

Privacy and Information Avoidance: An Experiment on Data Sharing Preferences

Dan Svirsky

Uber Technologies, Inc.

INTRODUCTION

There is a widespread intuition that people are inconsistent about protecting their privacy. This paper presents an experiment that demonstrates that people engage in information avoidance when making privacy decisions. People who are willing to pay nearly an hour's worth of wages for privacy are also willing to give away their data for small money bonuses if given a chance to avoid seeing the privacy consequences.

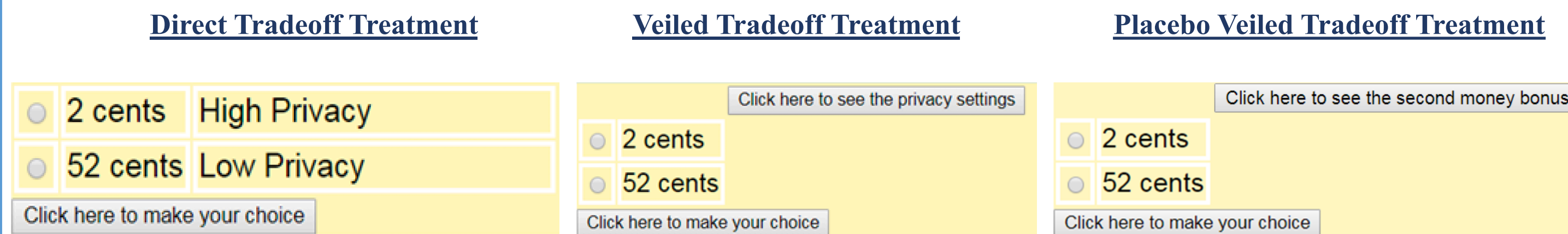
In the experiment, participants who complete a survey decide whether to do the survey anonymously or after logging in with their Facebook account in exchange for a money bonus. When participants face a choice between a 50 cent bonus and privacy, 64% of participants refuse to share their Facebook profile in exchange for 50 cents.

However, when the privacy settings are veiled (but revealed costlessly and instantly with the click of a button, as in a moral wiggle room experiment (Dana, 2007)), many participants keep themselves in the dark and opt for more money. Importantly, placebo tests confirm that this same avoidance pattern does not hold when participants make a choice between two money bonuses, rather than money versus privacy.

EXPERIMENT DESIGN

I conduct an experiment to test for information avoidance in privacy decisions. Participants are randomized to one of two treatments: a **Direct Tradeoff Treatment** and a **Veiled Tradeoff Treatment**. 795 participants were recruited on Amazon Mechanical Turk to take a short survey about health and financial status. After recruitment, the timeline of the experiment consists of three stages: 1) instructions and practice, 2) privacy settings, and 3) a survey. First, participants are shown an initial introductory screen that gives an overview of their participation. Participants were told that they would take a survey, but while everyone would take the same exact survey, each participant would be given a choice between two privacy options. They could opt for high privacy, in which case their survey answers would be anonymous. Or, they could opt instead for low privacy, in which case they would click a “Log In with Facebook” button at the top of the survey. This meant that the survey administrator would see, in addition to the participant's survey answers, her public Facebook profile (including profile picture, name, and gender) and her email address.

In the **Direct Tradeoff Treatment**, participants only made one decision: a direct choice between a \$0.52 bonus and logging in with Facebook (“Low Privacy”) or a \$0.02 bonus and doing the survey anonymously (“High Privacy”). In the **Veiled Tradeoff Treatment**, participants faced the same decision as in the Direct Tradeoff Treatment, but the privacy setting was initially hidden. Participants had to click to reveal the column describing the privacy settings, and there was a 50% chance that the higher money bonus would mean losing their anonymity. I also conduct a **Placebo Veiled Tradeoff Treatment** to test competing explanations for any treatment effect I find. This treatment is identical to the **Veiled Tradeoff Treatment**, but instead of making a choice between one money bonus and privacy, participants make a choice between one money bonus and a second money bonus. The first money bonus is either \$0.02 or \$0.52, as in the main experiment. The second money bonus is drawn from the distribution of willingness-to-pay prices for privacy elicited in a separate experiment. The figure below shows what this choice looked like in the experiment.



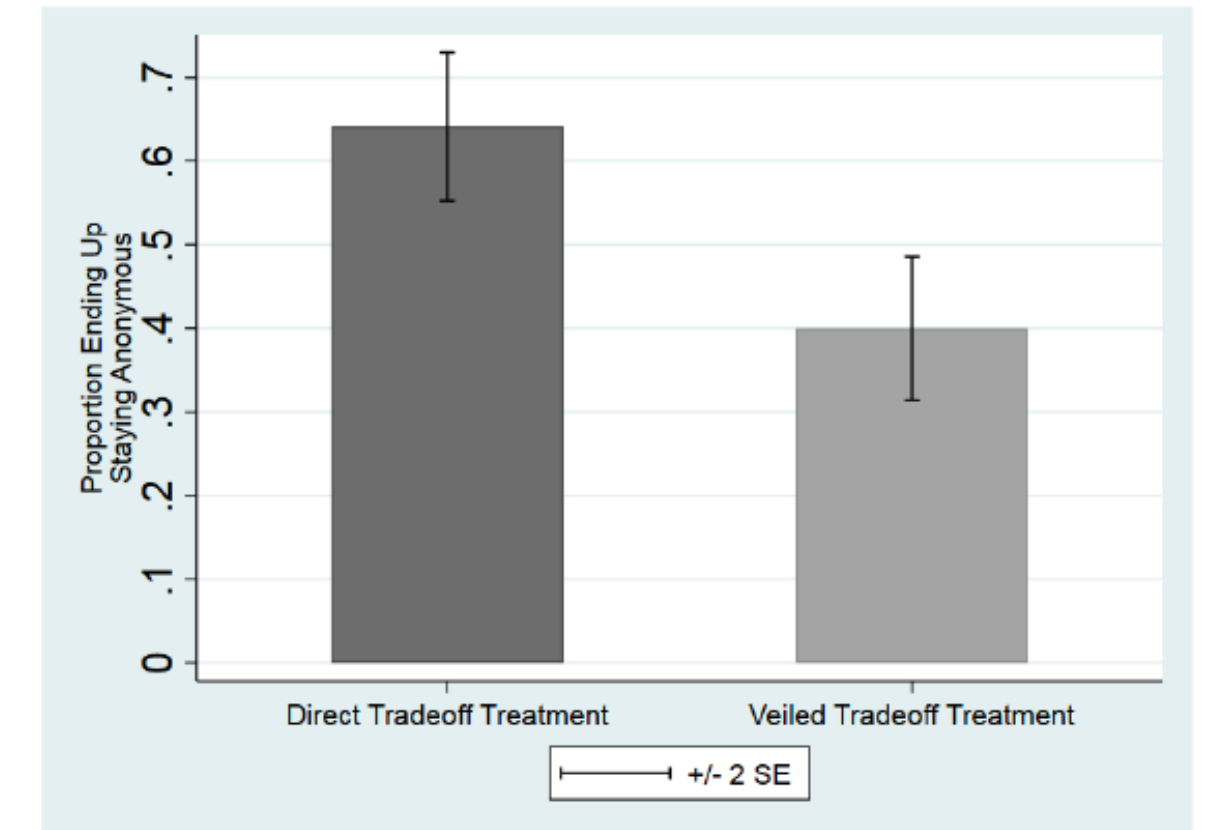
RESULTS

I find a treatment effect from putting a costless veil on privacy settings. 64% of people in the **Direct Tradeoff Treatment** refuse to sell their Facebook data for 50 cents. In contrast, in the **Veiled Tradeoff Treatment**, when the privacy consequences of their actions are initially hidden, only 40% refuse to sell their Facebook data for 50 cents. A majority in the **Veiled Tradeoff Treatment** (58%) chose not to look at the privacy setting before deciding to take the 50 cents.

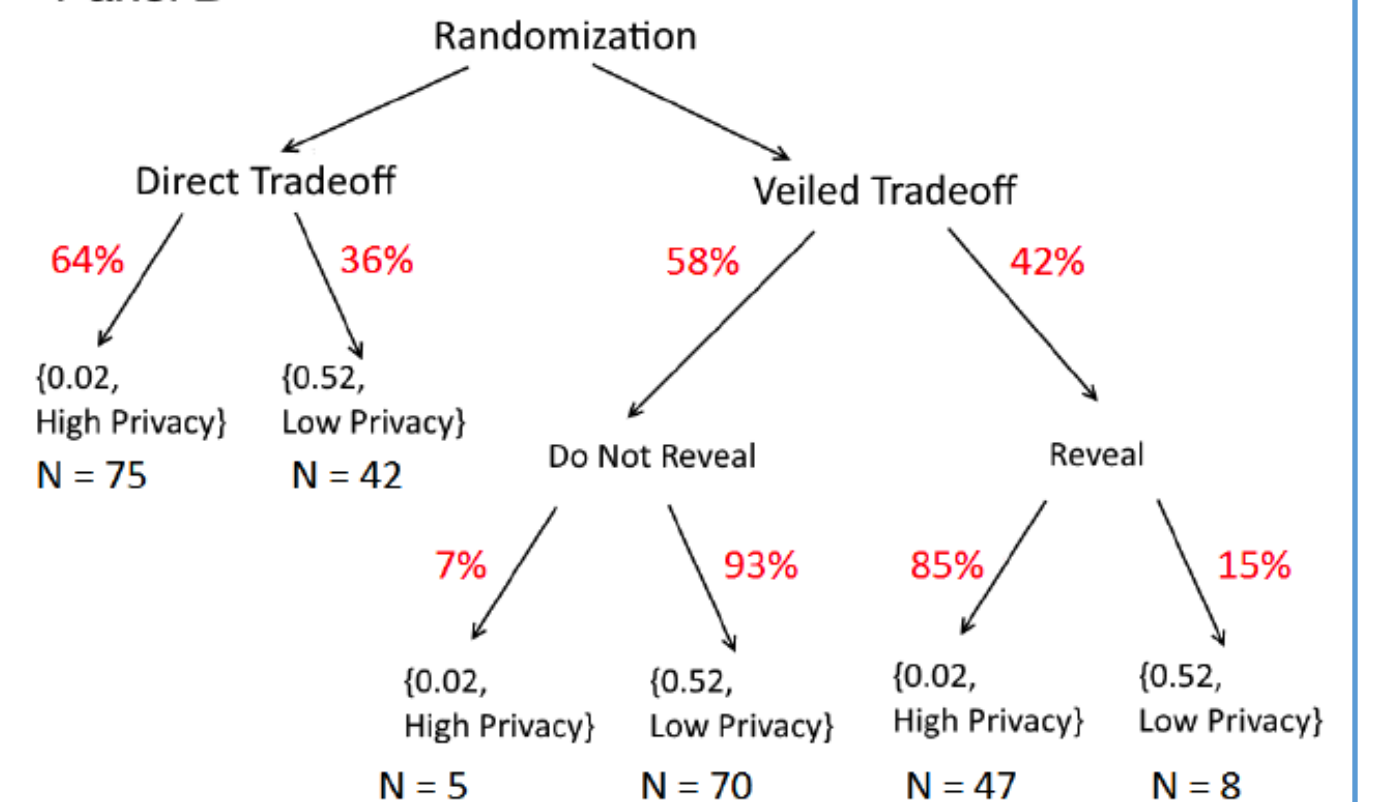
The results of the **Placebo Veiled Tradeoff Treatment** give more direct evidence that the results are not driven by clicking costs or confusion about experimental design. Among this group, the proportion of participants clicking to reveal the second column was 0.66. This is higher than the click rate of 0.42 in the main experiment, when participants chose between money and privacy, and the difference is statistically significant (Fisher's exact $p < 0.001$).

RESULTS

Panel A



Panel B



This figure shows people's privacy choices in the **Direct Tradeoff** and **Veiled Tradeoff Treatment**. Panel A shows the proportion of participants who ended up remaining anonymous instead of sharing their Facebook profile for 50 cents, for the Direct Tradeoff Treatment (N = 117) and the Veiled Tradeoff Treatment (N = 130). Panel B shows participants' decisions at each stage of the experiment. In the Veiled Tradeoff Treatment, participants first decide whether to reveal or not to reveal. If they do not reveal, then they choose between { \$0.02, Privacy Option A } and { \$0.52, Privacy Option B }. If they do reveal, then they face the same choice as in the Direct Tradeoff Treatment. The figure exclude all participants who, by randomization, faced a degenerate tradeoff of 50 cents and high privacy vs 0 cents and low privacy. Therefore, for the Veiled Tradeoff Treatment, anyone who chose the higher money option is counted as having chosen 50 cents over anonymity, regardless of whether they clicked to reveal the privacy setting before making their decision.