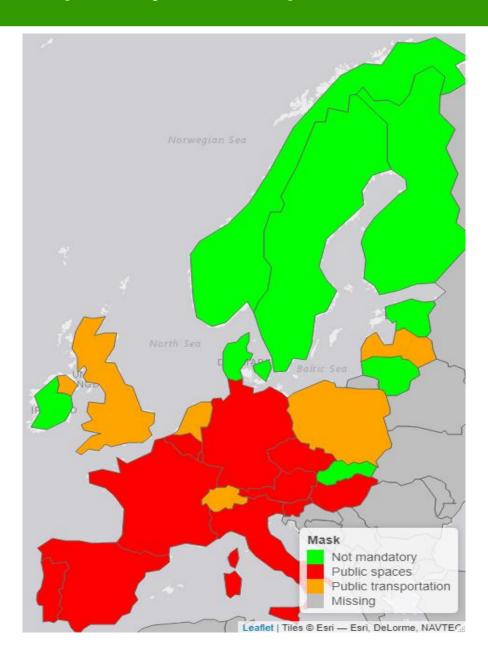
## Prime minister

"Policy making is now sailing a ship in very foggy conditions"





# Face masks policy: Europe



## Is this uncertainty common in research?

- Yes, definitely, but...
- ... it is not always acknowledged
- Replications to assess the uncertainty in research
- Percentage of successful replications
  - Psychology → about 36.1% (35/97)
  - Economics → about 68.8% (11/18)
  - Hematology and oncology → about 11.3% (6/53)



## Why should we care?

- Society/politicians:
  - Not acknowledging uncertainty → lower trust of science
  - Policy-making

- Students:
  - Well... you want to learn stuff that is correct
  - Some findings that could not be replicated are in psychology textbooks



## Take-home messages

- 1. Research is the foundation for policy makers and teachers (I hope)
- 2. There is always uncertainty in research
- 3. Question what you learn → teachers like this ;-)

But, most important: Enjoy your time as a student!



#### Thank you for your attention

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