

THE AFFECTION EFFECT IN INSURANCE DECISIONS

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S1: ILLUSTRATIVE SCENARIO

Helen and Laura are equally wealthy and do not know each other. They visited Europe last month. There they each bought a painting for \$100, and had it shipped to their home in the U.S. Due to some natural cause over which the shipping company had no control, the paintings were damaged beyond repair during shipment. Both Helen and Laura bought shipping insurance, and now they can claim a fixed \$100 check from the insurance company as compensation. However, claiming insurance is time consuming, and time is equally valuable to Helen and Laura. Helen loved the painting more than Laura.

QUESTION: Who would be more willing to spend the time collecting the insurance compensation?

Evaluating Insurance Claim Decisions

NOTATION

W = Wealth level of Individual 1 or 2

C = Insurance Payment in Case of Loss

T = Amount of time willing to invest in claiming compensation

$v(T)$ = Monetary equivalent of time

u = Shape of utility function

DETERMINING T $u(W-v(T)+C) = u(W)$

S2 TIME TO MAKE INSURANCE CLAIM

You were in Italy last month. You bought a painting there for \$100, and had a local company ship it to your home in the US. When the painting arrived, you found it badly damaged. In order to claim compensation, you must drive a long distance to a branch of the shipping company and show them the damaged painting yourself. If you go there, it is certain that you will get a fixed compensation of \$100 -- the price you paid for the painting. You won't get more or less than that. If you don't go there, you won't get any compensation.

High Affection Version

You liked the now-damaged painting very much and you fell in love with it at first sight. Although you paid only \$100, it was worth a lot more to you.

Low Affection Version

You were not particularly crazy about the now-damaged painting. You paid \$100 for it, and that's about how much you think it was worth.

QUESTION: **What is** the maximum number of hours they would be willing to drive in order to claim the compensation?

Choices: "0 hour" to "10 hours or more"

RESULTS OF SCENARIO 2

83 Participants

MEAN NUMBER OF HOURS DRIVING TO COLLECT \$100

High Affection Condition: 4.12 Hours

Low Affection Condition 2.89 Hours

$t = 2.45$ $p < .025$

S3 TIME TO MAKE INSURANCE CLAIM WITHOUT REPRISAL

Suppose that you recently bought a used camera for \$100. You accidentally dropped it yesterday and it was damaged beyond repair. You remember that the camera came with some insurance. You check with the insurance company and they agree to compensate you for what you paid for the camera, namely, \$100. In order to claim this compensation, you must personally go to the insurance company within 24 hours and fill out many forms. The whole process will take 4 hours. You have an exam coming up in a week and time is precious for you.

High Affection Version

You liked that camera very much. You fell in love with it the minute you first saw it. It became one of your most cherished possessions. Now it's totally damaged. You won't ever be able to find another camera like this.

Low Affection Version

You were not particularly crazy about that camera. You didn't have any particular feelings for it. You think it's just worth how much you paid.

QUESTION: Would you claim the compensation for the camera?

0 indicated "definitely not" and 5 indicated "definitely yes."

RESULTS OF SCENARIO 3

83 Participants

WHETHER ONE WOULD CLAIM COMPENSATION

High Affection Condition: 4.18

Low Affection Condition 3.58

$t = 2.23$ $p < .05$

PROSPECT THEORY

(Kahneman and Tversky 1979)

Loss without compensation = $v(-L)$

Case 1: Loss and Insurance Claim in Different Mental Accounts

Loss with compensation = $v(-L) + V(C)$

Willingness to claim compensation is independent of L

Case 2: Loss and Insurance Claim in Same Mental Account

Loss with compensation = $v(-L + C)$

Willingness to claim compensation decreases as L increases for $C < L$ due to convexity of v function in loss domain

A given amount of compensation is less attractive if it covers a smaller proportion of a loss.

RECENT LITERATURE ON DECISION MAKING

COGNITIVE LIMITATIONS

- Collecting Information (Simon 1955, 1956)
- Biases and Heuristics
(Tversky & Kahneman, 1974; Lichtenstein & Slovic, 1971;
Hsee, 1996)

EXPERIENTIAL UTILITY (Kahneman and Snell 1990, 1992)

- Task-irrelevant affective Factors (Hsee 1995)
- Mediating Role of Fear (Loewenstein et al. 1998)
- Anticipated Elation and Disappointment (Mellors et al 1997)
- Affect as a Cue for Risk and Benefits (Finucani et al 1998)

RECENT LITERATURE ON BEHAVIORAL INSURANCE

- Framing Manipulations (Johnson et al 1993)
- Arguments Used for Protective Decisions
Hogarth and Kunreuther 1993)
 - ◆Peace of Mind
 - ◆Relieving Anxiety

CONSOLATION HYPOTHESIS

When people decide whether or not to purchase an insurance policy for an article, people sense how much pain they would experience in case the article is damaged.

- The greater affection (A) they have for the article:
 - ◆ the more pain they expect to experience in the future
 - ◆ the more worry they experience now
- People view insurance compensation (C) as a token of consolation as well as a monetary award
- $U(\text{compensation}) = f(C, A)$
- If money is unrelated to lost object then A will not influence $U(\text{compensation})$

ROLE OF COMPENSATION IN PROVIDING CONSOLATION

- Non-Monetary Functions of Compensation
 - ◆ Relieves Anticipated Pain
 - ◆ Relieves Current Worry
- Greater Pain and Worry are Associated with more Cherished Items
- Insurance Provides Individuals with Peace of Mind
- Compensation has Meaning Independent of Monetary Value of Item (V)
 - ◆ Fixed C (e.g. \$200) is still attractive whether $V = \$200$ or $\$1000$
 - ◆ Contrast with Insurance as Monetary Award

S4 TURNING THE CONSOLATION EFFECT ON AND OFF

Suppose that you just returned home from a trip in Europe. While there you bought a sculpture for \$50, and had it shipped to your home. Due to some natural cause over which the shipping company had no control, the sculpture was broken beyond repair in transit. According to its policy, the shipping company is not responsible for the damage.

High Affection Version

You loved that sculpture very much. Now that it's broken, you feel devastated.

Low Affection Version

You didn't like that sculpture very much. Now that it's broken, you don't feel particularly affected.

Compensation Related to Sculpture

You could claim a \$50 compensation for the now-damaged sculpture but you must go to the insurance company right away and the whole process will take about 3 hours.

Will you claim the compensation for the sculpture?

Compensation Unrelated to Sculpture

You could claim a \$50 rebate for a book you bought there, which has nothing to do with the sculpture. In order to receive the rebate, you must go to the store right away and the whole process will take about 3 hours.

Will you go to claim the book rebate?

RESULTS OF SCENARIO 4

206 Participants

Purpose of the \$50	Willingness to claim the \$50	
	Low affection	High affection
compensation for the object	3.15	3.94
rebate for an unrelated object	3.40	3.26

Note. 0 definitely no 5 definitely yes

Statistical tests

Compensation for object (sculpture) High vs. low affection $t=2.60$ $p<.025$
Rebate for unrelated object (book) High vs. low affection $t < 1$ n.s.

S5: PURCHASING INSURANCE

You are in Europe and bought a vase there for \$200. It is too heavy for you to carry home. You ask a local shipping company to ship the vase to your home in the U.S. There is a 5% chance that the vase will get damaged during shipment. You can buy shipping insurance from an independent insurance company. Buying the insurance will not change the chances that the vase will get damaged. If you buy the insurance and if the vase gets damaged, you will be compensated by the insurance company for what you paid for the vase, namely, a \$200 check. If you don't buy the insurance and if the vase gets damaged, you will not receive any compensation.

High Affection Version

You fell in love with the vase at first sight. Even though you bought it for only \$200, you feel it is priceless to you. You have been searching for such a vase for many years.

Low Affection Version

You don't have any special feeling for this vase; you find it is OK for its price. You bought it for \$200, and think that's about how much it is worth to you.

QUESTION: What is the maximum you are willing to pay for the shipping insurance?

RESULTS OF SCENARIO 5

46 Participants

MAXIMUM WILLINGNESS TO PAY

High Affection Condition: \$44.80

Low Affection Condition \$24.76

$t = 2.71$ $p < .01$

EXPLAINING AFFECTION EFFECT IN INSURANCE PURCHASE DECISIONS USING STANDARD ECONOMIC THEORY

People may infer actual market value of object from their feelings

- those who loved the vase may have thought it had a higher market value than those who did not have affection for it
- object's market value affects a person's wealth and willingness to buy insurance

Notation:

M = market value of object

I = amount of insurance

W = individual's wealth level before buying the object

P = price of object

C = amount of compensation in the event of a loss

q = probability of loss.

EXPLAINING AFFECTION EFFECT IN INSURANCE PURCHASE DECISIONS USING STANDARD ECONOMIC THEORY (continued)

Determining Insurance Premium (I)

$$q u(W-P-I+C) + (1-q) u(W-P-I+M) = q u(W-P) + (1-q) u(W-P+M)$$

Influence of M on I

$$dI/dM = \frac{(1-q) U'(W-P-I+M) - (1-q) U'(W-P+M)}{(1-q) U'(W-P-I+M) + q U'(W-P-I+C)} > 0$$

As M (market value of object) increase then
 I (insurance premium) increases

S6: Insurance Purchase with Constant Market Value

Suppose that you are about to move to a new city. Your company will pay for all the moving expenses. Among the things you ask the moving company to ship is an antique clock. There is some chance that the clock may get lost in shipment. The moving company does not provide insurance, but you can purchase insurance from an independent company yourself. Buying insurance will not affect the chance of loss, but if you buy insurance and the clock is lost, you will receive a \$100 in compensation.

Note: The clock no longer works and cannot be repaired. It has literally no market value.

High Affection Version

It has a lot of sentimental value to you. It was a gift from your grandparents on your 5th birthday. You grew up with it. You learned how to read time from it. You have always loved it very much.

Low Affection Version

It does not have much sentimental value to you. It was a gift from a remote relative on your 5th birthday. You didn't like it very much then, and you still don't have any special feeling for it now.

QUESTION: What is the maximum you are willing to pay for the shipping insurance?

RESULTS OF SCENARIO 6

98 Participants

MAXIMUM WILLINGNESS TO PAY

High Affection Condition: \$22.24

Low Affection Condition \$10.51

$t = 3.95$ $p < .001$

S7: Direct Choice Between Insurance Policies

Suppose that you are visiting Europe now and bought two vases there for \$200 each. You ask a shipping company to ship the vases to your home in the U.S. There is some chance that both vases will be damaged in transit. Suppose that the two vases will be packed in the same box so that if one vase is damaged, the other is also damaged, and if one is not damaged, the other is also not damaged.

The shipping company offers insurance for individual items. If you buy insurance for a given vase and if it is damaged in shipment, then you will receive a check of \$200 as compensation.

Of the two vases, you love one much more than the other. You feel that the vase you love is worth \$800 to you and the other one is worth only \$200 to you.

Suppose that the insurance premium for the vase you love is \$12, and the insurance premium for the vase you don't love as much is \$10. Suppose also that you have enough money to insure only one vase.

QUESTION: If you are to insure one vase, which one will you insure?

Features of Scenario 7

Monetary consequences of the two insurance choices are identical,

- probabilities of damage to the two vases are perfectly correlated,
- compensation for either vase is a fixed \$200

Insurance for the low-affection vase is the strictly dominant option.

- insurance premium is \$10 for low-affection vase but is \$12 for the high-affection vase.
- market value affects perception of wealth not which insurance policy to buy

RESULTS OF SCENARIO 7

PREDICTIONS:

Standard Economic Theory: Buy \$10 insurance policy

Consolation Hypothesis: Buy \$12 insurance policy

CHOICE OF INSURANCE POLICY MAXIMUM WILLINGNESS TO PAY

(46 Participants)

High Affection Vase (\$12) 63.5%

Low Affection Vase (\$10) 36.5%

$$\chi^2 = 7.04 \quad p < .01$$

KEY FINDINGS OF STUDY

Main findings of the current research

- people are more likely to buy insurance for a loved object than for a less loved object even though the purchase of insurance does not provide added protection to the object
- people are more likely to seek compensation for the loss of a loved object than for the loss of a less loved object even though the compensation does not help recover the lost object.

Generalization of findings

People tend to devote more resources to objects which they love than for objects they do not have a special feeling, even though the differential treatment will not benefit the objects per se

IMPLICATIONS FOR INSURANCE RESEARCH

- Provides quantitative Measure of Emotion as it Influences Insurance Demand
- Helps Explain Some Insurance Anomalies
 - ◆ “Irrational” Demand for Flight Insurance (Eisner and Strotz 1961)
 - ◆ Demand for Disaster Insurance After the Event (Kunreuther 1996)
- **Open Question:** What is the Boundary Condition between the Affection Effect and the Partial/Full Compensation Effect?
 - ◆ Partial/Full Compensation Effect Occurs if a Fixed Amount (say \$200) of Compensation for an Article Appears Less Attractive to Somebody who Values the Article at \$1,000 than to someone who Values it at \$200
 - ◆ Did not Find this Effect in any of our Studies; Instead, we only found the opposite, **the affection effect**

IMPLICATIONS FOR INDIVIDUAL DECISION MAKING

- Shows importance of affective factors in judgment and choice
 - ◆ Waxing car more often immediately after purchase
 - ◆ Buying more expensive casket if one loves a person more
 - ◆ Indulging children more if one loves them more
- Framing message makes a difference
 - ◆ Labels make a difference (Study 4)
 - ◆ Conveying degrees of affection impacts on willingness to collect (Studies 5 and 6)
- Importance of Money as Meaning
(Money is Not Fungible in Many Cases)
 - ◆ Mental accounting concept
(Thaler 1985, 1990; Tversky and Kahneman 1982)
 - ◆ Source dependency (Loewenstein and Issacharoff 1994)
Valuing a prize more when earning it for good performance rather than being given it by chance