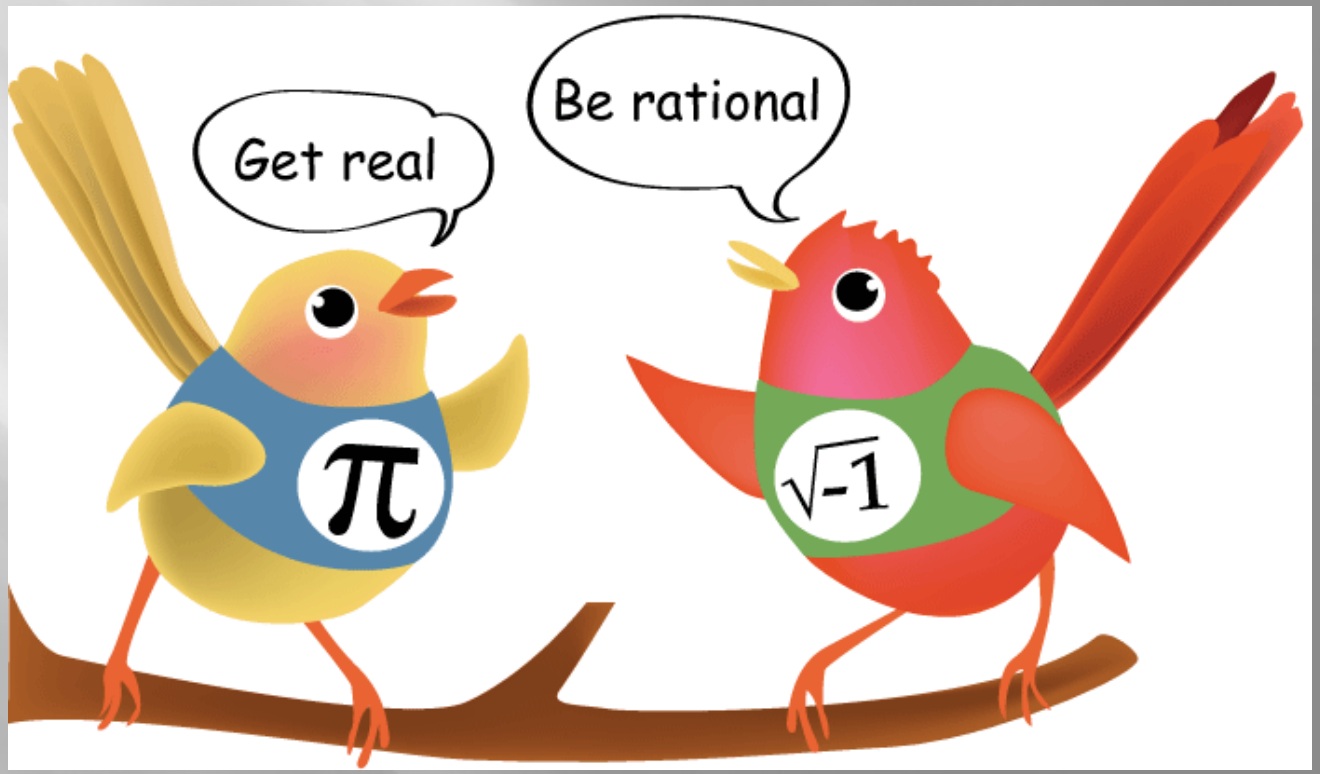
Rationality Myth

How & Why People Make Weird Choices



Rational animal

„Man is a rational animal – so at least I have been told. Throughout a long life I have been looking diligently for evidence in favour of this statement, but so far I have not had the good fortune to come across it.“

B. Russell

- **What does “RATIONAL” mean?**
- Reasonable & logical
- Unbiased by emotions
- Optimal, relative to the information available

Rational choice

- Expected Utility Theory:

$$\text{Expectancy} \times \text{Value}$$

Example 1: Crockery story

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Hsee, C. K. (1998). Less is better: When low-value options are valued more highly than high-value options. *Journal of Behavioral Decision Making*, *11*, 107-121.

Set A:

24 pieces

- Dinner plates 8, all in good condition
- Soup/salad bowls 8, all in good condition
- Dessert plates 8, all in good condition

Set B:

31 pieces

- Dinner plates 8, all in good condition
- Soup/salad bowls 8, all in good condition
- Dessert plates 8, all in good condition
- Cups 8, 2 of them broken
- Saucers 8, 7 of them broken

Example 1: Crockery story

Hsee, C. K. (1998). Less is better: When low-value options are valued more highly than high-value options. *Journal of Behavioral Decision Making*, *11*, 107-121.

Three groups:

	Offered price **Set A**(24pcs)	Offered price **Set B** (31pcs)
Group 1 – simultaneous evaluation	$ 30	$ 32
Group 2 – Set A only	**$ 33**	-
Group B – Set B only	-	**$ 23**

Example 2: Dictionary story

Hsee, C. K. (1996). The evaluability hypothesis: An explanation for preference reversals between joint and separate evaluations of alternatives. *Organizational behavior and human decision processes*, *67*(3), 247-257.

Dictionary A:

- Published 1993
- **10,000 entries**
- **Like new**

Dictionary B:

- Published 1993
- **20,000 entries**
- **Cover torn, otherwise like new**

Example 2: Dictionary story

Hsee, C. K. (1998). Less is better: When low-value options are valued more highly than high-value options. *Journal of Behavioral Decision Making*, *11*, 107-121.

Three groups:

	Offered price Dictionary A	Offered price Dictionary B
Group 1 – simultaneous evaluation	$ 19	$ 27
Group 2 – Dictionary A only	**$ 24**	-
Group B – Dictionary B only	-	**$ 20**

Conclusions

- **Preference reversal**

In certain conditions, our preferences and/or evaluations may change even though the attributes of the objects remain the same.

Rational prioritization (transitive):

A is more than **B** is more than **C**

Irrational prioritization (intransitive):

A is more than **B** is more than **C** is more than **A**

amount	amount	amount
defect	defect	defect

Conclusions

- **Preference reversal**

- **Evaluability effect**

Our evaluation of options is only based on the information immediately available.

We do not consider relative value of possible alternatives if they are not available.

How we think our mind works…

Rational thinking / decision making

Irrational thinking / decision making

How our mind actually works…

HEURISTICS

Conclusions

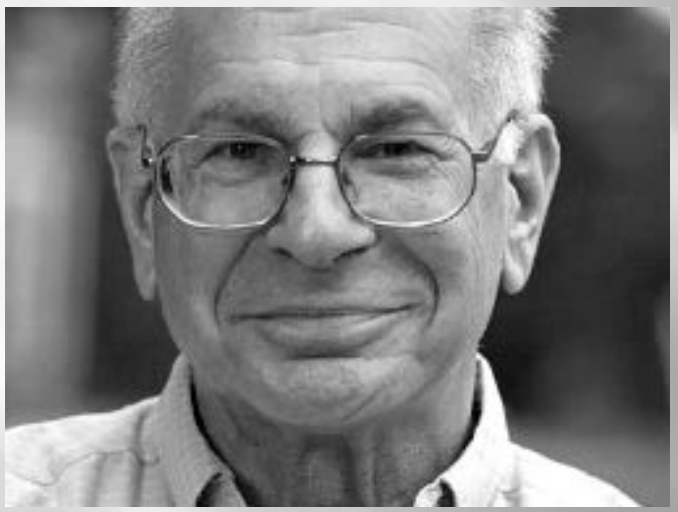
- **Preference reversal**
- **Evaluability effect**
- **Loss aversion**

We invest more into avoiding losses than into achieving gains (of the same value).

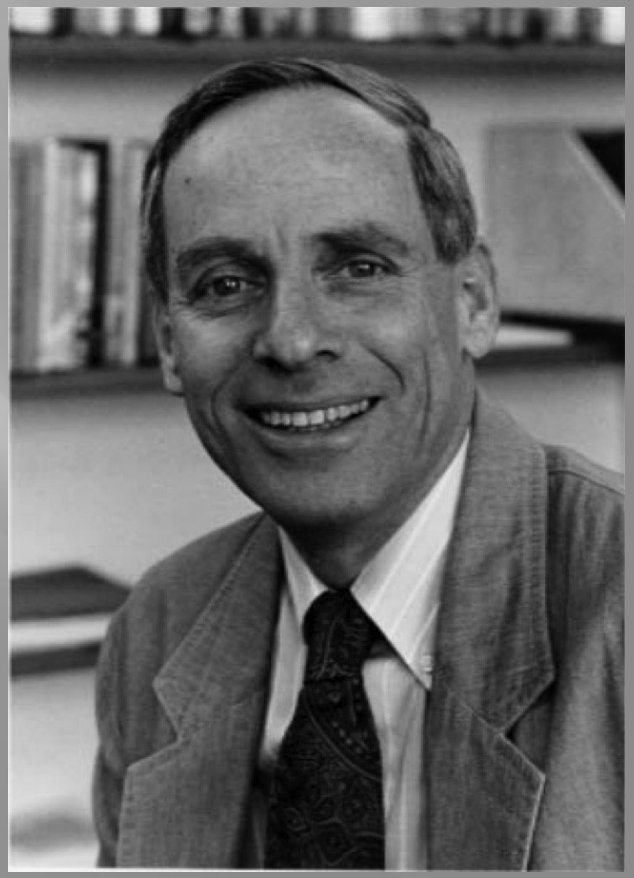
When negative information is available, we tend to give it special attention and prioritize it.

Loss aversion

Daniel Kahneman



Amos Tversky



Behavioural economics

Risk aversion

People avoid uncertainty.

(Daniel Bernoulli)

Loss v. risk aversion

Kahneman & Tversky

Situation A:

You have been given $1,000. You are now asked to choose one of these options: **50% chance to win $1,000 OR get $500 for sure**

50% chance of $1,000 or $2,000

OR

100% chance of $1,500

Situation B:

You have been given $2,000. You are now asked to choose one of these options: **50% chance to lose $1,000 OR lose $500 for sure**

50% chance of $1,000 or $2,000

OR

100% chance of $1,500

Loss v. risk aversion

Kahneman & Tversky

Loss v. risk aversion

	Certain $1,500 gain	Uncertain $1,000 or $2,000 gain
Situation A: $1,000 given 50% chance to win additional $1,000 OR get $500 for sure	**YES!!!**	No, thanks.
Situation B: $ 2,000 given 50% chance to lose $1,000 OR lose $500 for sure	Not if I can avoid it.	**THANKS FOR THE CHANCE!!!**

Loss v. risk aversion

	Certain $500 gain	Uncertain $1,000 or $0 gain
Situation A: $1,000 given 50% chance to win additional $1,000 OR get $500 for sure	**YES!!!**	No, thanks.
Situation B: $ 2,000 given 50% chance to lose $1,000 OR lose $500 for sure	Not if I can avoid it.	**THANKS FOR THE CHANCE!!!**

Loss v. risk aversion

	Certain $500 loss	Uncertain $1,000 or $0 loss
Situation A: $1,000 given 50% chance to win additional $1,000 OR get $500 for sure	**YES!!!**	No, thanks.
Situation B: $ 2,000 given 50% chance to lose $1,000 OR lose $500 for sure	Not if I can avoid it.	**THANKS FOR THE CHANCE!!!**

Loss aversion

A matter of FRAMING.

”Let’s go for a hike! Adam and Susan said they would also be going!”

”Let’s go for a hike! Adam and Susan said they would also be going, but, unfortunately, Steve cannot make it…”

Loss aversion, preference reversal & any choice

A matter of FRAMING.

Influenced by CONTEXT.

Dictionary story revisited

Hsee, C. K. (1998). Less is better: When low-value options are valued more highly than high-value options. *Journal of Behavioral Decision Making*, *11*, 107-121.

Three groups:

	Offered price **Dictionary A** (10,000 entries, like new)	Offered price **Dictionary B** (20,000 entries, cover torn)
Group 1 – simultaneous evaluation	**$ 19**	**$ 27**
Group 2 – Dictionary A only	$ 24	-
Group B – Dictionary B only	-	$ 20

Additional materials

- **Before attempting the first quiz, watch the two videos available in the interactive syllabus in the IS:**

  Dan Ariely's TED talk on decision making

  Daniel Kahneman's TED talk on past, present and future selves

- **Recommended good reading on behavioural economics:**

Kahneman, Daniel. *Thinking, Fast and Slow.*

Ariely, Dan. *Predictably Irrational*.

Ariely, Dan. *The Upside of Irrationality*.

Rationality Myth

To be continued…

Thank you!