

***Behavioural Economics Research:  
Some Examples, Applications, and  
Questions to Pursue***

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# ***Admonishments to Analysts***

**“Any measurement technique ... should be consistent with economic theory.”**

**(Freeman, 1963)**

**“A core set of economic assumptions should be used in calculating benefits and costs.”**

**(Arrow, et al., 1996)**

# ***Economists and Standard Economics***

**End of Chapter Question:**

**“You won a free ticket to see an Eric Clampton concert ... Bob Dylan is performing on same night ... Tickets for Dylan cost \$40. You would be willing to pay... What is the opportunity cost of seeing Eric Clampton?”**

- A. 25.1%**
- B. 21.6% (the correct answer)**
- C. 25.6%**
- D. 27.6%**

**(Ferraro and Taylor, 2005)**

# ***Behavioural Economics***

**Psychology, Economics, Decision Sciences**

**Findings can improve on standard economics,  
and policy analyses and policy design**

**Largely ignored (Behavioural Finance excepted)**

# ***Mental Accounting***

**Std. Theory Assumes Money is Fungible**

**Evidence / Experience Suggest Often Not**

**Spend dividends, “not dip into capital”**

**Decoupling purchase from paying**

**Sunk cost effect**

**Avoid debt**

# *Power of Default*

## **Organ donation consent:**

<b>Opt-In (U.S., Canada, others)</b>	<b>&lt;20%</b>
<b>Opt-Out (Europe, Singapore, etc.)</b>	<b>&gt;80%</b>

<b>Auto insurance</b>	<b>Buy Cheap</b>	<b>Buy Expensive</b>
<b>NJ, Cheap default</b>	<b>80%</b>	<b>20%</b>
<b>PA, Expensive default</b>	<b>25%</b>	<b>75%</b>

## **New employee enroll in pension plan:**

<b>Information, but Opt-In</b>	<b>25% enroll</b>
<b>Automatic unless Opt-Out</b>	<b>80% enroll</b>

# ***Anchoring***

## **Last Two Digits of SS Number**

**00-19   20-39   40-59   60-79   80-99**

**Max WTP for six consumer items:**

**Mean   11.25   17.06   16.94   21.37   32.99**

# ***The Power of Free***

<b>Lindt Truffle</b>	<b>@ 15¢</b>	<b>73%</b>
<b>Hersey's Kiss</b>	<b>@ 1¢</b>	<b>27%</b>



<b>Lindt Truffle</b>	<b>@ 14¢</b>	<b>31%</b>
<b>Hersey's Kiss</b>	<b>@ 0¢</b>	<b>69%</b>



# ***Monetary Measures of Changes in Economic Welfare (Values)***

**Gain = Max willing to pay for it (WTP)**

**Loss = Minimum demands to accept it (WTA)**

**“... we shall normally expect the results to be so close together that it would not matter which we choose”.  
*(Henderson, 1941)***

**“... economists expect that the difference between them will be small in most cases” *(U.S. EPA, 2010)***

# ***Working Assumption of Equivalence Not Consistent with the Evidence***

**People Value Losses More than Gains  
(Reference or Endowment Effect)**

**Value of 50 percent Chance Win \$20:**

**Willing to pay to Acquire    \$ 5.60**

**Compensation to give up    \$11.02**

***(Kachelmeier / Shehata, 1992)***

# ***Preferences: Mug vs. Chocolate***

	<b>Prefer</b>	
	<b><u>Mug</u></b>	<b><u>Chocolate</u></b>
<b>Simple Choice</b>	<b>56%</b>	<b>44%</b>
<b>Give up Chocolate for Mug</b>	<b>10%</b>	<b>90%</b>
<b>Give up Mug for Chocolate</b>	<b>89%</b>	<b>11%</b>

***(Knetsch, 1989)***

# ***Natural Experiments***

## **Price elasticity of eggs (Putler, 92)**

Price decreases (gains, insensitive) -0.45

Price increases (losses, sensitive) -1.10

## **Reluctance to realize losses (Odean 98)**

Sell “winners” and keep “losers”

Shares sold gained 3.4% more than those kept

## **Professional Golfers Putts (Pope/Schweitzer 11)**

Prevent loss (bogey) *More accurate*

Achieve gain (birdie) *Less accurate*

# ***Loss vs. Foregone Gain***

**Pay teachers for student achievement.**

**Treatments: (9 schools, \$0 -\$8000 bonus)**

**Control – No bonuses**

**Bonus per successful student at end of year**

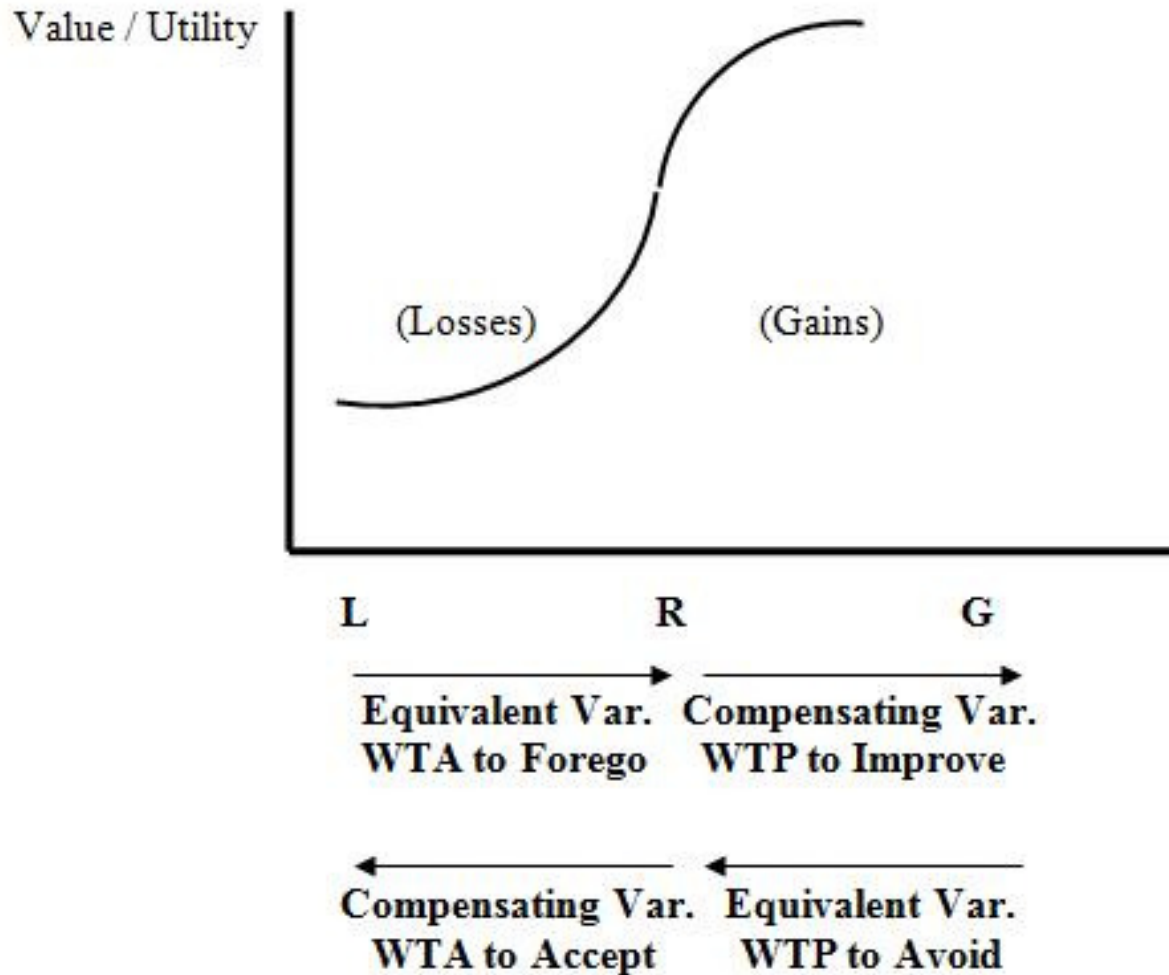
**Small (not sig) improvement over control**

**Full bonus now, pay back for unsuccessful**

**Big (sig) improvement over control**

**(Fryer, Livitt, List, Sadoff, in press)**

**Valuations: (1) Change from Reference State  
(2) Losses Greater than Gains**



# ***Thought Experiments & Intuition***

## **Blocking of roadway**

**Occurrence – Incur Loss: WTA to accept**

***(sum leave indifferent blocked travel and reference of normal travel)***

**Clearing the road—Eliminate Loss: WTA to forego**

***(sum indifferent between leave blockage and reference of normal travel)***

## **Physical Assault**

**Occurrence – A Loss: WTA to accept beating**

***(sum leave indifferent beating and reference of not being beaten)***

**Stopping the beating – Eliminate Loss: WTA to forego**

***(sum leave indifferent continuing beating and reference of not beaten)***

**Robbery**

**Accident**

**Oil spill**

**Serious illness**





# ***Deservedness***

***You and another person agree to work ...the time and work is the same. One of you will be paid \$75 and the other \$25. Before beginning you must choose between two rules***

***Require ... give \$25 to other person 90%***

***Allow person paid \$75 to keep it 10%***

***You are about to play simple game w/ winner depend entirely on chance. Winner gets \$75, the other \$25.***

***Require winner to give \$25 to loser 40%***

***Allow winner to keep the \$75 60%***

***Problem => Behavioural Insights =>  
Policy Design => Result***

**Changing Pension Plan Contributions:**

**From: Pay out of current earnings  
(a loss – very salient)**

**To: Portion of future wage increases  
(forego gain in future – not very salient)**

**Savings rates:**

<b>Pay from current earnings</b>	<b>3.5 %</b>
<b>Pay from future wage increases</b>	<b>13.4 %</b>

**(Thaler / Benartzi 2007)**

## ***Pigouvian Taxes: Good Economics – But Unloved and Underused***

**“...just another way for the government to take  
hard-earned money out of the pockets of people.”  
(Letter to the editor, Vancouver Sun)**

**“A government money grab” (Singapore taxi drivers)**

**“...much of the blame ... attributed to the carbon tax...  
Voters have never stopped hating the tax and its effect on  
their electric bills.”**

**(News account of unseating of Australian PM)**

# ***Financial Sanctions, and Moral Sanctions***

**Parents late day-care pickup penalty**

**Treat fine as price => Late pickups INCREASED**

**Low fine level => Implied low harm**

**(Gneezy / Rustichini, 2000)**

**Restraints:**

**Monetary**

**Non-monetary (self view, do right thing)**

# *Issues*

**Lack of responsiveness to higher tax / fee levels**

**What money can't buy**

**“Some things should not be available for purchase”**

**“Cost of doing business” vs. “Pay to pollute”**

# ***Preferences for Ear-Marking***

**Increase in B.C. park / camping fees:**

**To general revenue account: UNACCEPTABLE**

**To maintain / improve park: ACCEPTABLE**

**Acceptability (1 to 7) UK Road Pricing (Schuitema / Steg, 2008)**

<b>General public funds</b>	<b>2.1</b>
<b>Public transit</b>	<b>4.0</b>
<b>New roads</b>	<b>5.2</b>
<b>Decrease fuel taxes</b>	<b>5.6</b>
<b>Abolish road taxes</b>	<b>5.8</b>

**Reducing Indonesian petrol subsidy (Bradiptyo / Sahadewo, 2013)**

# ***Behavioural Findings => Alter Design?***

**Coordinate monetary / non-monetary**

**Build greater legitimacy into designs**

**Responsible for costs: FAIR**

**Transparent accounting of costs to others**

**Acceptable use of revenues:**

**Earmarking for related / desired uses**

**Increase responsiveness to changes in tax**

**Transparent accounting of costs changes**

**Narrow framing**

# ***Enforcing Tax Compliance***

**Standard economics deterrence model:**

**Comply or Not => Gain vs Expected Loss**

**Evidence at variance:Beccaria (1764) correct:**

**“Crimes are more effectually prevented by the certainty than the severity of punishment”.**

**(Beccaria, 1764)**

**A 1% increase in probability of punishment increases deterrence more than a 1% increase in the severity of punishment.”(Mungan/Klick, 2012)**



# ***Puzzle: Probabilities vs. Outcomes***

**Catastrophic Losses (e.g., health, environment):**

**People focus on possible outcomes**

**People insensitive to changes in probabilities**

**Wrong-Doing, Tax compliance, etc.**

**People focus on probabilities of sanctions**

**People insensitive to severity of sanctions**