

# Information-Consumption Substitutes Hypothetical Scenarios

## Outline of Analysis

### 1 Brief Introduction

This study tests the idea that current consumption is a substitute for information about aversive future events. Substitution implies that receiving information about aversive future events reduces the demand for pleasurable consumption in the present. The more we enjoy current consumption, the more willing we are to postpone and insure against a potentially negative future outcome when in the presence of information about this outcome.

We propose to generate four hypothetical scenarios through an online survey to test the corresponding hypotheses, utilizing real life situations to represent impending consumption and potentially negative future outcomes.

### 2 Study Design

#### 2.1 Online Survey

The survey consists of four questions corresponding to four different hypothetical situations, each of which comes with a treatment condition and a control condition.<sup>1</sup>

**Question 1** investigates the effect of current consumption on the demand for information about a potentially negative outcome.

During a routine medical test your doctor discovers a lump on your body. There is a 50-50 chance that it can be serious, or it could go away on its own. A biopsy has been conducted. Information is the phone call from the doctor about the test result.		
High consumption: A birthday celebration you look forward to during the weekend.	Information choice (when to find out about the test result) among: <ul style="list-style-type: none"><li>• As soon as possible, during the weekend.</li><li>• After the weekend.</li><li>• I don't care. They are the same to me.</li></ul>	Participants are randomly assigned to high consumption (treatment) condition and low consumption (control) condition

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<sup>1</sup> Question 2 has two variants so technically there are five questions/situations.

<p>Low consumption: A boring gathering you do not look forward to during the weekend.</p>		
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**Question 2f, n (frequent thinking/ non-frequent thinking)** investigates the effect of current consumption on the investment in the future to avoid potentially negative outcome.

<p>During a routine medical test your doctor discovers a rash on your body. There is a 50-50 chance that it will lead to severe diarrhea the next week or it could go away on its own. Investment is a pill to purchase to avoid the diarrhea. <i>Frequency of thinking is manipulated, f vs. n.</i></p>		
<p>High consumption: A birthday celebration you look forward to this weekend.</p>	<p>The maximum amount you are willing to pay for the pill (when you will be worried and think about the potential diarrhea during the consumption).</p>	<p>Participants are randomly assigned to high consumption (treatment) condition and low consumption (control) condition</p>
<p>Low consumption: A boring gathering you do not look forward to this weekend.</p>		

**Question 3** investigates the effect of salient information about aversive future events on the demand for forthcoming pleasurable consumption.

<p>During a routine medical test your doctor discovers a lump on your body. There is a 50-50 chance that it can be serious or it could go away on its own. You get a biopsy. Information is the phone call from the doctor about the test result. Consumption is a birthday celebration you look forward to during the weekend.</p>
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<p>Timing of information is manipulated: A phone call this weekend during the celebration, or after this weekend of celebration</p>	<p>Consumption choice (whether to postpone the celebration) among:</p> <ul style="list-style-type: none"> <li>• Keep the celebration this weekend.</li> <li>• Postpone to a later date.</li> <li>• I don't care. They are the same to me.</li> </ul>	<p>Participants are randomly assigned to info during celebration (treatment) condition and info after celebration (control) condition</p>
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**Question 4** the effect of salient information on the investment in the future to avoid potentially negative outcome.

<p>During a routine medical test your doctor discovers a rash on your body. There is a 50-50 chance that it will lead to severe diarrhea the next week or it could go away on its own. Investment is a pill to purchase to avoid the diarrhea.</p>		
<p>Salient info: You receive frequent updates about it from your regular news sources on a daily basis</p>	<p>The maximum amount you are willing to pay for the pill.</p>	<p>Participants are randomly assigned to salient info (treatment) condition and non-salient info frequent updates about it from your favorite news sources on a daily basis (control) condition</p>
<p>Non-Salient info: Your neighbor mentions she receives frequent updates about it from her regular news sources on a daily basis</p>		

**2.2 Sample Size**

This study will recruit a total 1500 subjects. We have 5 \*2 conditions, including the frequency-of-thought variants in question 2, each with 150 participants. These numbers will ensure we have enough statistical power for between subject analysis. We aim to pay 80¢ per participant but with Prolific's service fee this comes out to \$1.0666 per person, for \$1,600 total.

**2.3 Allocation to Treatments**

Which hypothetical scenario and whether the subject will be assigned to treatment group with each scenario will be decided by randomizers generated by Qualtrics prior to the commencement of each survey.

### 3 Data and Variables

Individual-level data will be collected through the Qualtrics survey distributed through Prolific, an online research platform. The population will be drawn from registered users on Prolific. Participants must be at least 18 years of age.

#### 3.1 Qualtrics Survey data

Scenario 1:

- 1) Choice of timing to find out the test result
- 2) Treatment received (Birthday celebration or boring gathering)

Scenario 2:

- 1) Choice of the maximum willingness to pay for avoiding the negative outcome
- 2) Treatment received (Birthday celebration or boring gathering)

Scenario 3:

- 1) Choice of whether to postpone the consumption
- 2) Treatment received (Information during the celebration or after the celebration)

Scenario 4:

- 1) Choice of the maximum willingness to pay for avoiding the negative outcome
- 2) Treatment received (Salient information or information from a neighbor)

### 4 Hypotheses

1. ***Current consumption increases information avoidance.*** Birthday celebration increases the probability of delay in receiving information about the test result compared to the boring gathering condition.

- a. Unpaired proportions z-test on information delay by treatment.
- b. Regression (OLS / ordered logit / logit) information delay on treatment condition.

2f,n. ***Current consumption increases investment to eliminate future threat.*** Birthday celebration increases the valuation to avoid potential aversive outcome (diarrhea), *when people are*

*thinking/about it (frequent thinking version), but there will be no treatment effect when people are not thinking about it (not frequent thinking version).*

- a. Unpaired t-test on means of coded choice value of WTP for the pill by treatment.
- b. Regression of coded choice value of WTP for the pill on treatment.

**3. *Receiving salient information about aversive future events decreases demand for forthcoming pleasurable consumption.*** Receiving information during birthday celebration increases the probability of delaying the celebration compared to receiving information after the celebration

- a. Unpaired proportions z-test on consumption delay by treatment.
- b. Regression (OLS / ordered logit / logit) consumption delay on treatment condition.

**4. *Receiving salient information about aversive future events increases investment in the future to avoid potentially negative outcome.*** Personally receiving frequent updates on potential aversive outcome (diarrhea), compared to hearing the neighbor mention it, increases the valuation to eliminate future threat.

- a. Unpaired t-test on means of coded choice value of WTP for the pill by treatment.
- b. Regression of coded choice value of WTP for the pill on treatment.