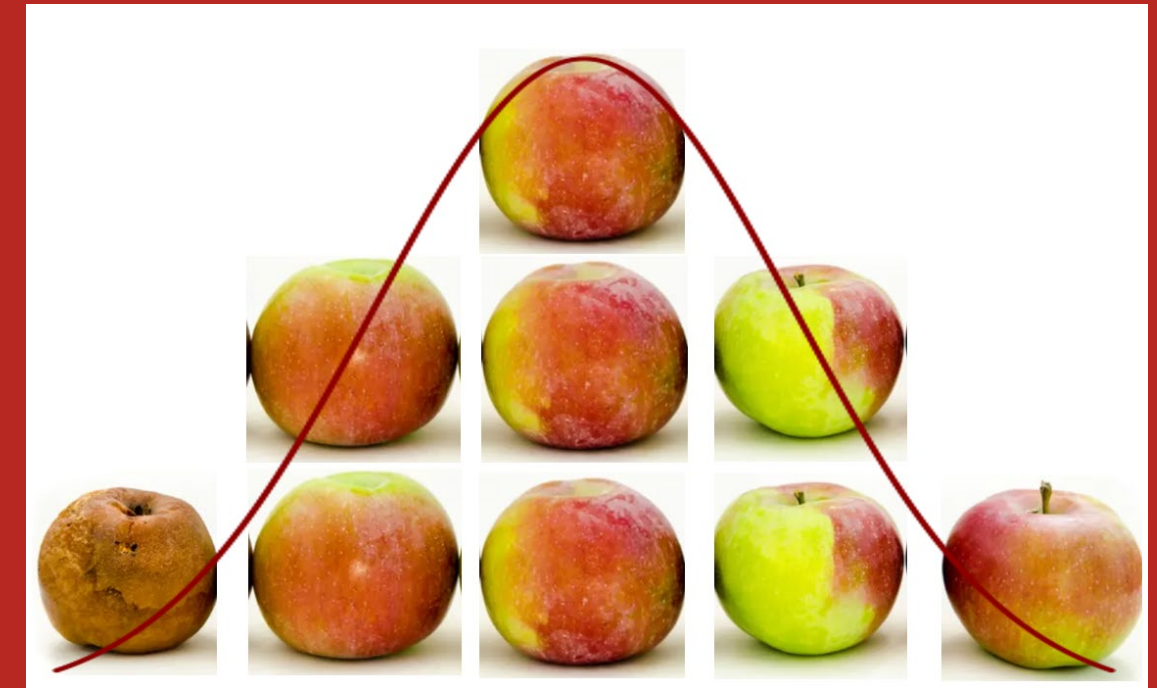
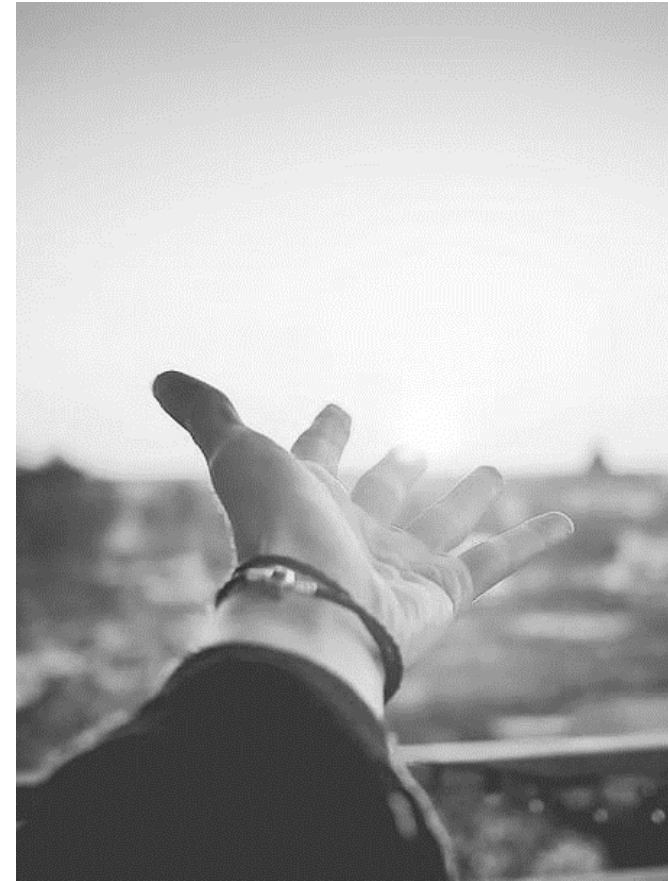


Understanding confidence in evaluations and value-based decisions

Julian Quandt, Harm Veling, Bernd Figner, Rob Holland
Radboud University



Making Decisions by collecting evidence



Decisions are detective work

Collect evidence to find the truth

Be aware of evidence quality



(Boldt, de Gardelle, & Yeung, 2017)

Confidence in Evidence

Better evidence → higher **confidence**

Confidence determines

- engagement
- commitment
- changes of mind



(Koriat, 2011)

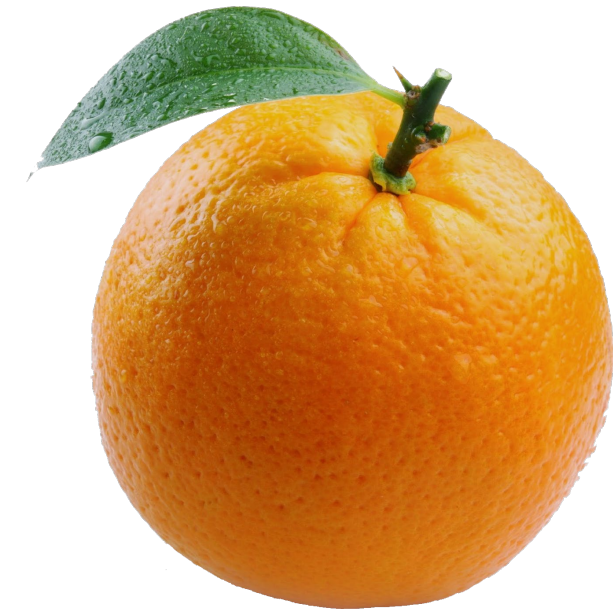


A more difficult case to crack

Which one would you rather eat?

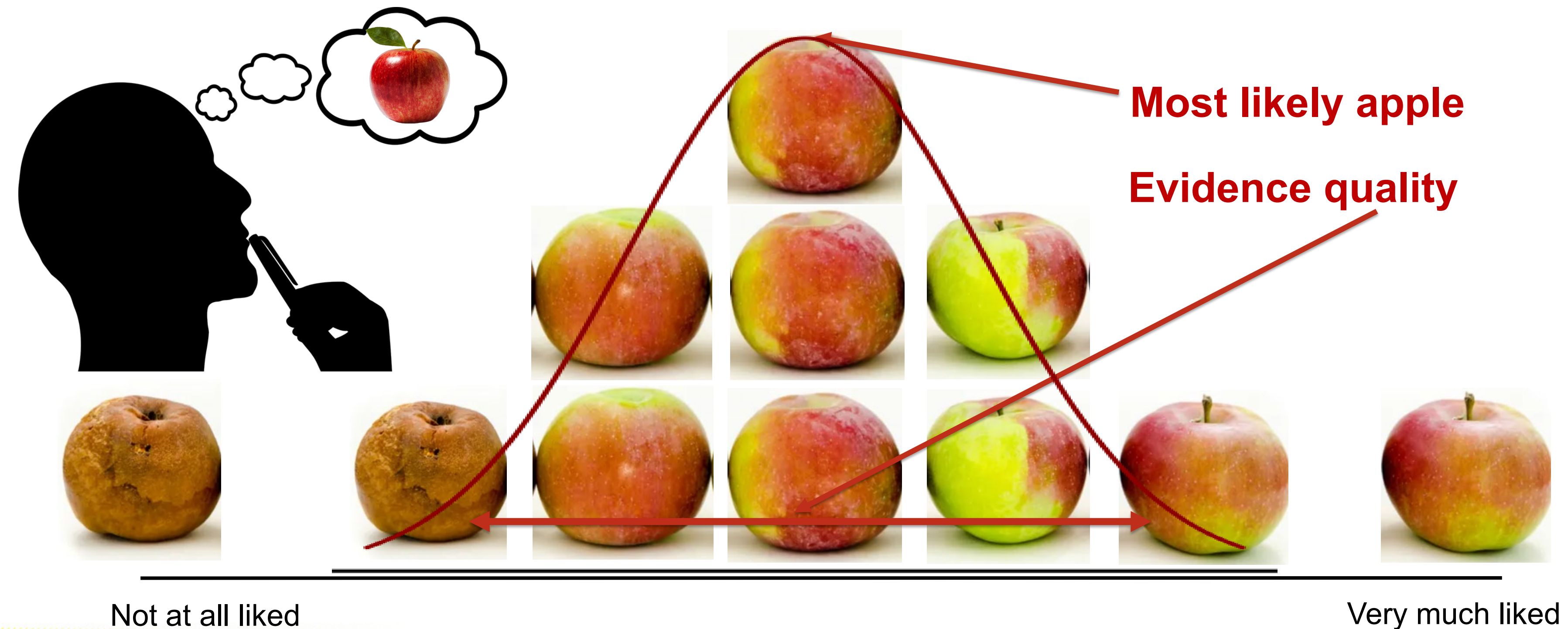
How *confident* are you?

What is the evidence?



(Folke, Jacobsen, Fleming, & De Martino, 2016)

Collecting evidence from memory



(Bakkour et al., 2019; Shadlen & Shohamy, 2016)

Comparing and

Current research on VBD

- retrieve value → put on internal liking / utility scale
- compare values → choose higher value



Not
at all

Very
much



Research Questions

Confidence = Consistency of experiences?

Diverse experiences → instable evaluations and choice?



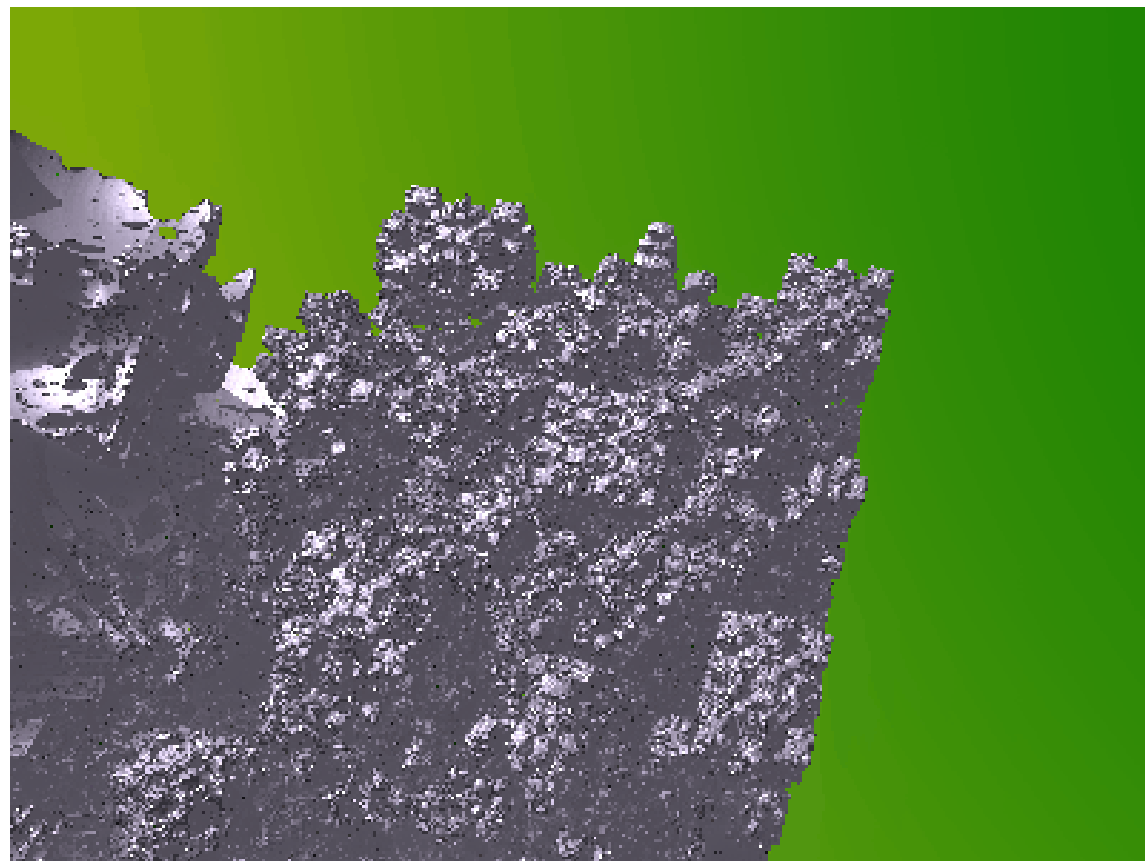
Two problems to solve

1. Previous experiences are unknown
2. Previous experiences cannot be easily manipulated

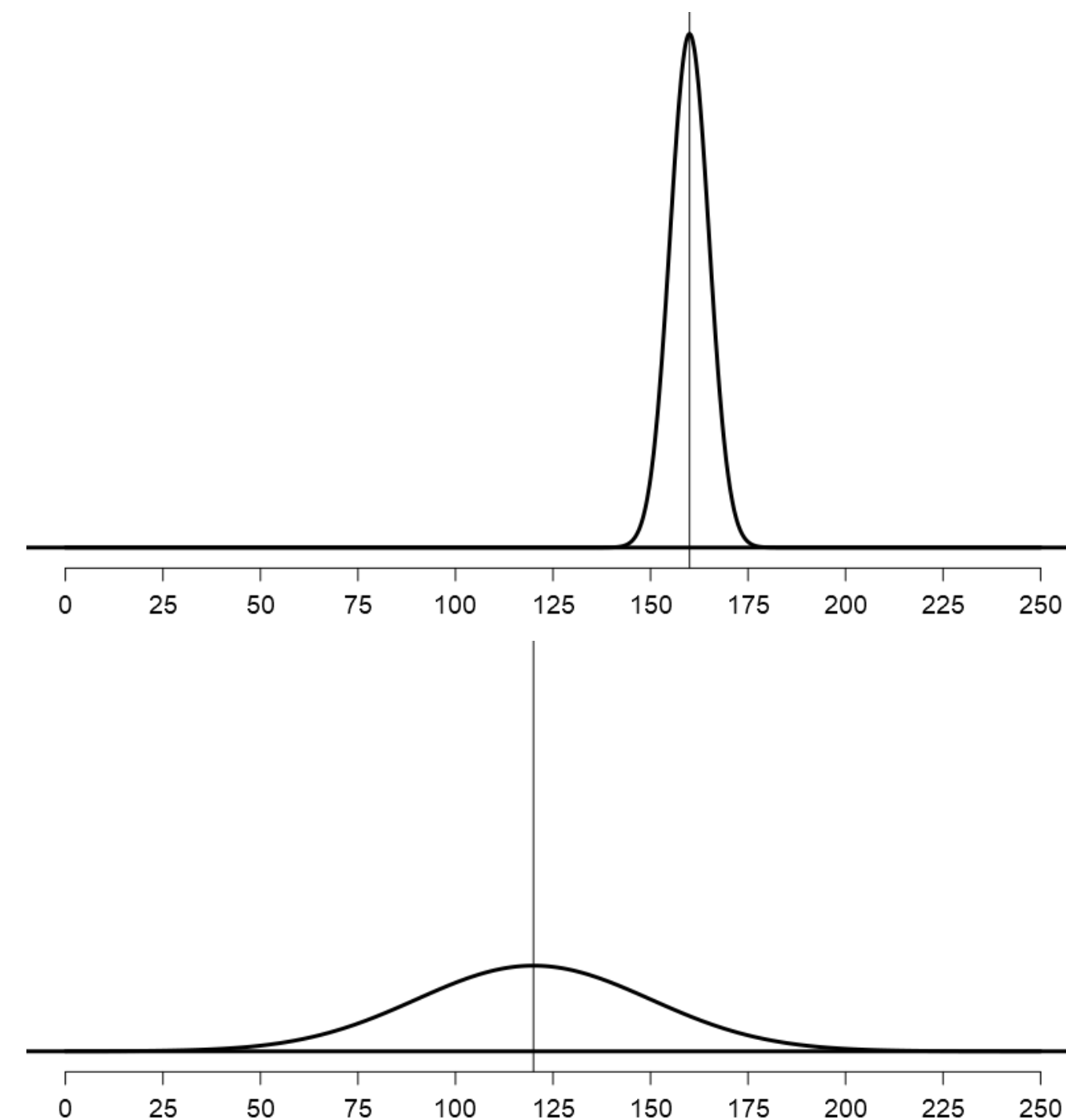
→ use novel stimuli and manipulate diversity of experiences



Learning values and creating distributions



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2 Experiments

1. Learn the value distribution

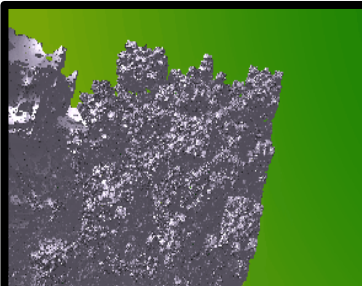
2. Rate value and confidence in ratings

→ Diverse experiences → Lower confidence

→ Real life things? → Experiment 3 with Food



Distribution Builder Task



Taking this back to food



Imagine eating multiple apples...

→ **Wider distributions** → **lower confidence in ratings**

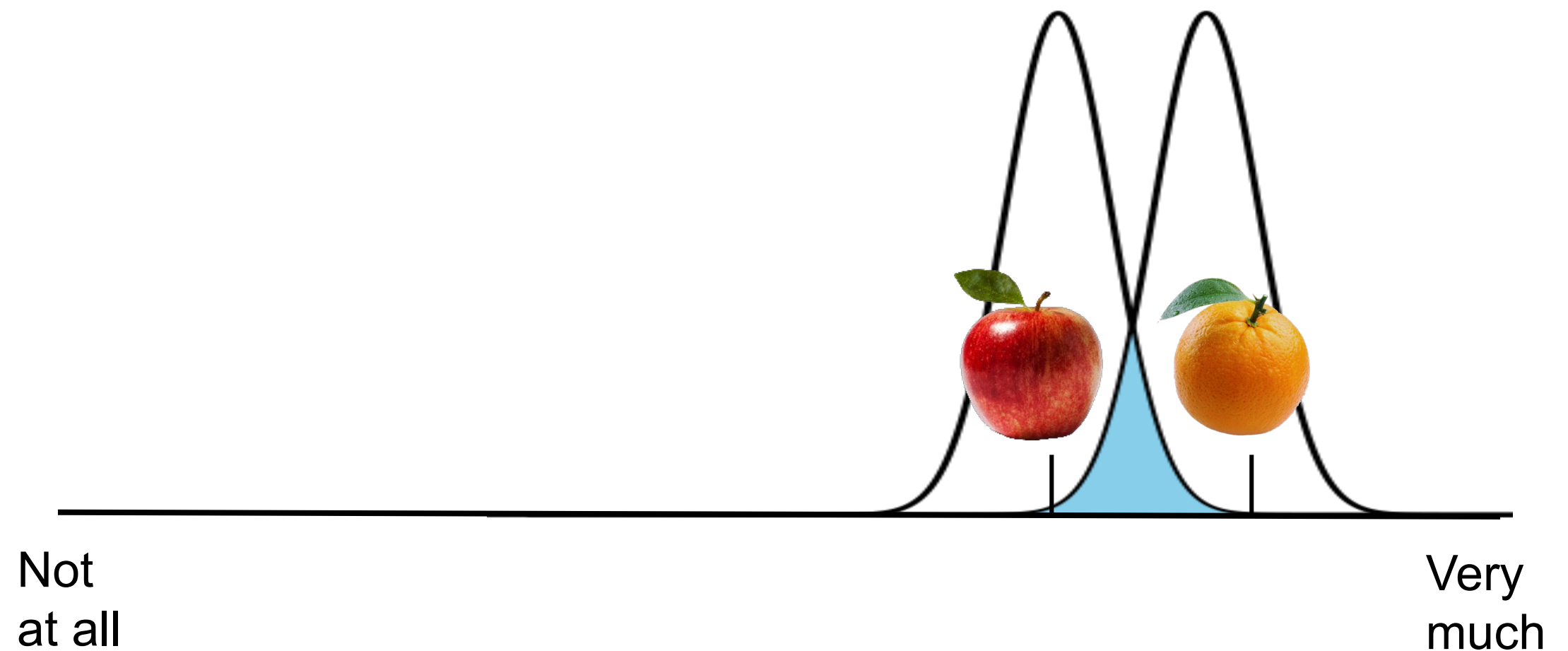
→ **Wider distributions** → **more inconsistent ratings**

Remaining Points = 100



Choices

Higher overlap of value-distributions \rightarrow lower confidence / more instable choices



Take Home

Confidence = Quality of Evidence

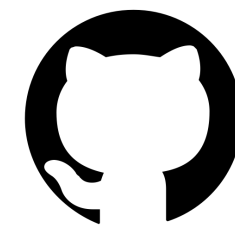
More diverse experiences → More diverse evaluations

Shared values in choices → lower confidence and instable choices



Thank you for your attention!

Questions?



julianquandt