



Human Decision-Making and Energy Efficiency

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An experiment...

I give you
€30:



You choose



I give you
€50:



You choose

Lose €10



Finding 1: People dislike losses relative to equivalent gains and will take risks to avoid them



A second experiment...

Scenario 1



€100 today



€105 tomorrow

Scenario 2



€100 in 30 days



€105 in 31 days

Finding 2: People discount the future sharply, resulting in “time inconsistent” decisions and procrastination



A third experiment...

Which of these two would you rather put a €10 bet on?

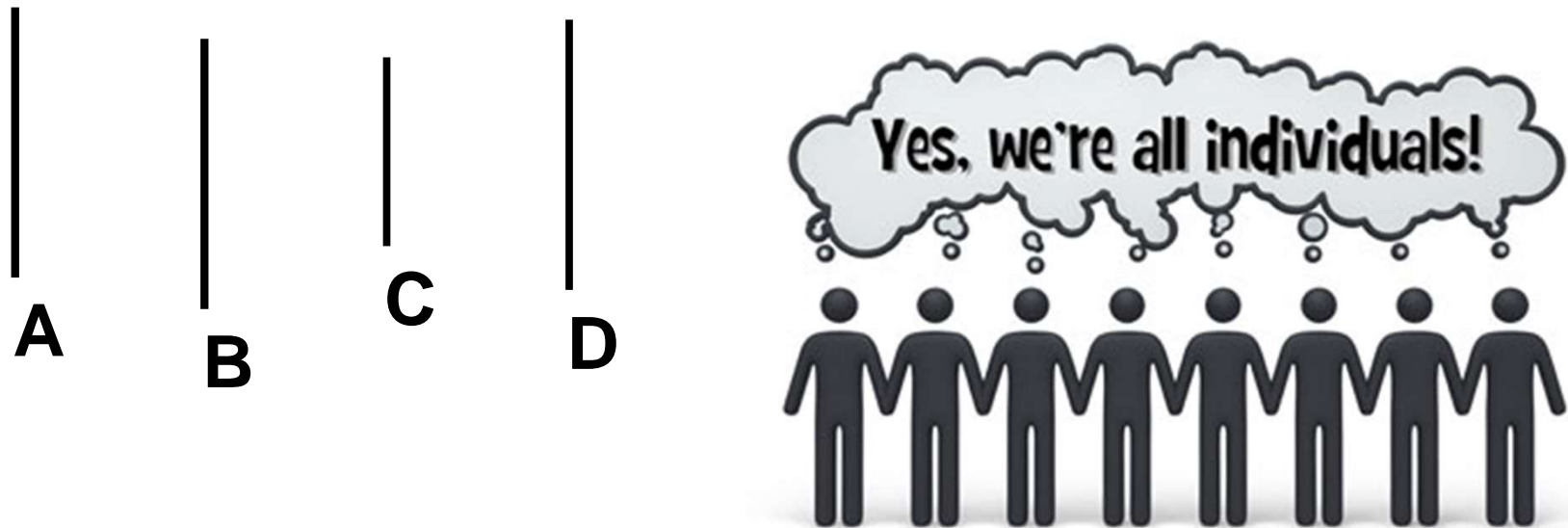
- 1) Is life expectancy in India greater than or less than 60?
- 2) Will Irish house prices go up or down in 2016?



Finding 3: People are more willing to take risks on matters they are familiar with or about which they feel more competent to assess risk (even if in fact they are not!)



A fourth (and famous) experiment...



Finding 4: People copy the decisions of others and feel uncomfortable departing from the norm

A fifth experiment

Marks out of 10 for bad behaviour

- 1) You notice you have not been charged for your butter, which is hidden behind the baked potato, but you say nothing...
- 2) You hide the butter behind the baked potato in the hope of not being charged for it...



Finding 5: Actions that generate harm are judged more harshly than inaction that causes the same harm



Suppose a DM considers investing in a more efficient technology



- Outlay involves losses in terms of money, time and effort
- Losses immediate; gain in future
- Cost of putting it off is low
- Size of gain is uncertain
- DM lacks familiarity
- DM can't easily observe decisions of others
- DM may be blamed if it goes wrong, but not if it is never attempted

NOTE:

- Information and education will not necessarily help
- Subsidies and tax breaks will not necessarily help
- None of this involves DM's views about the environment



Summary

- Important to understand how people make decisions under uncertainty with consequences over extended periods
- This understanding can perhaps be used to improve decision-making
 - Reduce uncertainty
 - Do formal calculations over a meaningful time-frame
 - Share experience
 - Try not to personalise the decision

