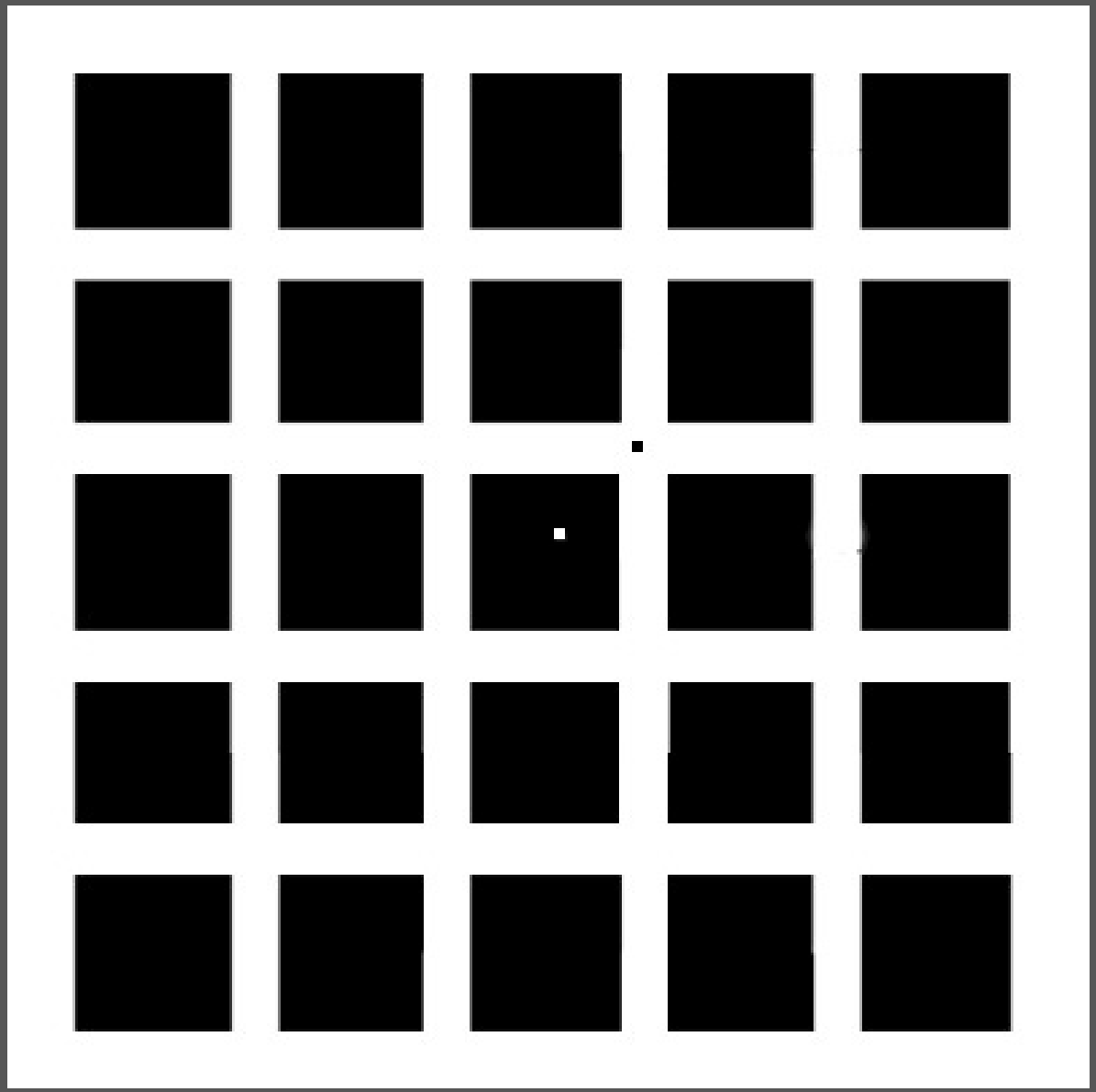
Decision making

Visual illusions as a metaphor for DM



Decision making

- A perspective on behavior as a collection of decision making tasks.
- Both explicit and implicit decisions?
- Sometimes decisions determine behavior and sometimes they are an epi-phenomenon
- Economic theory is based on naive psychology, decision-making attempts to create a descriptively accurate foundation.

Econ vs. psych

- Economics is a science that describes how people should behave --> **rationality**.
  - Sometimes it is confused with how people behave
  - Mostly by economists
- Psychologists attempts to describe how people behave! (and why)

Our goal

- To illustrate some fundamental differences between rationality and behavior
- Different assumptions / effects / behaviors lead to different implications

The Rational agent model

- Calibrated
- Well informed
- Ordered preferences
- Stable preferences (mostly about tangibles)
- Controlled
- Selfish
- Calculating
- **Implications**
- People maximize
- What's knowable is known
- All opportunities exploited
- Need no protection from themselves

The "Boundedly rational" model

- Mediocre judgments
- Incoherent preferences
- Impulsive and myopic
- Reciprocating, trusting and vindictive
- Variable tastes (poorly predicted)
- Malleable preferences
- **Implications**
- People "solve" local decisions
- (context dependent, reference dependent, myopic, biased)
- Require paternalistic attention and help???

Topics to cover

- Regret
- Context effects
  - ADS & Compromise
- Too much choice?

Topics to cover (Social)

- The spotlight effect
- Magical thinking

Regret

Regret I

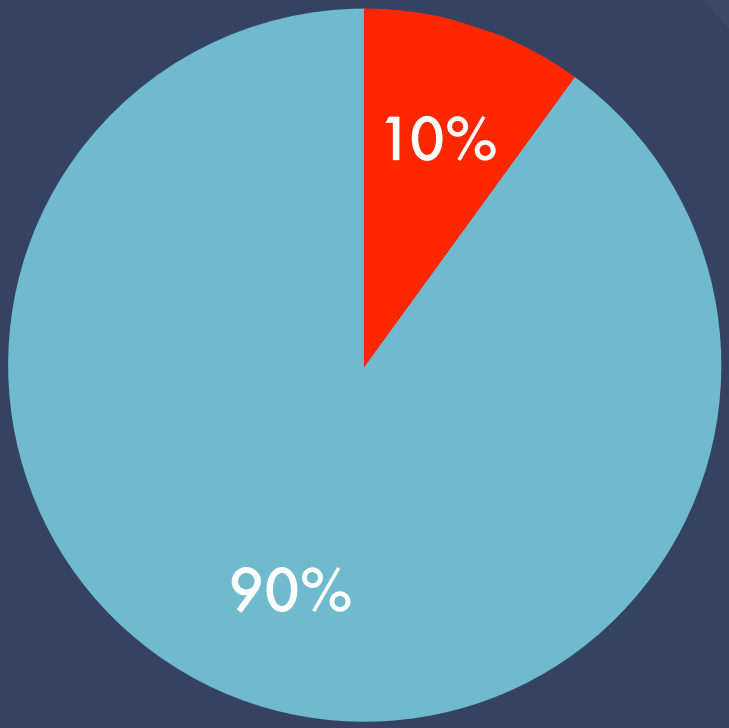
- Who would feel more regret
  - Person A who missed his plane by 2 min
  - Person B who missed his plane by 2 hours and 2 min
- Why?
- What does that mean?

Regret II

- Who will feel happier
  - Winner of the silver medal or the bronze medal in the olympic games?
- Why?
- Other predictions?

Gambles & counterfactuals

$100



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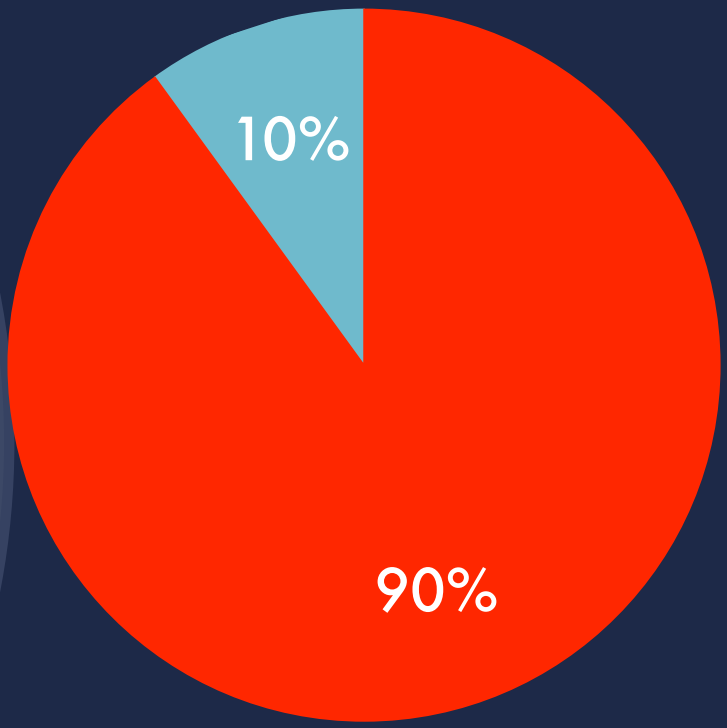


Regret III

- Who would feel more regret
  - Person A who had a tree fall on their car
  - Person B who took a different drive home and had a tree fall on their car
- Why????
- Counterfactuals !!!
- Implications ....

Regret & Markets

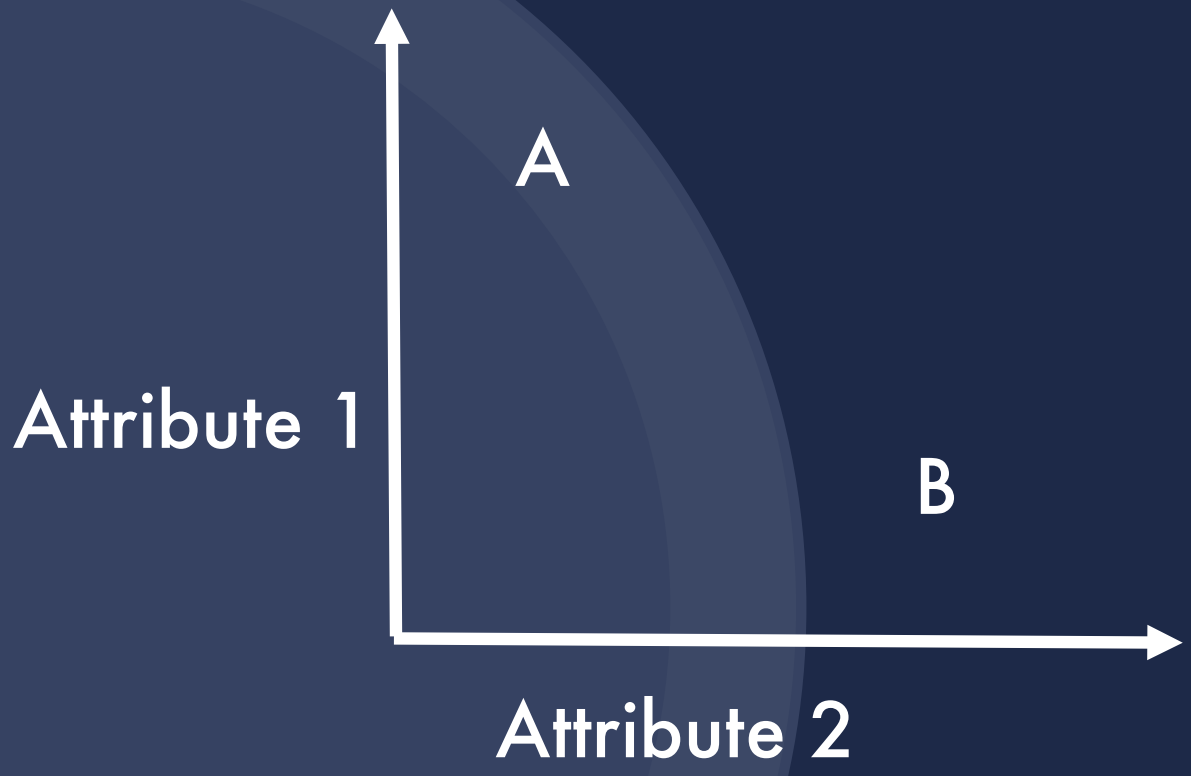
- What are some market mechanisms to increase regret?
- What are some market mechanisms to decrease regret?

Regret

- Regret is a powerful force
- People care not only about states but also about their state relative to other states
- But, not all possible other states, just a few that come to mind …

Context effects

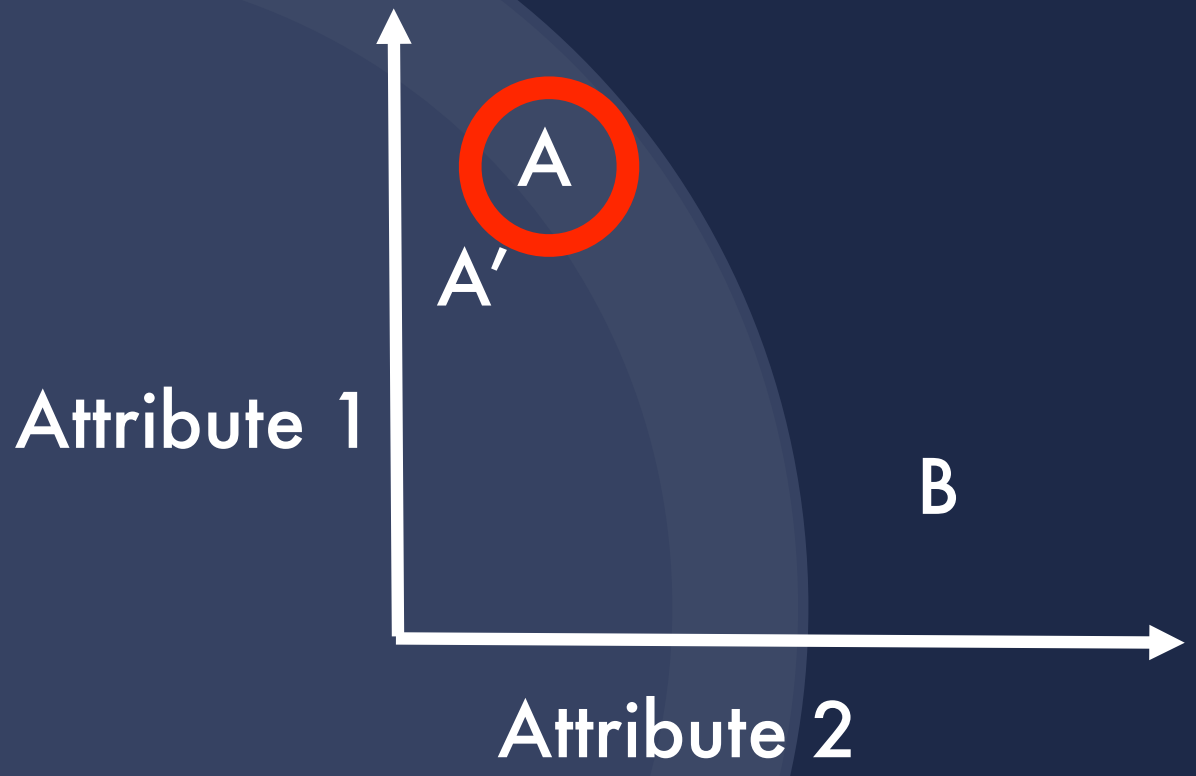
Context effects



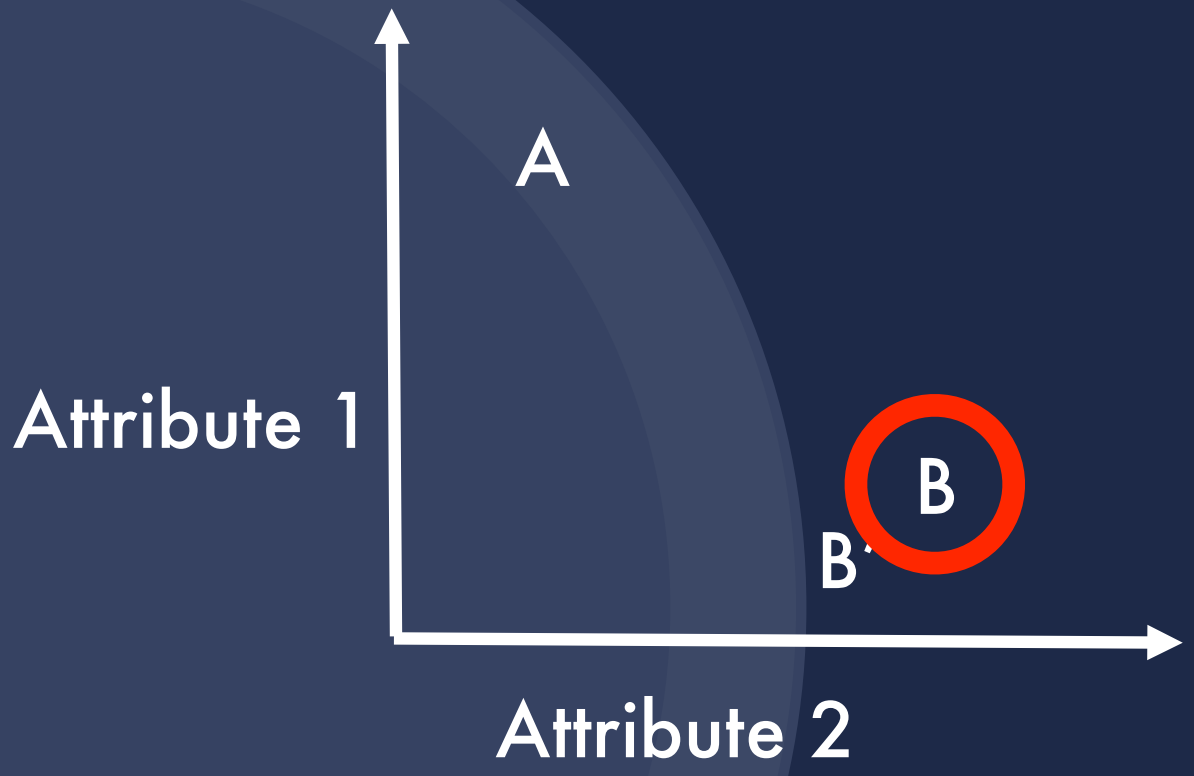
Asymmetric dominance

- Introducing a dominated alternative
  - An alternative that is worse on every attribute
  - Should have no effect on choice

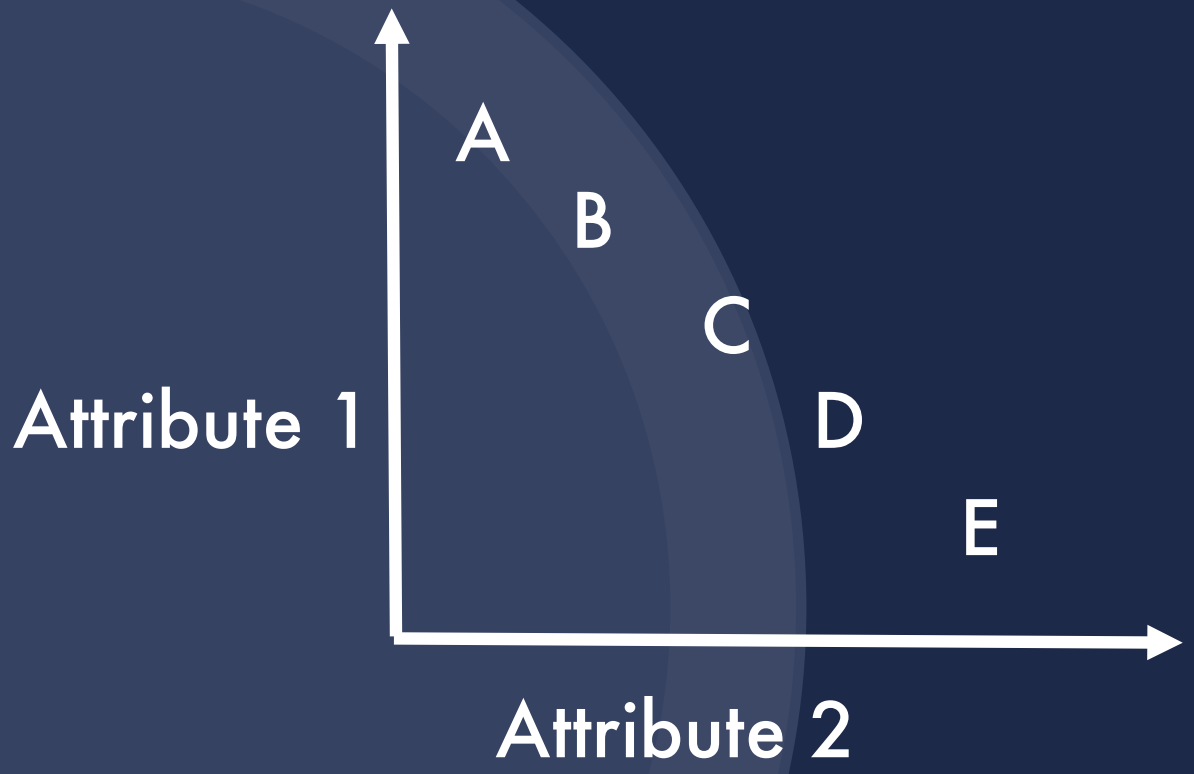
Asymmetric dominance



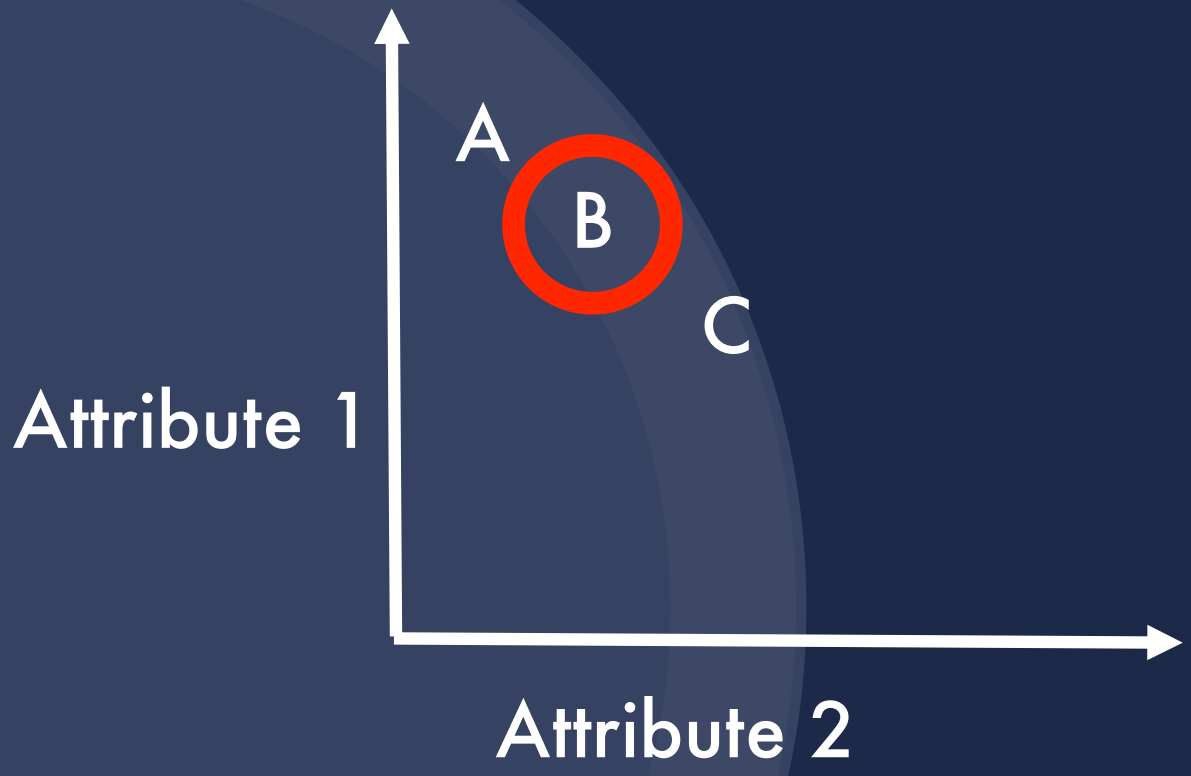
Asymmetric dominance



Compromise effect



Compromise effect



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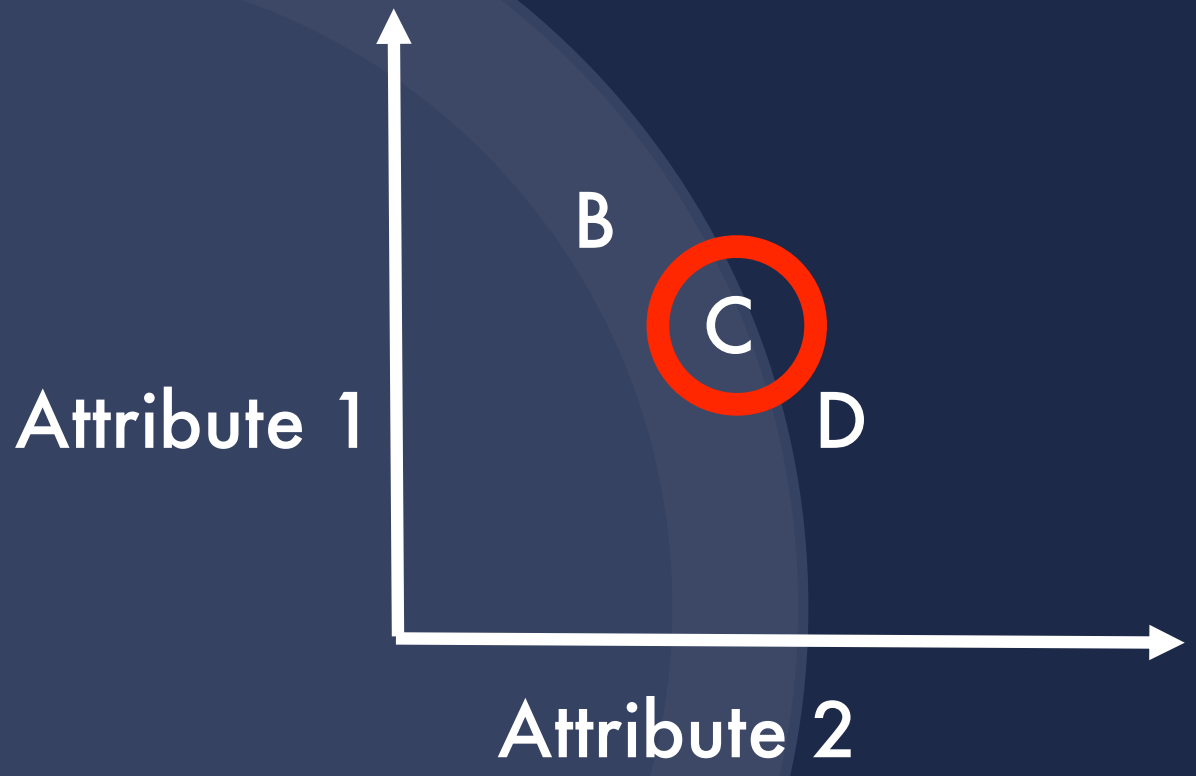
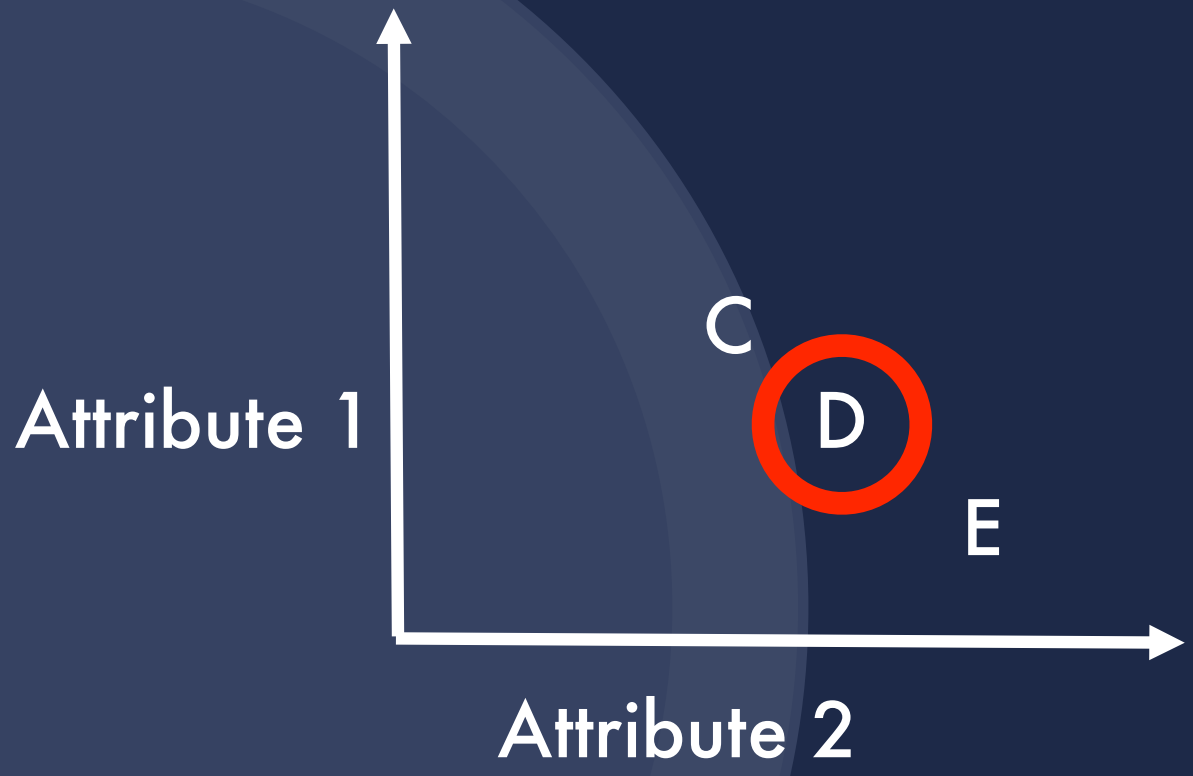


Compromise effect



Examples

- Bread makers
- Condoms in Bangladesh
- The economist

The economist

https://www.economist.com/subscriptions/index.cfm

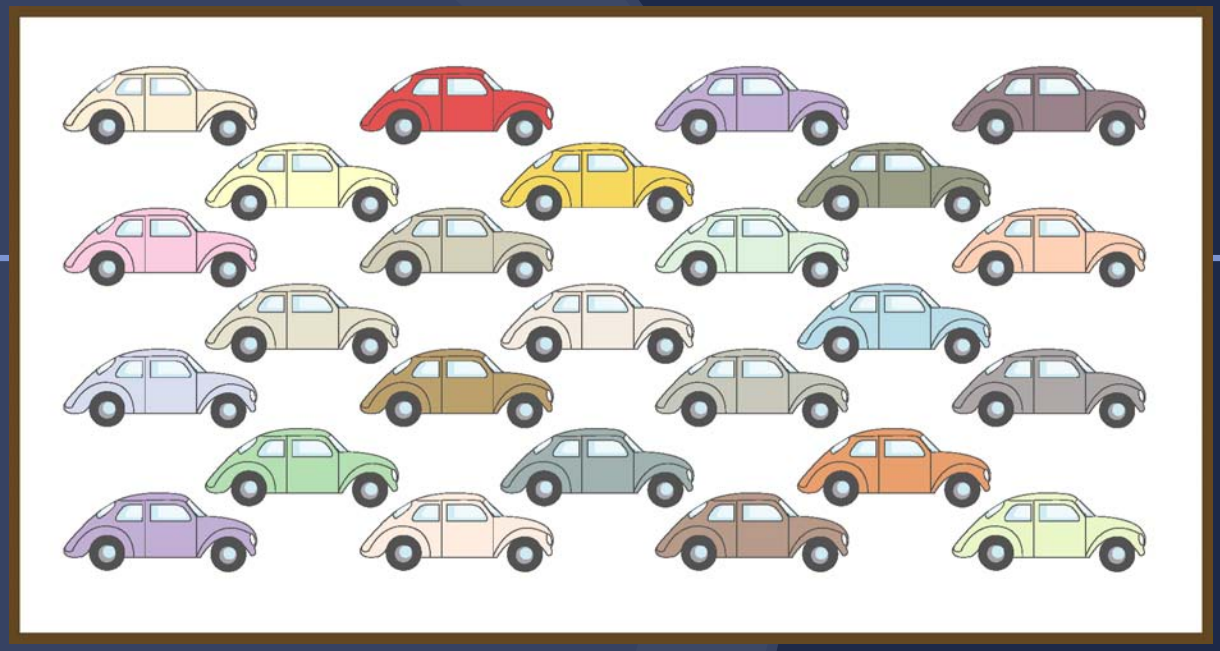
Context effects

- People use context to evaluate the focal options.
-
- Implications…….

Context effects

- Lessons:
- Evaluations and choices are relative
- People use the context to infer value
- Decisions are hard, relative decisions can be easy

Too much choice ?



An example

The Jam study

	6 jams	24 jams
Approach	40%	60%
Try	1.4	1.5
Buy	30%	3%

Defaults & too many options

Which would you pick

Case I: You plan to spend the evening in the library working on a short paper due the following day. As you walk across campus you discover that an author you have always admired is about to give a public lecture. Do you proceed to the library anyway or go to the lecture instead?

Case II: You plan to spend the evening in the library working on a short paper due the following day. As you walk across campus you discover that an author you have always admired is about to give a public lecture and that—in another hall—they are about to screen a foreign movie that you have been wanting to see. Do you proceed to the library anyway, go to the lecture instead, or go to the movie?

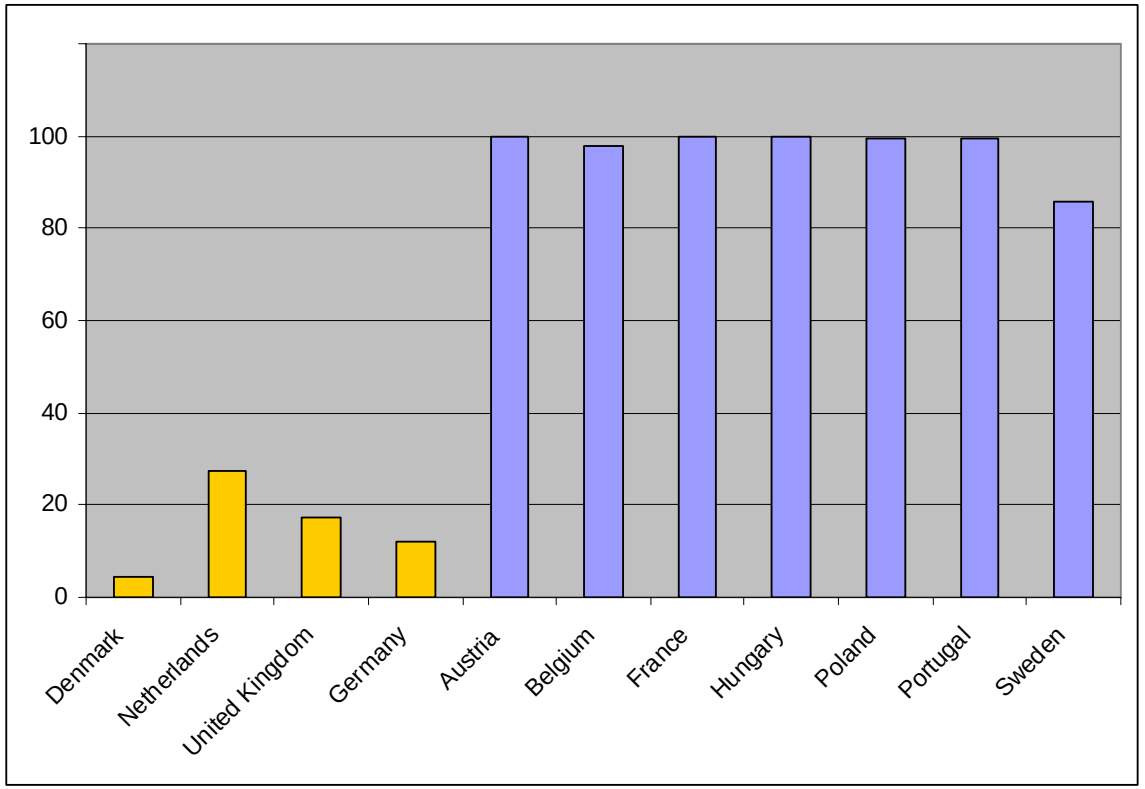
Which would you pick

Your patient is a 67-year-old farmer with chronic right hip pain. The diagnosis is osteoarthritis. You have tried several nonsteroidal anti-inflammatory agents (eg. aspirin, naproxen, and ketoprofen) and have stopped them because of either adverse effects or lack of efficacy. You decide to refer him to an orthopedic consultant for consideration for hip replacement surgery. The patient agrees to this plan. Before sending him away, however, you check the drug formulary and find that there

Case I: is one nonsteroidal medication that this patient has not tried (ibuprofen). What do you do?

Case II: are two nonsteroidal medications that this patient has not tried (ibuprofen and piroxicam). What do you do?

Donating Organs?



Effective consent rates, by country: Explicit consent (opt-in, gold) and presumed consent (opt-out, blue). Adapted from Science magazine. (Image courtesy of MIT OCW.)

What should we do?

- A few options or many?
  - Jams, 401K, Movies, dating , etc.
- How would these influence:
  - Approach & decisions?
- Defaults? – How could we use these?
- Defaults & complexity? – How could we use these?

The "spotlight" effect

The "spotlight" effect

- People think that other pay a lot of attention to them
  - The "Barry Manilow" effect

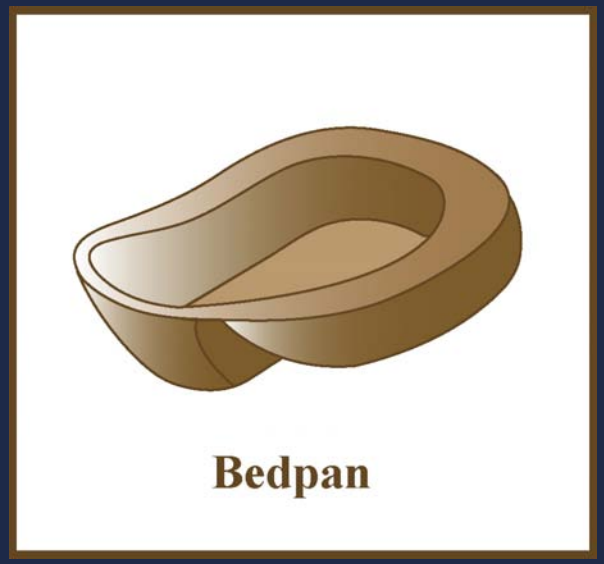
Magical thinking

Magical thinking I

- How attractive is a chocolate shaped like a cockroach? stool?

Magical thinking II

- How would you feel drinking from a brand new bedpan?
- Would you burn pictures of your loved ones?



Summary

Decision making summary

- We do it all the time, but how?
- One analogy: visual illusions –fast, most efficient, but susceptible to mistakes & to context influences
- Some specific examples:
  - Regret
  - Context effects (ADS & Compromise)
  - Too much choice?
  - Two "social" effects: The spotlight effect and magical thinking