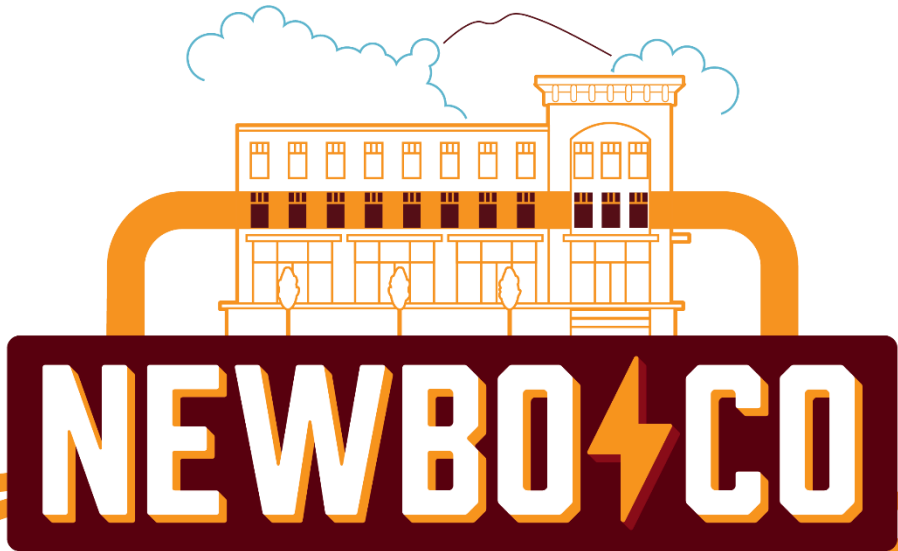


# Your Brain Is Broken



... and you suck at making decisions



# Brains: perfect thinking machines?

Negativity Bias  
Confirmation Bias  
Barnum Effect  
Clustering Illusion  
Framing Effect  
Law of the Instrument  
Cheerleader Effect  
Gambler's Fallacy  
Hot-hand fallacy  
Denomination Effect  
Post-Purchase Rationalization  
Functional Fixedness  
Hyperbolic Discounting  
Choice-supportive bias  
Hindsight Bias  
Neglect of Probability  
Anchoring  
Expectation Bias  
Ostrich Effect  
Base Rate Fallacy  
Illusory Correlation  
Course of Knowledge  
Loss Aversion  
Bandwagon Effect  
Normalcy Bias  
Endowment Effect  
Availability Heuristic  
Sunk Cost Fallacy  
Omission Bias  
Bias Blind Spot  
Planning Fallacy  
Information Bias  
Backfire Effect  
Contrast Effect  
Rhyme as Reason Effect  
Hostile Attribution Bias  
Berkson's Paradox  
Pareidolia  
Distinction Bias  
Frequency Illusion

# Brains: perfect thinking machines?

Confirmation Bias – the tendency to seek out information that conforms to our already held beliefs

Sunk Cost Fallacy – the tendency to continue with an activity even if it has a very small chance of success because of invested resources

Framing Effect – the tendency to react to a particular choice differently depending on how it is presented

Availability Heuristic – the tendency to view information that is easily recalled as more important than alternatives

Bias Blind Spot – the tendency to see these biases in others, but not in ourselves

Fast vs. slow thinking



We're bad at understanding probability



# Probability – A quick mental exercise

## New breathalyzers

The local police buy new breathalyzers for the department.

- If someone is intoxicated it will indicate it 100% of the time (no false negatives).
- If someone is not intoxicated it will indicate a positive (a false positive) 5% of the time.

Statistics have shown that at any given time, an average of 1 out of every 1000 motorists are intoxicated.

Police pull over a motorist completely at random. When asked to blow into the breathalyzer, the test shows that the person is intoxicated.

What is the probability that the person is intoxicated?

## Let's vote

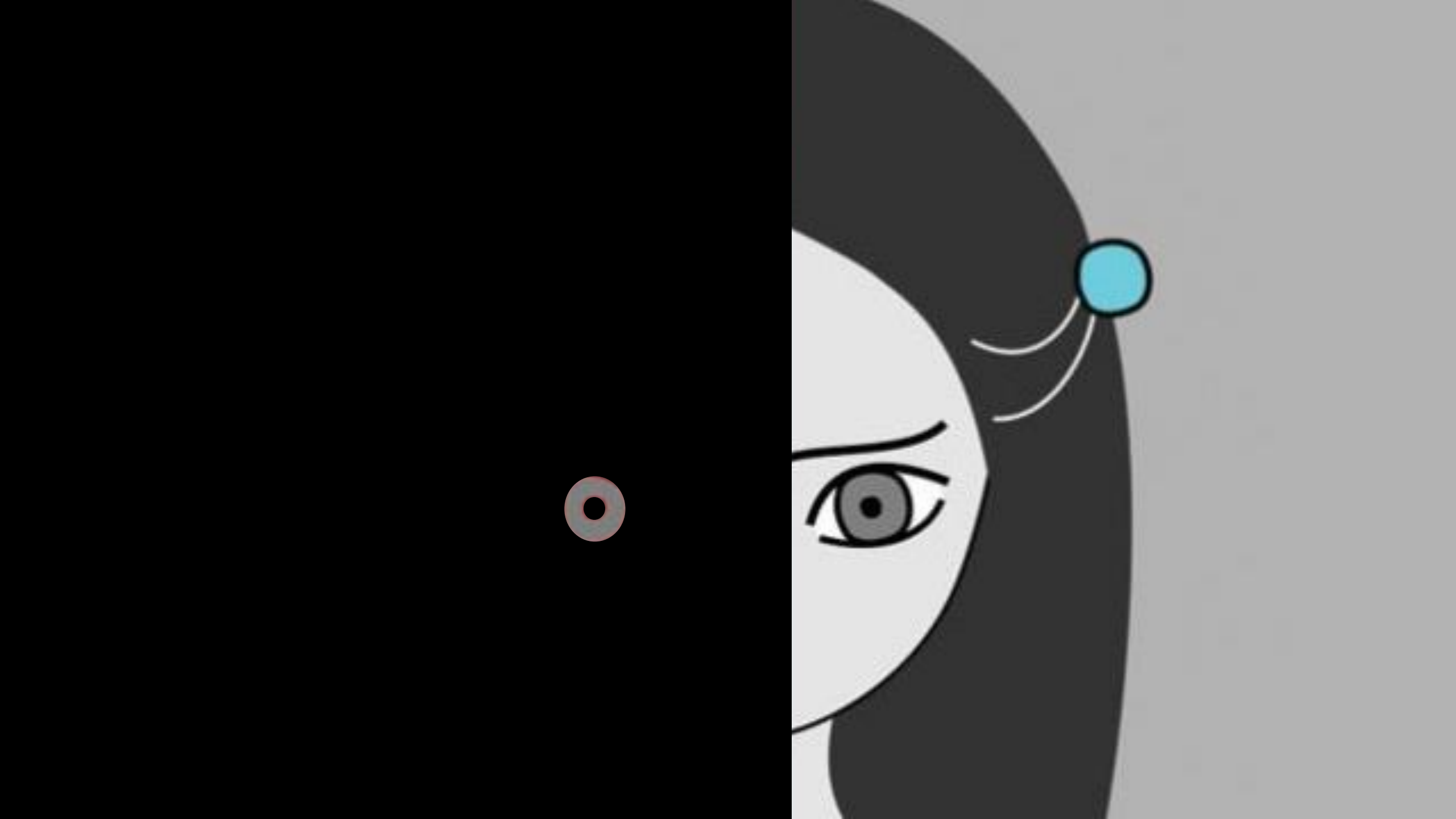
- A) 100%
- B) 95%
- C) Between 50 and 95%
- D) Between 5 and 50%
- E) Less than 5%

Our vision is broken





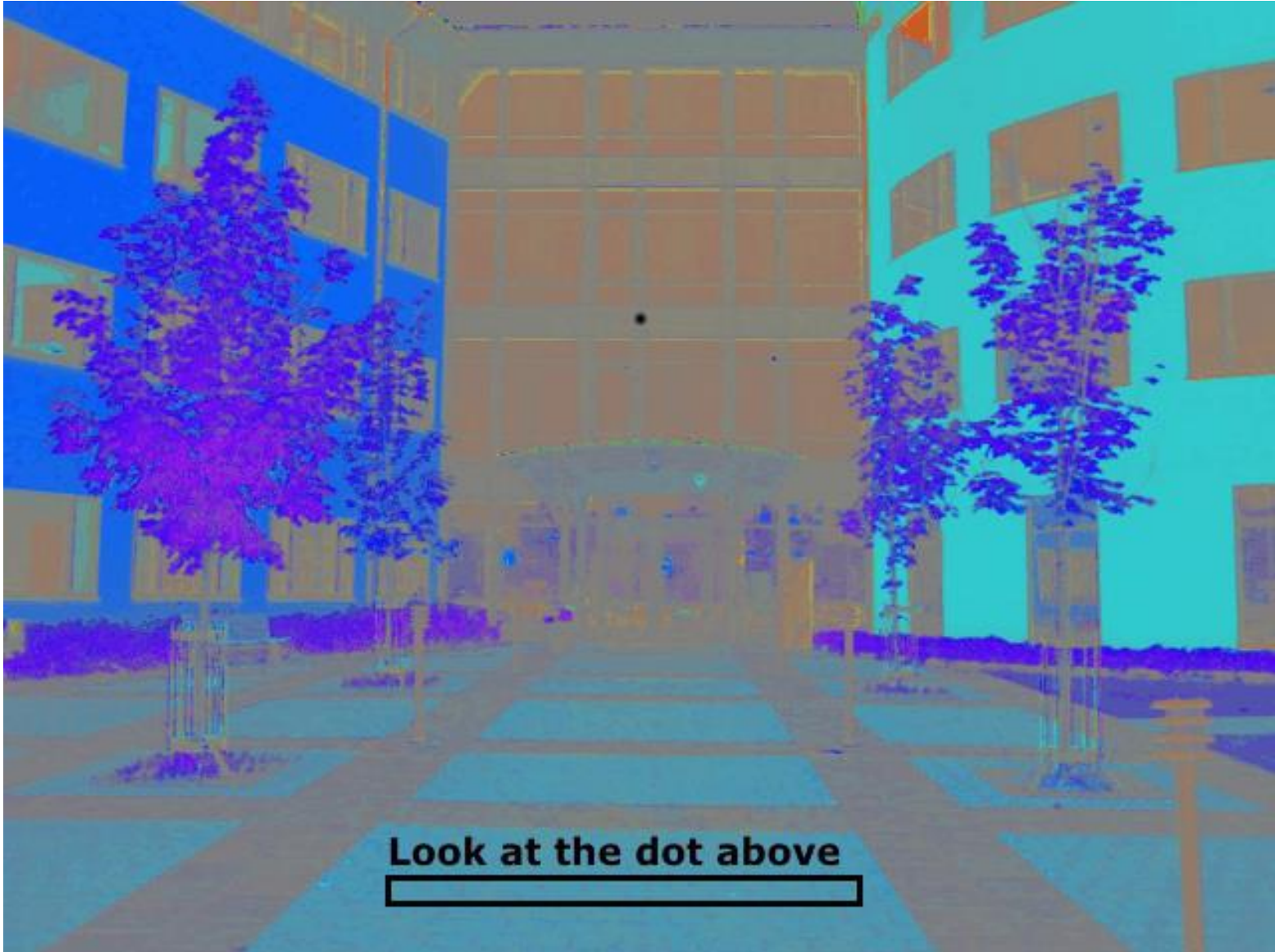




**BLUE  
AND  
BLACK?**



**WHITE  
AND  
GOLD?**



Our memory is broken



How agile practices buffer us  
from ourselves

Lean and Agile – they go together like peas and carrots

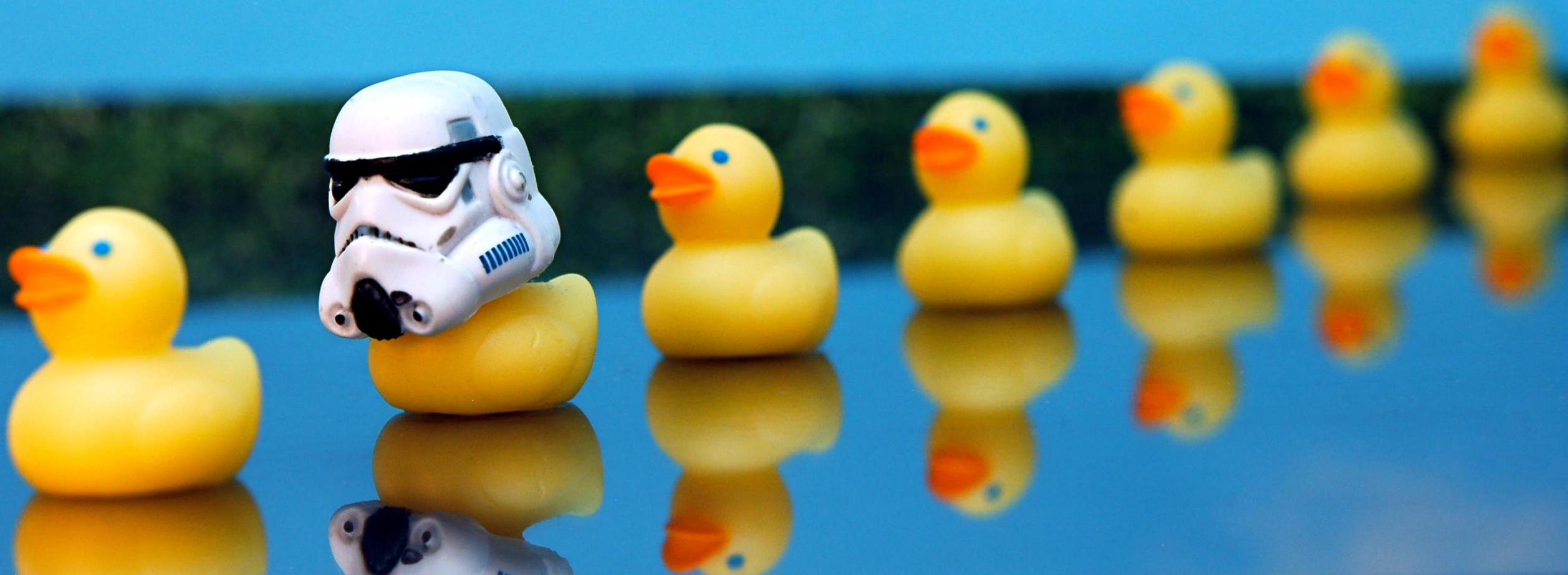




Planning practices – overcoming the Planning Fallacy



# Avoiding conformity effects

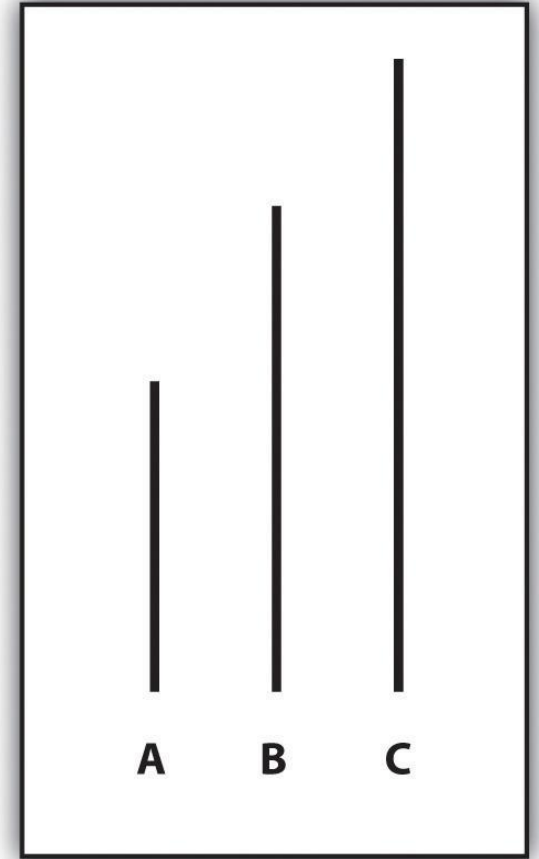
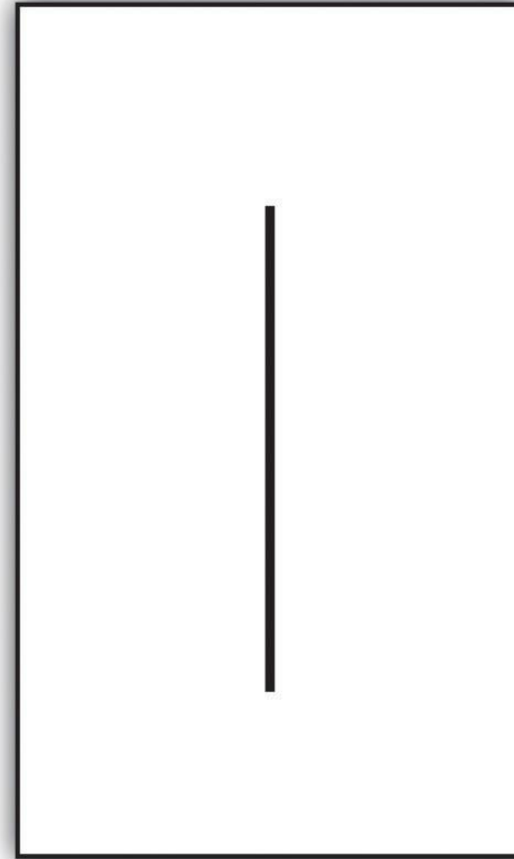


# The Asch experiment

74% of people conformed at least once

On average, people conformed about 1/3 of the time

Only around three opponents is required for people to conform at these levels





Feedback practices

# Hijacking the Availability Heuristic using Information Radiators

Image needed

# Breaking the Curse of Knowledge by telling effective User Stories



Putting it all together

# Thank you! Questions?

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