

# The Endowment Effect, Loss Aversion, and Status Quo Bias

Daniel Kahneman, Jack L Knetsch, and  
Richard H Thaler (1991)

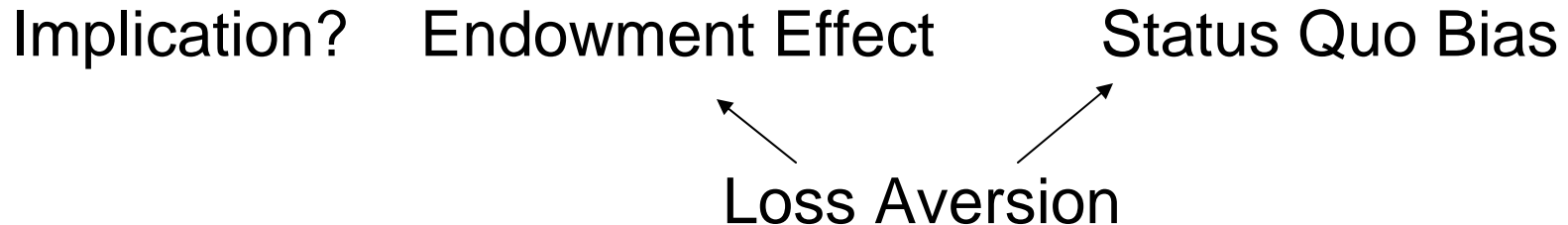
Harish K Subramanian (11/18/03)

# Agenda

- Understanding the terms
- Summary
- Example
- Discussion
- Implications in Markets?
- Further Questions

# Understanding the terms

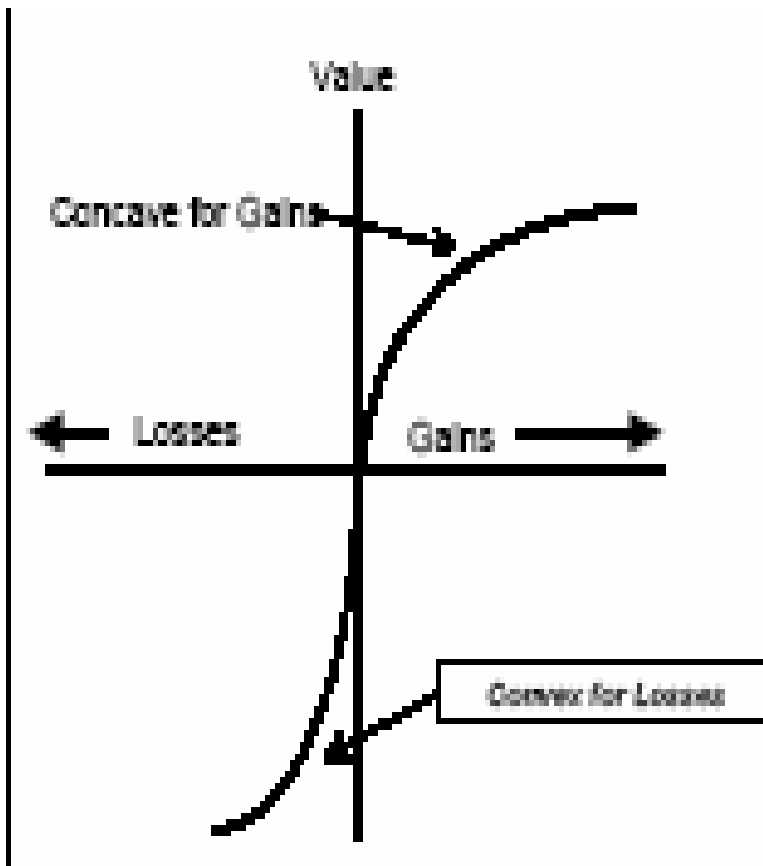
- **Endowment Effect:** Gain of value of product by just owning it – increases WTA-WTP spread
- **Loss Aversion:** Regret minimization – in some senses causes the other phenomena.
- **Status Quo Bias:** Inertially staying in same state – a form of underadjustment .



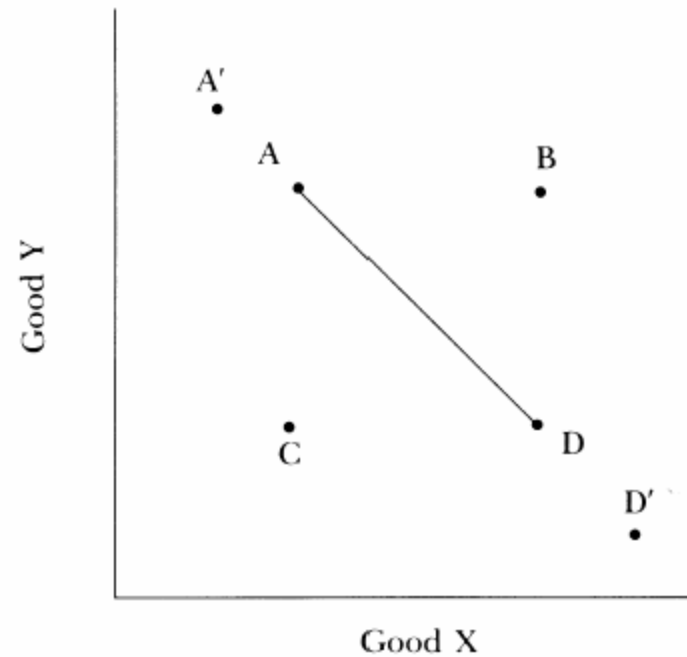
# Terminology

- Omission v Commission – Repenting changing states to find it unfavorable > regret of staying in state.
- Income Effect – People change budget share for certain items based on income.
- Reversibility of Indifference curves – if you have 5 pens and 0 dollars → have to give up 4 pens for 8 dollars → when you have 1 pens and 8 dollars → you should be willing to buy the 4 pens for 8 dollars.

# Summary



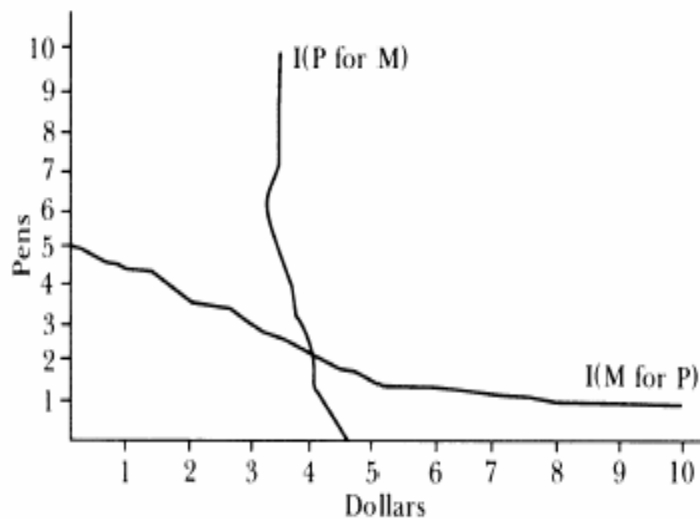
Value function replaces traditional utility function (which predicts linear fit).



Reference points make a difference !

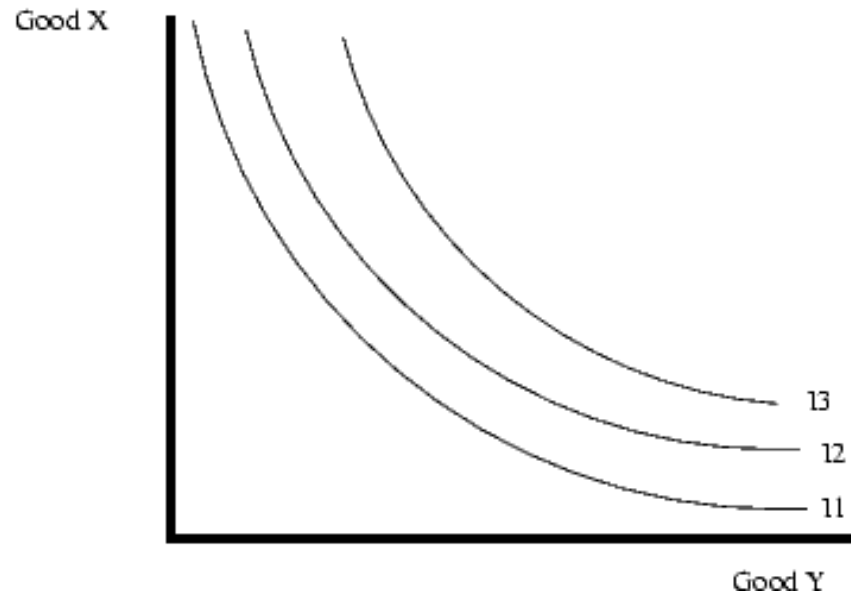
# Summary (2)

Indifference is between 5 pens and \$0 / 8 pens and \$1!



Kahneman says:

The curves intersect because with endowment, the curves are no longer reversible.



Standard Assumption:

Indifference curves do not cross.  
This is a consequence of the assumption that they are reversible.

# Example

Round 1: Please make a choice between (1)  
and (2)

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Round 2: Please make a choice between (1)  
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Round 2: Please make a choice between (1) and (2)

Hypothesis: In simple, controlled repeated choice scenarios, it is difficult and inaccurate to continue these studies – people learn!

# Example

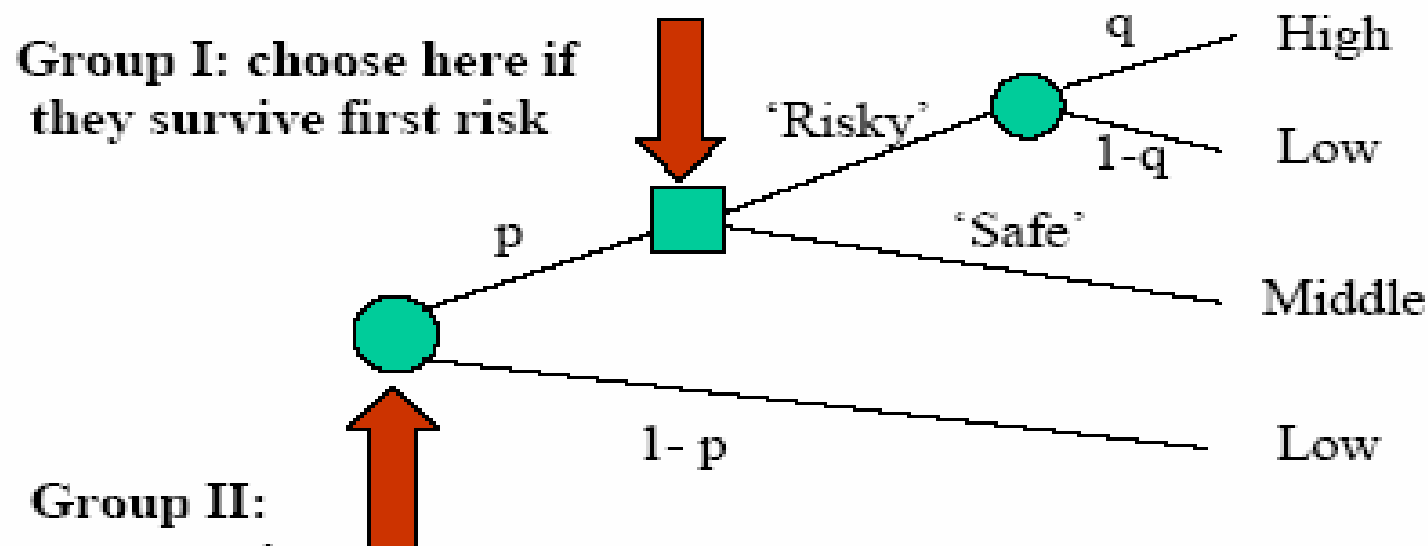
Round 1: Please make a choice between (1) and (2)

Round 2: Please make a choice between (1) and (2)

Hypothesis: In simple, controlled repeated choice scenarios, it is difficult and inaccurate to continue these studies – people learn!

- True in this case... but not always !!
- Even now, 80 deg in winter seems warm but in summer seems cool. Trivial but important consideration.

# Illustration of problem in decision making



Group I: choose here if they survive first risk

Group II: precommit to decision before first risk is resolved

Result:  
Group II take more risks  
Prediction failure(?)

## Stocks v Bonds - Effect of Loss Aversion

“While stocks and bonds provide a reasonably comparable neo-classical economic risk function, stocks have always commanded a higher rates of return than bonds.”



# Stocks v Bonds

“While stocks and bonds provide a reasonably comparable neo-classical economic risk function, stocks have always commanded a higher rates of return than bonds.”

Loss Aversion explanation?

Stocks can be bought/sold at will → more chance for profit → even greater chance for loss → require higher compensation for additional “risk”.

# Effect on Markets?

- Implementation on portfolio is obvious – long term investment.
- How is it applicable to short-term trading (like day trades)?
- Pitting rational agents with irrational agents – how to model this irrational behavior into market when trying to design a competing automated agent?

# Other Anomalies?

- Intertemporal Choice
- Preference Reversals
- Mental accounts.....

# Is it always a negative effect?

Apparently .. No!

The tumbling DOW Jones Index was explained to be “propped up” because of loss averse behavior – people refused to sell losing stock for fear of seeing their paper loss translated into actual “irreversible” loss....



# Discussion

- Opportunity cost: Is a GOOD consideration to get out of status quo ?
- Wine collector: Market price assumed – no undervaluation by seller.
- Transaction costs are usually negligible for large trades or money decisions.
- Lack of information or overwhelmed by math... does it explain something?
- Grand Canyon example: Not part with money for social benefit? No private gain?

# References

- Why smart people make big money mistakes – Gary Belsky/Thomas Gilovich (book).
- Loss Aversion in repeated games – Jonathan Shalev
- Prospect Theory and Asset Prices – Barberis, Huang and Santos ....