ECO663 Anomalies part2

Week3

Example: Consumer Preference

**Goal Orientation and Consumer Preference for the Status Quo**

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Journal of Consumer Research Vol .31, 2004

Objective

- Analyze the relationship between regulatory concerns (promotion focus vs. prevention focus) and status-quo bias.

- How goal orientation influence consumer preference for the status quo.

Promotion-focused (Growth framed) consumers are more sensitive to potential gains.

Prevention-focused (Security framed) consumers are more sensitive to potential losses.

THE VALUE FUNCTION: GOAL ORIENTATION AND LOSS AVERSION
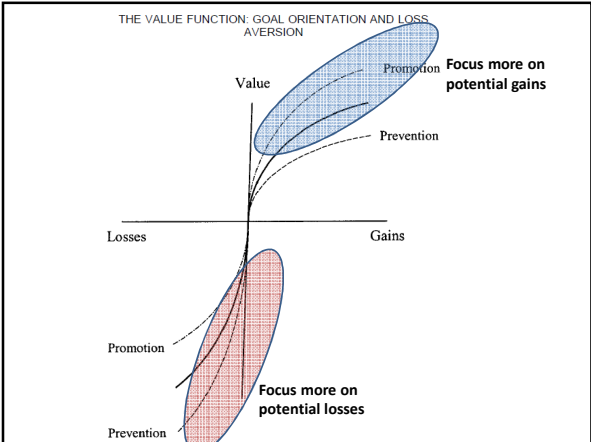
Hypothesis:

Prevention-focused consumers have stronger preference for status-quo, compared to **promotion-focused** consumers.

How can this be confirmed by experiments???

Experiment

The fund you are currently invested in now earns 7.1% [9.1%] interest. For next year, you have to choose whether to stay with the same fund or to switch to a new fund by checking a box on a form. The only information you have about the two funds is the expected rate of interest for the next year. These expected rates of return are only predictions; the actual rates could be higher or lower than predicted. Your options are:

    A.   Stay with the same fund, expected to earn 8.15% [8.65%].

    B.   Switch to a new fund, expected to earn 8.65% [8.15%].

Step1: Manipulation of goal orientation

Promotion-focused: ask to generate reports of their hopes/aspirations

Prevention-focused: asked to generate reports of their duties/obligations.

Expectations?

	Gain Frame (7.1%)	Loss Frame (9.1%)		Gain Frame (7.1%)	Loss Frame (9.1%)
SQ (8.65%)	Select SQ since SQ (8.65%) is expected to earn more.		SQ (8.15%)		
ALT (8.15%)			ALT (8.65%)	Select ALT since ALT (8.65%) is expected to earn more	

STATUS QUO BIAS AS A FUNCTION OF GOAL ORIENTATION AND DECISION FRAME, EXPERIMENT 2 (%)

		Goal orientation			
		Promotion		Prevention	
Status quo option		Gain frame	Loss frame	Gain frame	Loss frame
		7.1%	9.1%		
Dominant	8.65%	97.3 ①	94.6 ③	97.3	97.3
Not dominant	8.15%	94.6 ②	91.9 ④	75.7	59.5

① = 97.3% selected SQ.
=100-97.3% = 2.7% selected Non-SQ option.

② = 94.6% selected Non-SQ
=100-94.6% = 5.4% selected SQ option.

③ = 94.6% selected SQ.
= 5.4% selected Non-SQ option.

④ =91.9% selected Non-SQ.
=8.1% selected SQ.

STATUS QUO BIAS AS A FUNCTION OF GOAL ORIENTATION AND DECISION FRAME, EXPERIMENT 2 (%)

		Goal orientation			
		Promotion		Prevention	
Status quo option		Gain frame	Loss frame	Gain frame	Loss frame
				7.1%	9.1%
Dominant	8.65%	97.3	94.6	97.3 ⑤	97.3 ⑦
Not dominant	8.15%	94.6	91.9	75.7 ⑥	59.5 ⑧

⑤ = 97.3% selected SQ.
=100-97.3% = 2.7% selected Non-SQ option.

⑥ = 75.7% selected Non-SQ
=100-75.7% = 24.3% selected SQ option.

⑦ = 97.3% selected SQ.
= 2.7% selected Non-SQ option.

⑧ =59.5% selected Non-SQ.
=40.5% selected SQ.

STATUS QUO BIAS AS A FUNCTION OF GOAL ORIENTATION AND DECISION FRAME, EXPERIMENT 2 (%)

		Goal orientation			
		Promotion		Prevention	
Status quo option		Gain frame	Loss frame	Gain frame	Loss frame
Dominant		97.3	94.6	97.3	97.3
Not dominant		94.6	91.9	75.7	59.5

NOTE.—The numbers in each cell indicate the percentage of responses favoring the dominant option (the option with the higher expected return); the magnitude of the status quo bias is captured by the difference in the shares of the dominant option as a function of whether or not it is the status quo alternative. All cells had an equal number of observations ($n = 37$).

Under Prevention + Gain Frame, 24.3% of people select SQ option, under Prevention + Loss Frame, 40.5% of people select SQ option although the expected return of status-quo option is lower than the alternative.

Implication:

- Gain-loss frame (currently 7.1 or 9.1%) did not alter the selection results.

- Goal-orientation manipulation (promotion focus vs. prevention focus) affected status-quo preference significantly.

- Prevention focused: more loss averse => stick to SQ option more.

Example: Electric bill
(Hartman, Doane and Woo (1991))

Preference over Reliability of Electric Supply (lower outrage) vs. Electric Bill

6 alternatives (various combination of reliability and bill) are presented.

Group 1: Status Quo = High Reliability + 30% higher price

Group 2: Status Quo = Low Reliability + 30% lower price

Consumer Rationality and the Status Quo
Author(s): Raymond S. Hartman, Michael J. Doane and Chi-Keung Woo
Source: *The Quarterly Journal of Economics*, Vol. 106, No. 1 (Feb., 1991), pp. 141-162


Result

Group 1:
- 60.2 % selected their status-quo (=high reliability, high price)
- 5.7% preferred low reliability option (currently actually experienced option)

Group 2:
- 58.3% selected their status-quo (=low reliability, low price)
- 5.8% preferred high reliability option

Preference is strongly influenced by existing status-quo characteristics. When status-quo changes, people switch to prefer the new "status-quo" more.

FIGURE I
Trade-offs Between Service Reliability and All Other Goods
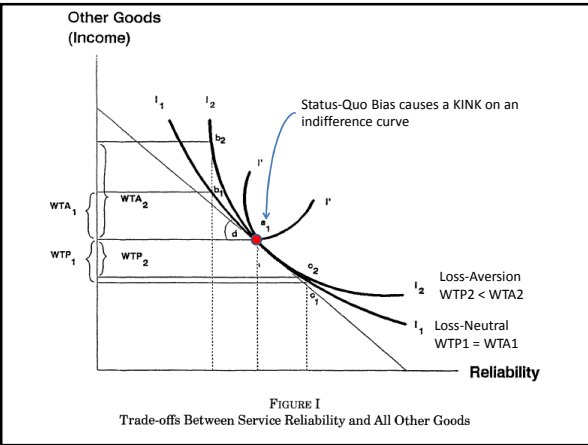
Example: Patient Inertia

Patient Inertia and the Status Quo Bias: When an Inferior Option Is Preferred
Gaurav Suri, Gal Sheppes, Carey Schwartz and James J. Gross
Psychological Science 2013 24: 1763 originally published online 19 July 2013
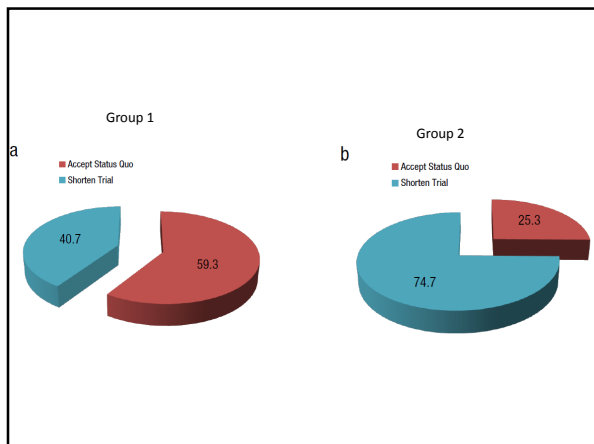

- Study 1: Press a button to shorten the waiting time till an electric shock experiment

Status Quo: not press a button

Alternative choice: press a button

Group 1: choice is made voluntarily by the participants

Group 2: participants are forced to make a choice

Slide 1

Group 1

a
- Accept Status Quo
- Shorten Trial

40.7
59.3

Group 2

b
- Accept Status Quo
- Shorten Trial

25.3
74.7

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Study 3: Help participants to "experience" the new choice beforehand.

One such manipulation could be to require participants to press the button that reduced the shock probability early in the experiment. This would remove participants' resting-state inertia and thereby reduce their SQB. Support

Slide 3

b
- Accept Status Quo
- Reduce Shock Probability

22.4
77.6

Slide 4
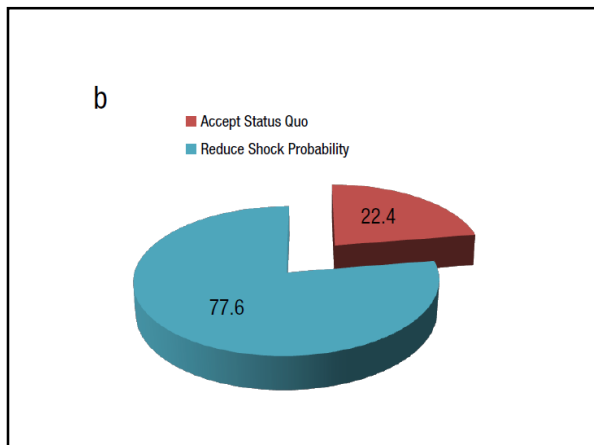
However, this is frequently not possible. For example, it is difficult to mandate that people get flu vaccinations or get medical checkups on a regular basis. In such cases, it is important to provide individuals with sufficient support to overcome their inaction inertia (or other default state). Our findings from Study 3 suggest an effective way to do this would be to focus resources to induce individuals to try the recommended option once. After they have completed the activity for the first time, their psychological inertia (Gal, 2006) would make it easier for them to repeat the action. This suggests, for example, that it may be better to invest scarce resources to induce people to get the flu vaccine once, for the first time, rather than spend money on a broader campaign aimed both at potential first-time and repeat vaccine recipients. More broadly, efforts focusing on getting individuals to commence taking their medications as prescribed, go for their first medical checkup, or go for a first run may lead to the overcoming of patient inertia and the initiation of lasting compliance behavior.

Slide 5

Preference Reversals

Reference:

Anomalies
Preference Reversals
Tversky and R.H. Thaler

Journal of Economic Perspectives
Vol4, Num2, Spring 1990

Slide 6

Experiment

- There are two gambles

A: 9/10 chance to win $5,00 (1/10 chance to win $0)

B: 1/10 chance to win $45,00 (9/10 chance to win $0)

Which one would you select?

Experiment

Now you are the seller of these gambles.

For how much, would you sell gamble A?
(9/10 chance to win $5)

For how much, would you sell gamble B?
(1/10 chance to win $45)

Preference Reversal

• Assumption of Choice Analysis

"A is preferred to B"

"A has a higher reservation price than B"

are treated as same thing.

<= procedure invariance

However, these two statements are not equal in some situations => Preference Reversals

Preference Reversals occur when

"H is preferred to L"

and

"$P_L > P_H$".

As the result,
$P_H \approx H \gg L \approx P_L > P_H$

Choice is based on Joint Evaluation

"H is preferred to L"

Pricing is based on Single Evaluation

P_H
P_L

Example 1

• H bet : 9/10 chance to win $5
(High chance of winning low prize)

• L bet: 1/10 chance to win $45
(Low chance of winning high prize)

Choice Between H and L?

• H bet : 8/9 chance to win $4
(High chance of winning low prize)

• L bet: 1/9 chance to win $40
(Low chance of winning high prize)

=> Majority choose H bet

Pricing for H, L?

• H bet : 8/9 chance to win $4
(High chance of winning low prize)

• L bet: 1/9 chance to win $40
(Low chance of winning high prize)

Expected loss (as a seller) = (8/9)*4 = $ 3.56 for H. => P_H > $3.56.
Expected loss (as a seller) = (1/9)*40 = $4.44 for L.
$\Rightarrow P_L$ > $4.44. => Min($P_H$)<Min($P_L$)

$\Rightarrow$ Preference Reversal

"H is preferred to L"

and

"P_L is higher than P_H"

Example 1

• 600 people per year are killed in traffic accidents

Program A: reduce the casualties to 570, costs $12 million

Program B: reduce the casualties to 500, costs $55 million

• 600 people per year are killed in traffic accidents

Program A: reduce the casualties to 570, costs $12 million
=> $12,000,000/30 = $400,000 per person

Program B: reduce the casualties to 500, costs $55 million

=>$55,000,000/100 = $ 550,000 per person

• Choice between A & B

Joint Evaluation: Compare 30 saved vs. 100 saved.

• Pricing of A and B

Program A: reduce the casualties to 570, costs $12 million

Program B: reduce the casualties to 500, costs ☐ million

=> How much the cost of program B should be so that the programs are equivalent?

- Pricing of A and B

Program A: reduce the casualties to 570, costs $12 million (=> $12 million/30 = $400,000 per life)

Program B: reduce the casualties to 500, costs ☐ million

If the respondent answer ☐ <55 million (say, 40 million), s/he is revealed to prefer A to B.

⇒90% of respondents answered less than $55 million.

⇅ Preference Reversal

⇒Majority preferred B to A as the program.

Preference Reversal (under slightly different context)
& Hyperbolic Discounting

Q: How much dollars are you willing to accept after one week in order to forgo $1.50 now?

Today	$1.50	
After 1 week		
After 2 weeks		
After 10 weeks		
After 50 weeks		

- Any evidence of hyperbolic discounting?

Exercise/Experiment

Which of the following choices do you prefer?
A: receiving $1000 in 2 years
B: receiving $800 in 1 year

Suppose 1 year past from the previous situation.
Which one do you prefer now?
A: receiving $1000 in 1 year
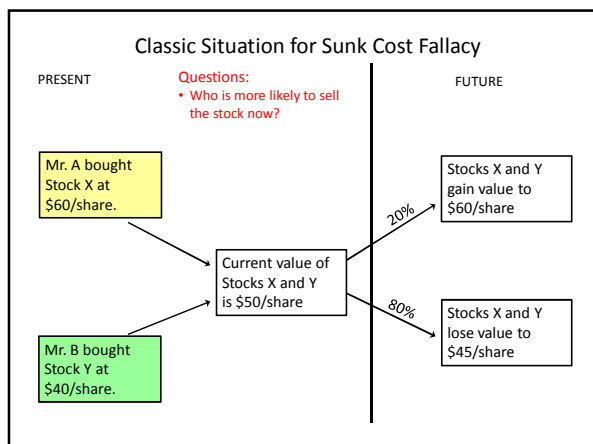B: receiving $800 now.

Sunk Cost Fallacy

"To choose a course of action that builds on past investments that you *would not choose* if you were in exactly the same position but with a different history of investments."

Your choice:
- Maintain course: Keep investing your time, money and effort on a project in which you have already invested some time, money or effort.
- Change course: Pursue a new project.

Advice – Ignore the time, money and effort in the past when deciding what to do next.
- Ask yourself, "What would I do given my present situation if I had not already sunk money or time into a particular project or course of action."

Classic Situation for Sunk Cost Fallacy

PRESENT

Questions:
• Who is more likely to sell the stock now?

FUTURE

Mr. A bought Stock X at $60/share.

Current value of Stocks X and Y is $50/share

Mr. B bought Stock Y at $40/share.

20% → Stocks X and Y gain value to $60/share

80% → Stocks X and Y lose value to $45/share

Example

You has paid $90 for 1-day only nonrefundable ski lift and rental ticket beforehand.

When you arrived at the resort, it happened that the weather condition was terribly bad, cold, icy, windy…

What will you do?
(a) Stay and ski
(b) Give up and go home

• If you haven't paid for skiing, what would you do?

• Decide whether or not to invest **one million dollars** in a plane that eludes conventional radar.

Senario A

• A competitor had recently begun marketing a better version of the same plane.

• 90% the project has already completed (about 10 million dollars has already spent)

Q: Will you be willing to invest an additional one million dollars to complete the project?

• Decide whether or not to invest **one million dollars** in a plane that eludes conventional radar.

Scenario B

• A competitor had recently begun marketing a better version of the same plane.

Q: Will you be willing to invest one million dollars to complete the project?

Summary: Sunk Costs

• It is a decision-making mistake to honor sunk costs.

• Why is it a fallacy to honor sunk costs?

The decision should be based on what might happen in the future, not on the "loss" of past investments.