# Heuristics and biases in decision making

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# What you should expect in the near future

- No meetings at the university until April,13th

- Course online – presentations, readings and tasks

- Tasks will need to be completed by you and submitted on the e-learning platform

- First task deadline – Monday, March 30th

- Decision about tests will be taken in due time, depending on the lockdown duration

- In case you need any additional information, please contact me via email or use the course chat

# Aim of today's class

- Learn about major heuristics and biases in decision making
- Consider their causes and effects

# First activity –guess the rule

| Numbers | Do they fit the rule? | The rule | Certainty |
|---|---|---|---|
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# Confirmation bias

- "Confirmation bias, as the term is typically used in the psychological literature, connotes the seeking or interpreting of evidence in ways that are partial to existing beliefs, expectations, or a hypothesis in hand." (Nickerson, 1998)
- It refers to:

    a) a way of searching for the information

    b) its interpretation

    c) and the way in which it is remembered (or forgotten)

# A real life example

- "This is the president's vision," said Peter Navarro, Trump's ascendant trade adviser. "My function, really, as an economist is to try to provide the underlying analytics that confirm his intuition. And his intuition is always right in these matters"

https://bloom.bg/2Fv7yEm

# Psychologist's reply

1. If you think anyone's intuition is always right, you're not thinking.

2. Analytics exist to challenge intuition, not confirm it.

3. Falling victim to blatant confirmation bias is bad. Saying it's your job as an economist is even worse.

Adam Grant on Twitter

# Kathleen Hartnett White

**Kathleen Hartnett White** is a Republican American government official and environmental policy advisor. Currently serving as a senior fellow at the free-market think tank Texas Public Policy Foundation. She was nominated by President Donald Trump to lead the Council on Environmental Quality; the nomination was later withdrawn.

Source: https://en.wikipedia.org/wiki/Kathleen_Hartnett_White

https://www.youtube.com/watch?v=xykBJLfxDFI

# Why do we fall pray to effects of biases? – on the example of the confirmation bias

- Reasons for them can be either cognitive or emotional

- They include following (Casad, 2007):
  - ❑ confirmation bias is an effective way to process information – there are certain cognitive limitations of human mind and we need shortcuts
  - ❑ confirmation bias helps people feel better about themselves (it is connected with the protection of one's self-esteem) – people feel that they are more intelligent if they hold accurate beliefs.

# How can confirmation bias affect you (or your colleagues)?

• Confirmation bias exists in motivated and unmotivated forms.

• Sometimes evidence is treated in a biased way because of the desire to defend one's beliefs. (which is quite obvious)

• People may however also be biased when they have no personal interest or other plausible reason.

• Think in groups of at least three examples of situations when you/ your friends, relatives or colleagues might be affected

https://www.ted.com/talks/eli_pariser_beware_online_filter_bubbles

# Some real-life decision making contexts in which the confirmation bias was studied

- Law and judical decisions

- Medicine and doctors' decisions

- Group work and inter-group relations

- Science

# Your task

- In groups search in the internet for the information about peculiar, seemingly strange beliefs teat people used to have

- Please choose 2 of them that you find interesting and discuss in your group if the confirmation bias can be held accountable for the fact that they prevailed

# Lind and the scurvy experiment (1747)

- Scurvy and sailors



Source: Wikipedia

# Lind and the scurvy experiment (1747)

- Lind picked 12 crewmen who suffered from scurvy and divided them into 6 pairs.

- Each pair received a different treatment:

| 1. a few drops of sulfuric acid | 2. a quart of cider | 3. half a pint of seawater |
|---|---|---|
| 4. a spicy paste plus a drink of barley water | 5. six spoons of vinegar | 6. two oranges and one lemon |