

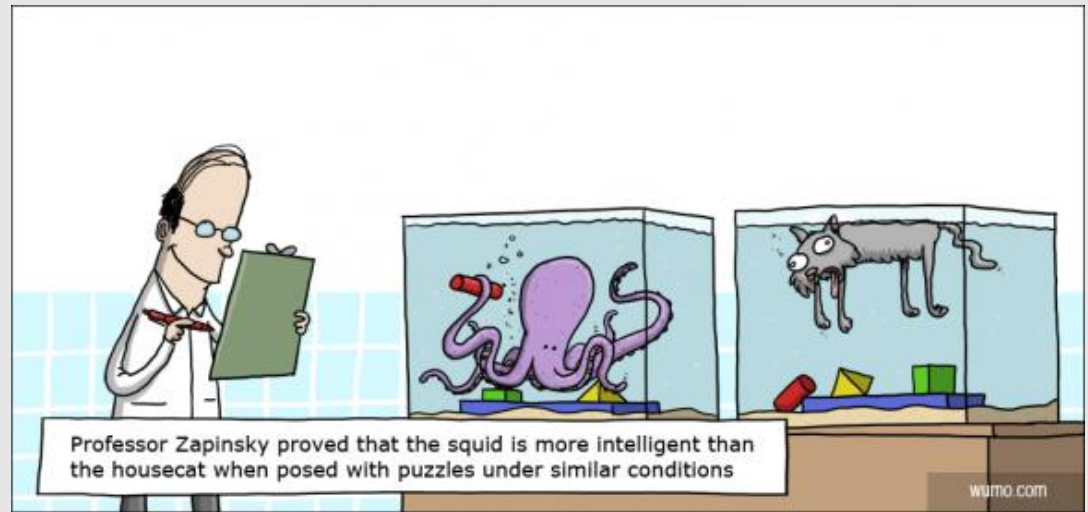
Keys to good decision making under uncertainty

Agile Islands 2018

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Have you experienced?

Problem is obvious! Why aren't we doing something about it?

Talk talk talk...

Why are you working so hard to solve ..completely the wrong problem?

Traps in decision making under scarce information

Gut decisions

"Analysis paralysis"
(asking for yet more information)



Assumption

"My experience, is a good predictor for the future"

"There is only one probable outcome"

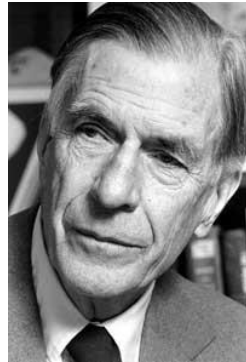
"There is only one preferred solution"

Assumption

"Looking for the risk free option"

One problem with improving decision making

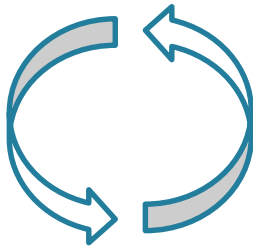
" Faced with the choice of changing ones mind and proving there is no need to do so, almost everyone get's busy on the proof"



John Kenneth Galbraith
Economist

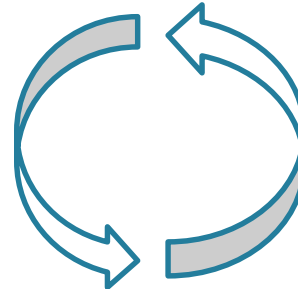
How our brain works

Two systems



System 1

"snap decisions, fast,
unconscious"



System 2

"analytical, slow,
conscious"

Let's try it!

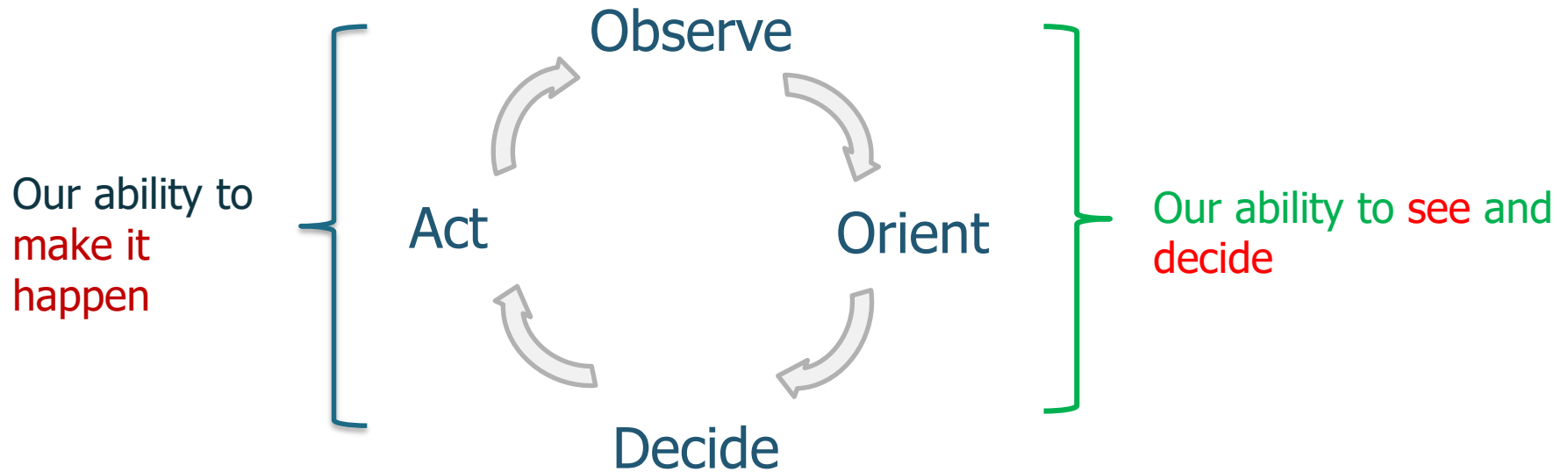
A hockey stick and a puck cost €1.10. The hockey stick costs €1 more than the puck. How much does the puck cost?

$$\text{Answer : } \text{€}0,05 \quad (1 + x) + x = 1,10$$

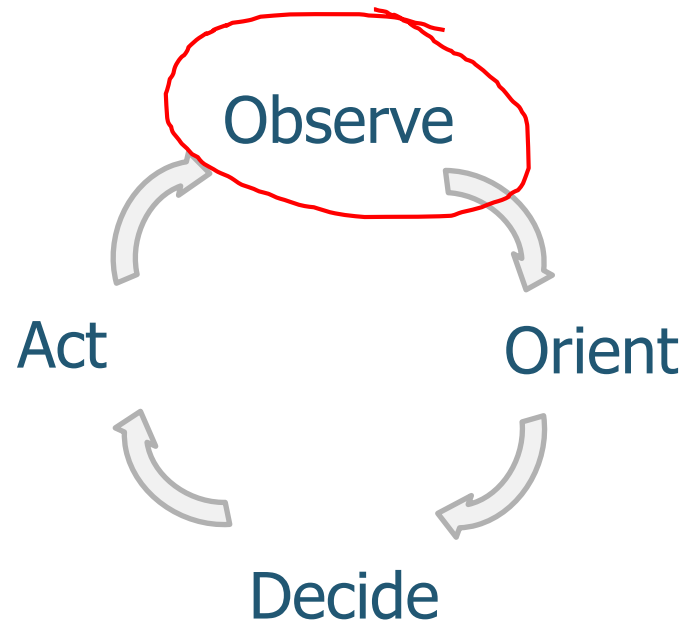
$$2x = 0,10$$

$$x = 0,05$$

A simple decision model (OODA)



A simple decision model (OODA)

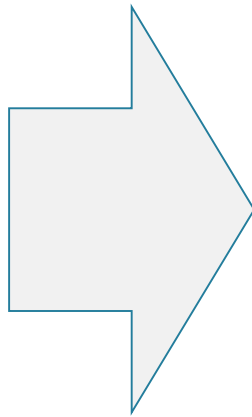


What's tricky? Observe

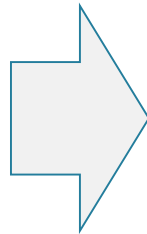


Change blindness – we only notice what we think is important

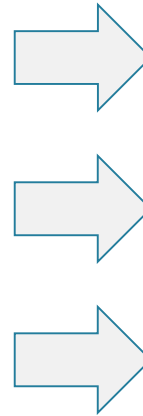




Eye



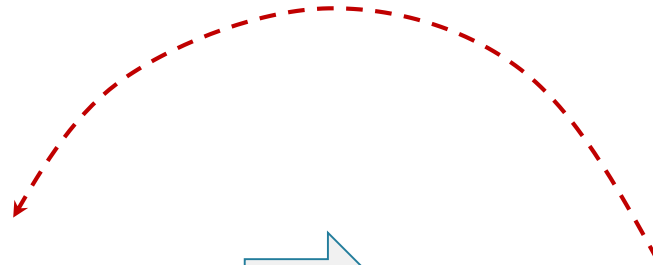
Filter/Routing



Process



Mental model



~~WYSIWIG~~

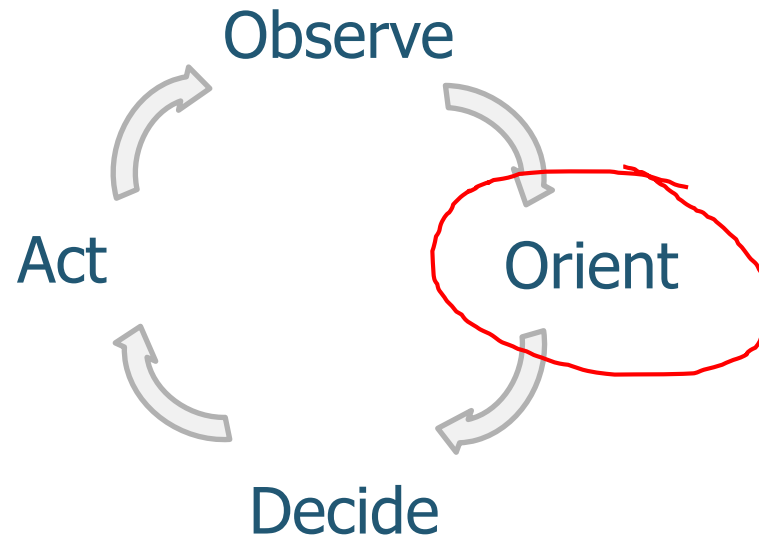


WYTIWYS

Counter action

- You will only see signals, if you decide to look for them
- When observing – test different hypothesis (“if the hypothesis X was true, what would I see”)?

A simple decision model (OODA)



Exercise: What's the rule?



Confirmation bias

Wason Rule Discovery Test

Most people do not try at all to **test** their hypotheses critically, but rather searches for information that **confirms** them

What's tricky? Orient



Your brain likes to be right.

It will (force) fit reality to the model it is familiar with.

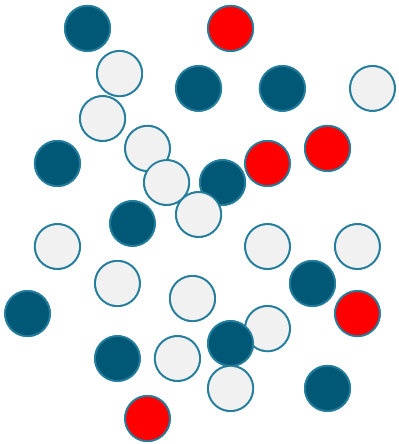
Orient: Counter action

See things for what they are
(resist extrapolating from history)

When problems are described, avoid replacing
words with your own

Illuminate different perspectives

Counter action: Evidence first!



"Trust, but verify!"



Ronald Reagan

The rule of five

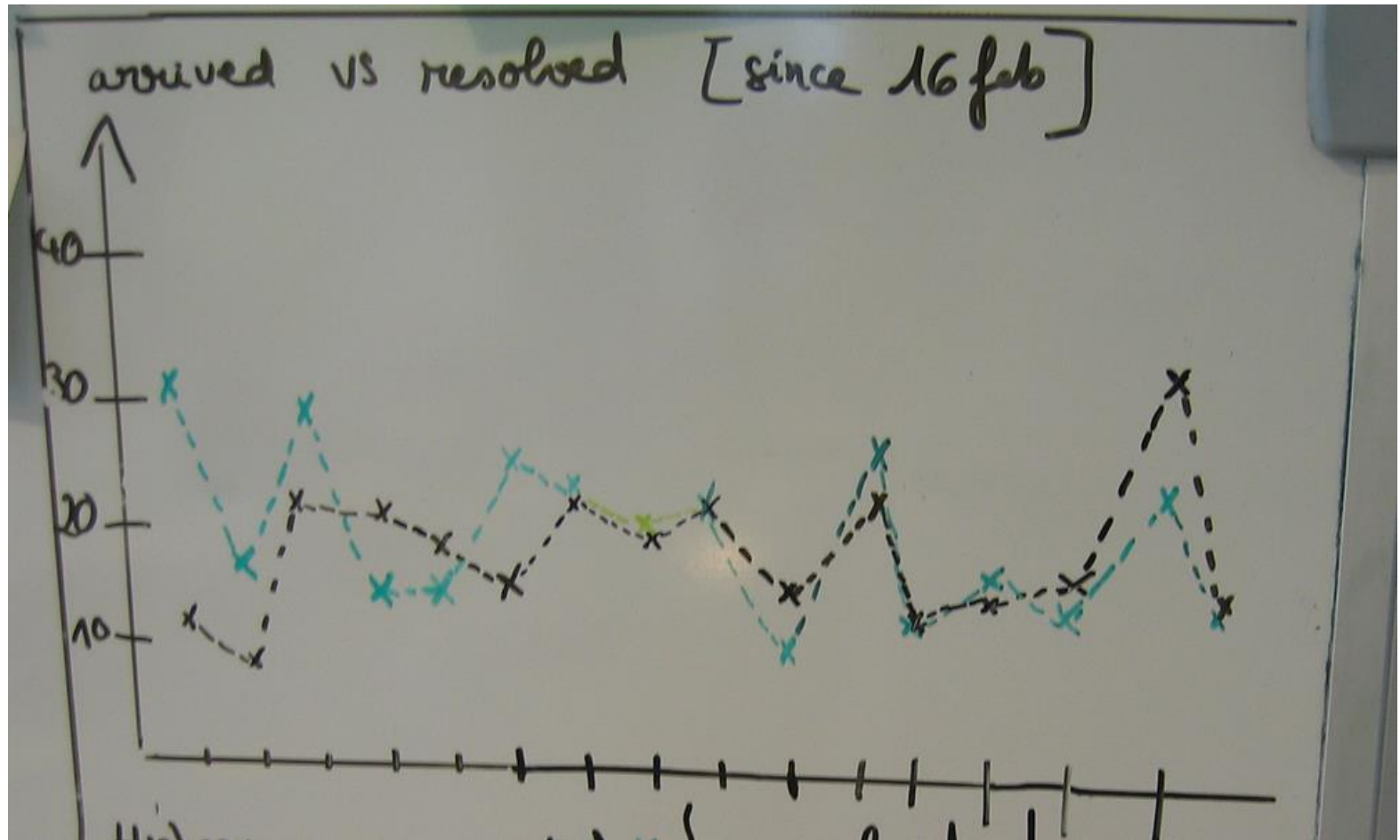
How far does an average family drive during one year?



There is a 93.75% chance that the median of any population is between the smallest and largest values in a random sample of five.

Example: Validating a "truth"

Arrived tickets this week (green)
Resolved tickets this week (black)



Scenario: Big room planning

What do you do?



What we did



Recommendations for better decision making

Making decisions - group scenarios

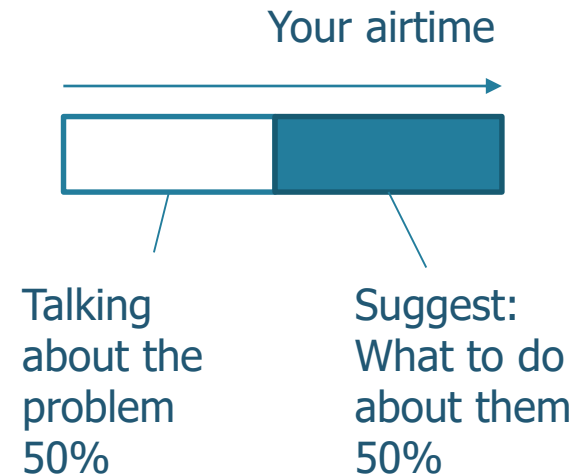


See things for what they are. Use facts & observations from the source



Most experienced/highest rank speaks last

"The 50/50 rule"

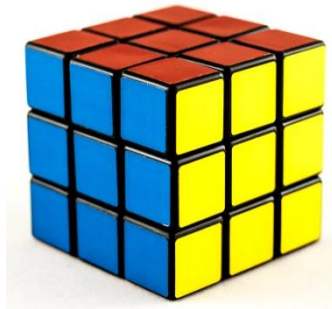


Making decisions under uncertainty



Stretch solution

Baseline solution



Consider alternative perspectives
& hypothesis



Practice decision making
in fluid situations

Sources

- ["Unskilled and unaware of it: How difficulties in recognizing One's own incompetence lead to inflated self assessment"](#), Justin Kruger & David Dunning, Cornell University, 1999
- ["Games may help train analysts to overcome bias"](#), Jacob Graham, Penn State University, 2012
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- "Minnet, en lömsk kompass", Svenska Dagbladet, 12 Januari 2014
- ["Why yet more information is not what you need"](#) Crisp blog
- "How to measure anything", Douglas W Hubbard

