Relative Privacy Valuations under Varying Disclosure Characteristics

Online Appendix

Overview

Contained within this Appendix are an overview of the experiment protocol, relevant figures and tables describing each of the three studies we conducted, and additional details regarding experiment participants and empirical analyses. Figures A1 and A2 provide the experiment protocols participants completed, in order from left to right. All participants followed the same path through the protocols independent of their treatment assignment. With the exception of Study 3, participants began the experiment by reading a series of pages that created a scenario of market research by Google. Participants in Study 3 also went through these scenario pages, but prior to these pages they watched a video presentation on the consequences of disclosing private information and completed a quiz on the topics discussed in the video (viewable at https://goo.gl/X2C5lj). Tables A1, A4, and A6 demonstrate the manipulations found in the scenarios.

As regards the experiment procedure, participants were given instructions on how they may sell their private information by entering a valid WTA. Following the instructions, we quizzed participants to ensure they understood how the selling mechanism (i.e., Becker-DeGroot-Marschak procedure) operates. Participants were then given a list of sample items (Table A2) and told that they may be asked to disclose private information contained in the list or any additional private information Google may require. Following the list of sample items, participants entered their WTA between $0.00 and $5.00. Participants were prevented from continuing if an invalid WTA was entered.

Immediately after submitting their WTA, participants were informed whether their information sold. If participants sold their private information (indicated by dashed arrows), they were directed to a form that contained the list of sample items presented to them earlier. Participants had to disclose private information for each item in the form before continuing the experiment. Participants who did not sell their private information were directed to the post-experiment survey without completing a form. Lastly,

participants answered several questions on a post-experiment survey. At the end of the survey, participants were thanked for their time and informed on how they may receive payment if their private information sold.

We also conducted an a priori power analysis to determine how many participants were required per cell in our factorial design to have sufficient power for detecting at least a medium effect size with an alpha of 0.05. With three factors and two levels of each factor, a minimum participant count per cell is 20 in order to obtain a power of 0.88. The minimum cell count in Study 1 is 34 (37.5 average per cell for students), which is sufficient for a power of 0.98. The minimum cell count in Study 2 is 20 (25.25 average per cell for students; 54.5 average for AMT). Study 3 has two factors with two levels of each factor, so 35 participants are required per cell to obtain a power of 0.84. The minimum cell count in Study 3 is 32 (35 average per cell for students; 45.5 average for AMT). A post hoc power analysis for the student samples show that even with an alpha of 0.10, the power for Study 3 is approaching 0.90. Further, after pooling the studies, the post hoc power achieved is > 0.99 for detecting a medium effect at an alpha of 0.05, and > 0.90 for detecting a small effect. Overall, we are confident that we have sufficient power to detect even small effect sizes, especially given the very high p-values for our null results.

Tables A3, A5, and A7 show the text of each page participants viewed throughout the experiments. Within the text, we indicate the manipulation text from the corresponding manipulations table with brackets and italics (e.g., [*Secondary Use*]). Table A8 includes the items of our post-experiment survey. All items are measured using a 7-point Likert scale unless otherwise specified.

Participation, Opt Outs, and Incomplete Observations

We outline in Table A9 those observations that were removed from each study. As we can see by the Opt Out column, the rates of explicitly opting out are quite low, less than 2% in every case except AMT Study 3 at 3%. It appears the opt out rate does slightly increase as we increase the saliency of consequences in each study, as may be expected. We know that increasing the saliency of consequences does increase the WTA, and that the increase is greatest in Study 3. Next, we discuss the issue of incomplete observations, as that is the source of the bulk of removed observations for the student sample.

Almost all the incomplete observations are driven by limitations of the Qualtrics system used for data collection. Qualtrics records an observation each time a potential participant opens the survey. Therefore, subjects who click on the link to participate, regardless of whether they continue with the study, create a potentially incomplete observation in the data set. Upon inspection, almost all of the unfinished observations were abandoned prior to the request to sell private information. Thus, subjects were assigned to a treatment but did not advance to a point in which they could tease out the purpose of the study. Also, incomplete observations may occur for a multitude of reasons. For example, students may start the study and then become distracted, click on a recruitment link in email using a phone and then later click the link for a second time on a computer, or a participant may have uncertainty if he/she wants to participate at all. In contrast to the student sample, we believe the AMT workers intend to participate in the study once it is started so that their time is used efficiently.

Last, we consider those that failed the attention and/or manipulation checks. We report a bulk rate of ~20-25% removed observations but after removing the incomplete and opt out observations, the percentage of participants that failed attention and/or manipulation checks is less than 9% for students. Regarding AMT, the difference between Study 2 and Study 3 is driven by eight participants that did not play the entire video. Therefore, only 4 of the 12 participants failed the attention or manipulation checks in similar ways for AMT Study 3, putting the rate percentage of observations at 2.00%, which is almost identical to the 1.78% rate for AMT Study 2. Also, instead of implementing attention questions for the AMT workers, we instead used time checking for each page to discover fraudulent workers (e.g., bot workers). If a worker spent a significantly smaller amount of time on the page than the average, we flagged the observation for later review. Any flagged AMT observation was dropped from the study during review if the worker completed the study in an impossibly fast amount of time.

A further breakdown of participants removed from each study is shown by Table A10. There are not any clear indications of differences in participation rates between treatments, and there seems to be no repeatable pattern between the invasiveness of the treatment groups and the incomplete responses and/or failed attention or manipulation checks. For example, in Student Study 1, the group with the highest failed

attention checks has medical context with no secondary use but with identifying information, whereas in Student Study 2, the medical context with secondary use but not identifying information is highest. A similar situation occurs for incompletes, where Student Study 1 has the highest number of incompletes for medical non secondary use non identifying, but Student Study 2 has medical secondary use identifying with the largest number of incompletes. In addition, the overall results are consistent between the Student population and the AMT population, and the AMT population also has fewer dropped observations. The overall breakdown of participants gives us confidence in our random assignment of participants to treatments and effectiveness of experimental manipulation.

Details Regarding Empirical Analysis

To address heteroscedasticity in Study 3 for the AMT sample, we estimated two additional models. The first model estimated is Generalized Method of Moments (GMM) due to its ability to generate efficient parameter estimates in the presence of heteroscedasticity (Baum et al. 2003). We also estimated a Symmetrically Trimmed Least Squares (STLS) model, based upon the ability for STLS estimators to address heteroscedasticity in the Tobit model (Powell 1986). Results are shown in Table A11 and are qualitatively consistent with the Tobit regressions already presented in the paper.

Tables and Figures

Figure A1: Study 1 and Study 2 Experiment Protocol

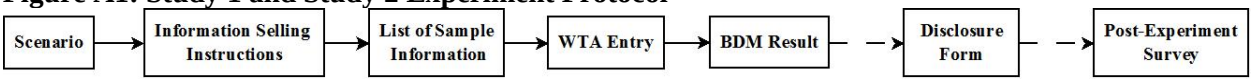

Figure A2: Study 3 Experiment Protocol

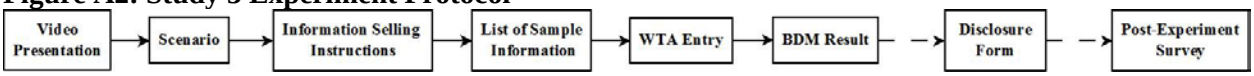

Table A1: Study 1 Manipulations

Information Context	
Medical	medical history
Shopping	shopping preferences
Secondary Use	
Secondary Use	will distribute the information you provide to outside marketing and advertising agencies for various purposes

No Secondary Use	will not distribute information to any third parties. The information will be for internal application use only
Identifying Information	
Identifying Information	will store identifying information, such as name, email, and phone number, with the medical information you provide
No Identifying Information	will not store identifying information, such as name, email, and phone number, with the medical information you provide

Table A2: List of Sample Information Items

Medical	Shopping
Allergies	Frequent Retail Stores
Illnesses	Frequent Purchases
Diseases	Recent Purchase History
Family History	Preferred Shipping Method
Sexual Activity	Product Attributes
Smoking Habits	Preferred Method of Payment
Drug Use	Frequent E-commerce Websites
Alcohol Use	Common Grocery Purchases
Blood Type	Mobile App Purchases

Table A3: Study 1 Outline

Page 1

Welcome

The following is a study on the valuation of information. Google Inc. is currently developing a new [*Information Context*] application. **Google Inc. wishes to begin paying users** for the information they provide when registering for the application. However, Google Inc. does not know how much to compensate users for their information. In order to capture an appropriate compensation value, we will ask you to enter your selling value for **ALL** of your medical information. **The value entered must be between $0.00 and $5.00.** Throughout the study, we will refer to this value as your selling price.

It is important to note that Google Inc. [*Secondary Use*].

The application Google Inc. is developing will require users to enter [*Information Context*] information about themselves. A sample of the information Google Inc. may request appears later. Due to a nondisclosure agreement with Google Inc., we cannot disclose the specifics of the new application. However, the application will provide a quality service for its users.

You may opt out of this study at any time.

Page 2

Information Selling Instructions

After viewing the list of information Google Inc. may request, you have two options.

1. You may enter your selling price for the information Google Inc. requests. **Remember that the value entered is your selling price for all of your information, not individual pieces.**
2. You may opt out if you do not wish to participate or if your selling price is greater than $5.00. A opt

out option is available on the selling price page. If you choose to opt out, you must provide a reason for doing so.

If you choose to participate and enter a selling price then you will type your selling value into a text box. The value must be between $0.00 and $5.00 and in the format X.XX. The following occurs after you submit your selling price:

Google Inc.'s information buying algorithm calculates a buying price between $0.00 and $5.00.

If Google Inc.'s buying price is greater than or equal to your selling price, you will sell your information to Google Inc. for the buying price and must provide the information Google Inc. requests. If Google Inc.'s buying price is less than your selling price, you will not sell your information and do not provide your information to Google Inc.

Example 1:
Your selling value is $1.00, Google Inc. buying price is $2.50 ⇒ You will sell your information for $2.50.

Example 2:
Your selling value is $3.00, Google Inc. buying price is $2.00 ⇒ You will **NOT** sell your information.

Example 3:
Your selling value is $2.50, Google Inc. buying price is $2.50 ⇒ You will sell your information for $2.50.

You will receive course credit for participating in this experiment and finishing the survey at the end. If you sell your information to Google Inc., you will receive the course credit and the buying price. If you do not sell your information to Google Inc. or choose to opt out, you will only receive the course credit.

****IMPORTANT****
Before you receive your payment from Google Inc., Google Inc. will verify the information you provide for truthfulness.

Page 3

Information Selling Instructions

We will now demonstrate how pricing works. It is in your best interest to accurately state your true valuation as your selling price for your information. The following are two examples of why:

Example 1: What happens if your stated selling price is HIGHER than your true value:
Imagine you value your information at $3.00, but you enter a selling value of $4.50. We will say that the Google Inc. buying price is $4.25.

Since the buying price, $4.25, is less than your selling price, $4.50, you will not sell the information to Google Inc. and will not earn the $4.25. Therefore, you will miss the opportunity to sell your information for a price you deem as reasonable.

Example 2: What happens if your stated selling price is LOWER than your true value:

Imagine you value your information at $1.75, but you enter a selling value of $0.75. We will say that the Google Inc. buying price is $1.00.

Due to your selling price being lower than the Google Inc. buying price, you must sell your information to Google Inc., even though you value the information much more than the $1.00 you will receive. You will forfeit your information for less than what you think it is worth.

Page 4

Information Selling Instructions Quiz

Before proceeding, we wish to ensure you understand all of the instructions clearly. Below are four example scenarios, please choose the best answers to the questions:
Scenario 1: Your stated selling value is $1.50. The Google Inc. buying price is $2.50. What will happen next?

- You will not sell your information or complete the form
- You will sell your information for $1.50 and complete the form
- You will sell your information for $2.50 and complete the form

Scenario 2: Your stated selling value is $1.50. The Google Inc. buying price is $1.00. What will happen next?

- You will not sell your information or complete the form
- You will sell the information for 0.50 and complete the form
- You will sell the information for 1.50 and complete the form

Scenario 3: Google Inc.'s buying price is $0.75 and your selling value is $0.25. What must you do after winning?

- Do not complete the information form
- The information sells so you must complete the information form

Is the Google Inc. buying price (and your selling value) based on each individual piece of information or all information on the form?

- Each individual piece of information
- All information on the form

Page 5

Thank you for completing the tutorial.

The following page will request your selling value for your medical information. Below, we provide a brief list of possible information items Google Inc. will request. This list is not comprehensive and Google Inc. reserves the right to request [*Information Context*] that is not shown below.

Please be aware that Google Inc. [*Identifying Information]*

[*List of Medical/Shopping Information Items]*

Page 6

Enter a selling value between $0.00 and $5.00, in the format X.XX, for the information presented in the sample form.

If you wish to opt out of the study, you may do so. To opt out please select the Opt Out option and click >>.

Opt Out

Page 7 (if information was sold)

SOLD!

Your value, $[*participant's WTA*], is less than the randomly drawn value, $[*system generated WTA*]. Therefore, you will earn an additional $[*Random WTA minus the WTA entered*] at the end of this experiment. Please proceed to the next page and enter the requested information.

Page 7 (if information was not sold)

NO SALE

Unfortunately your selling price, $[*participant's WTA*] was greater than the randomly drawn value, $[*system generated WTA*]. You are not required to enter your information. Please proceed to the next page.

Table A4: Study 2 Manipulations

Information Context	
Medical	***medical history***
Shopping	***shopping history***
Secondary Use	
Secondary Use	***will distribute the information you provide to outside marketing and advertising agencies for various purposes***
No Secondary Use	***will not distribute information to any third parties. The information will be for internal application use only***
Identifying Information	
Identifying Information	***will store identifying information, such as name, email, and phone number, with the medical information you provide***
No Identifying Information	***will not store identifying information, such as name, email, and phone number, with the medical information you provide***

Table A5: Study 2 Outline

Page 1
Welcome

Google Inc. is currently developing a new [Information Context] application and wishes to pay its users for the information they provide when registering for the application. However, Google Inc. does not know how much to compensate users for their information. In order to capture an appropriate compensation value, we will ask you to enter your selling value for ***your [Information Context]***. The value entered must be between $0.00 and $5.00. This value will be referred to as your selling price.

The application Google is developing will require users to enter [*Information Context*] about themselves. A sample of the information Google Inc. may request appears later. Due to a nondisclosure agreement with Google Inc., we cannot disclose the specifics of the new application. However, the application will provide a quality service for its users.

You may opt out of participation at any time.

Page 2

Welcome

We must inform you that ***Google Inc. [Secondary Use]*** Disclosing your information represents consent for Google Inc. to share the information with other [*medical/advertising*] companies.

Page 3

Welcome

Shown below is a brief list of possible information items you will provide when registering for an account. In addition to [*Information Context*], ***you [Identifying Information]***. This list is not comprehensive and Google Inc. reserves the right to request [*Information Context*] that is not shown below.

[*List of Medical/Shopping Information Items*]

Page 4

Welcome

In summary, Google Inc. is creating a new application in which

Users *provide* [*Information Context*]
Google [*Secondary Use*]
Users provide [*Identifying Information*]

Compensation for your information can fall between $0.00 and $5.00. You may opt out at any time by closing your web browser.

Page 5

Information Selling Instructions

****IMPORTANT**** Before you receive your payment from Google Inc., Google Inc. will verify the information you provide for truthfulness.

After viewing the list of information Google Inc. may request, you have two options.

1. You may enter your selling price for the information Google Inc. requests. **Remember that the value entered is your selling price for all of your information, not individual pieces.**
2. You may opt out if you do not wish to participate or if your selling price is greater than $5.00. A opt out option is available on the selling price page. If you choose to opt out, you must provide a reason for doing so.

If you choose to participate and enter a selling price then you will type your selling value into a text box. The value must be between $0.00 and $5.00 and in the format X.XX. The following occurs after you submit your selling price:

Google Inc.'s information buying algorithm calculates a buying price between $0.00 and $5.00.

If Google Inc.'s buying price is greater than or equal to your selling price, you will sell your information to Google Inc. for the buying price and must provide the information Google Inc. requests. If Google Inc.'s buying price is less than your selling price, you will not sell your information and do not provide your information to Google Inc.

Example 1:
Your selling value is $1.00, Google Inc. buying price is $2.50 ⇒ You will sell your information for $2.50.

Example 2:
Your selling value is $3.00, Google Inc. buying price is $2.00 ⇒ You will **NOT** sell your information.

Example 3:
Your selling value is $2.50, Google Inc. buying price is $2.50 ⇒ You will sell your information for $2.50.

You will receive course credit for participating in this experiment and finishing the survey at the end. If you sell your information to Google Inc., you will receive the course credit and the buying price. If you do not sell your information to Google Inc. or choose to opt out, you will only receive the course credit.

Page 6

Information Selling Instructions

We will now demonstrate how pricing works. It is in your best interest to accurately state your true valuation as your selling price for your information. The following are two examples of why:

Example 1: What happens if your stated selling price is HIGHER than your true value:
Imagine you value your information at $3.00, but you enter a selling value of $4.50. We will say that the Google Inc. buying price is $4.25.

Since the buying price, $4.25, is less than your selling price, $4.50, you will not sell the information to Google Inc. and will not earn the $4.25. Therefore, you will miss the opportunity to sell your information for a price you deem as reasonable.

Example 2: What happens if your stated selling price is LOWER than your true value:

Imagine you value your information at $1.75, but you enter a selling value of $0.75. We will say that the Google Inc. buying price is $1.00.

Due to your selling price being lower than the Google Inc. buying price, you must sell your information to Google Inc., even though you value the information much more than the $1.00 you will receive. You will forfeit your information for less than what you think it is worth.

Page 7

Information Selling Instructions Quiz

Before proceeding, we wish to ensure you understand all of the instructions clearly. Below are four example scenarios, please choose the best answers to the questions:
Scenario 1: Your stated selling value is $1.50. The Google Inc. buying price is $2.50. What will happen next?

- You will not sell your information or complete the form
- You will sell your information for $1.50 and complete the form
- You will sell your information for $2.50 and complete the form

Scenario 2: Your stated selling value is $1.50. The Google Inc. buying price is $1.00. What will happen next?

- You will not sell your information or complete the form
- You will sell the information for 0.50 and complete the form
- You will sell the information for 1.50 and complete the form

Scenario 3: Google Inc.'s buying price is $0.75 and your selling value is $0.25. What must you do after winning?

- Do not complete the information form
- The information sells so you must complete the information form

Is the Google Inc. buying price (and your selling value) based on each individual piece of information or all information on the form?

- Each individual piece of information
- All information on the form

Page 8

Enter a selling value between $0.00 and $5.00, in the format X.XX, for the information presented in the sample form.

If you wish to opt out of the study, you may do so. To opt out please select the Opt Out option and click >>.

○ Opt Out

Page 9 (if information was sold)
SOLD! Your value, $[*participant's WTA*], is less than the randomly drawn value, $[*system generated WTA*]. Therefore, you will earn an additional $[*Random WTA minus the WTA entered*] at the end of this experiment. Please proceed to the next page and enter the requested information.

Page 9 (if information was not sold)
NO SALE Unfortunately your selling price, $[*participant's WTA*] was greater than the randomly drawn value, $[*system generated WTA*]. You are not required to enter your information. Please proceed to the next page.

Table A6: Study 3 Manipulations

Secondary Use	
Secondary Use	will distribute the information you provide to outside marketing and advertising agencies for various purposes
No Secondary Use	will not distribute information to any third parties. The information will be for internal application use only
Identifying Information	
Identifying Information	will store identifying information, such as name, email, and phone number, with the shopping information you provide
No Identifying Information	will not store identifying information, such as name, email, and phone number, with the shopping information you provide

Table A7: Study 3 Outline

Page 1
Before you begin, please watch the brief video below. Following the video, you will be asked several questions regarding its content. [*Embedded video*]

Page 2 (Video quiz)
Online businesses are able to perform _____ (varying the price of a product according to who the buyer is), with the information they obtain from consumers. ○ Price matching ○ Price equity ○ Price discrimination ○ Fair pricing

Advertising agencies are capable of targeting unwanted advertisements with the information they are able to obtain.

- True
- False

With the distribution of private information to third parties, there are more targets for hackers and identity thieves to attack. Thus, people experience an increased chance of experiencing _____.

- Harm
- Inconvenience
- Both harm and inconvenience

Sharing private information over the Internet leads to greater vulnerability to which of the following events?

- Identity theft
- Hacked online accounts
- Data loss
- All of the above

Which of the following is considered identifying information and can magnify the effects of a security breach?

- Full name
- Shopping habits
- Hobbies
- Special interests

Page 3

Welcome

Google Inc. is currently developing a new shopping application and wishes to pay its users for the information they provide when registering for the application. However, Google Inc. does not know how much to compensate users for their information. In order to capture an appropriate compensation value, we will ask you to enter your selling value for ***your shopping information***. The value entered must be between $0.00 and $5.00. This value will be referred to as your selling price.

The application Google is developing will require users to enter shopping information about themselves. A sample of the information Google Inc. may request appears later. Due to a nondisclosure agreement with Google Inc., we cannot disclose the specifics of the new application. However, the application will provide a quality service for its users.

You may opt out of participation at any time.

Page 4

Welcome

We must inform you that ***Google Inc. [Secondary Use]*** Disclosing your information represents consent for Google Inc. to share the information with other advertising and marketing companies.

Page 5

Welcome

Shown below is a brief list of possible information items you will provide when registering for an account. In addition to the shopping information, ***you [Identifying Information]***. This list is not comprehensive and Google Inc. reserves the right to request shopping information that is not shown below.

[*List of Shopping Information Items*]

Page 6

Welcome

In summary, Google Inc. is creating a new application in which
Users *provide shopping information*
Google *[Secondary Use]*
Users provide [*Identifying Information*]

Compensation for your information can fall between $0.00 and $5.00. You may opt out at any time by closing your web browser.

Page 7

Information Selling Instructions

****IMPORTANT**** Before you receive your payment from Google Inc., Google Inc. will verify the information you provide for truthfulness.

After viewing the list of information Google Inc. may request, you have two options.

1. You may enter your selling price for the information Google Inc. requests. **Remember that the value entered is your selling price for all of your information, not individual pieces.**
2. You may opt out if you do not wish to participate or if your selling price is greater than $5.00. A opt out option is available on the selling price page. If you choose to opt out, you must provide a reason for doing so.

If you choose to participate and enter a selling price then you will type your selling value into a text box. The value must be between $0.00 and $5.00 and in the format X.XX. The following occurs after you submit your selling price:

Google Inc.'s information buying algorithm calculates a buying price between $0.00 and $5.00.

If Google Inc.'s buying price is greater than or equal to your selling price, you will sell your information to Google Inc. for the buying price and must provide the information Google Inc. requests. If Google Inc.'s buying price is less than your selling price, you will not sell your information and do not provide your information to Google Inc.

Example 1:
Your selling value is $1.00, Google Inc. buying price is $2.50 ⇒ You will sell your information for $2.50.

Example 2:
Your selling value is $3.00, Google Inc. buying price is $2.00 ⇒ You will **NOT** sell your information.

Example 3:
Your selling value is $2.50, Google Inc. buying price is $2.50 ⇒ You will sell your information for $2.50.

You will receive course credit for participating in this experiment and finishing the survey at the end. If you sell your information to Google Inc., you will receive the course credit and the buying price. If you do not sell your information to Google Inc. or choose to opt out, you will only receive the course credit.

Page 8

Information Selling Instructions

We will now demonstrate how pricing works. It is in your best interest to accurately state your true valuation as your selling price for your information. The following are two examples of why:

Example 1: What happens if your stated selling price is HIGHER than your true value:
Imagine you value your information at $3.00, but you enter a selling value of $4.50. We will say that the Google Inc. buying price is $4.25.

Since the buying price, $4.25, is less than your selling price, $4.50, you will not sell the information to Google Inc. and will not earn the $4.25. Therefore, you will miss the opportunity to sell your information for a price you deem as reasonable.

Example 2: What happens if your stated selling price is LOWER than your true value:
Imagine you value your information at $1.75, but you enter a selling value of $0.75. We will say that the Google Inc. buying price is $1.00.

Due to your selling price being lower than the Google Inc. buying price, you must sell your information to Google Inc., even though you value the information much more than the $1.00 you will receive. You will forfeit your information for less than what you think it is worth.

Page 9

Information Selling Instructions Quiz

Before proceeding, we wish to ensure you understand all of the instructions clearly. Below are four example scenarios, please choose the best answers to the questions:

Scenario 1: Your stated selling value is $1.50. The Google Inc. buying price is $2.50. What will happen next?

- ○ You will not sell your information or complete the form
- ○ You will sell your information for $1.50 and complete the form
- ○ You will sell your information for $2.50 and complete the form

Scenario 2: Your stated selling value is $1.50. The Google Inc. buying price is $1.00. What will happen next?

- ○ You will not sell your information or complete the form
- ○ You will sell the information for 0.50 and complete the form
- ○ You will sell the information for 1.50 and complete the form

Scenario 3: Google Inc.'s buying price is $0.75 and your selling value is $0.25. What must you do after winning?

- ○ Do not complete the information form
- ○ The information sells so you must complete the information form

Is the Google Inc. buying price (and your selling value) based on each individual piece of information or all information on the form?

- ○ Each individual piece of information
- ○ All information on the form

Page 10

Enter a selling value between $0.00 and $5.00, in the format X.XX, for the information presented in the sample form.

[ ]

If you wish to opt out of the study, you may do so. To opt out please select the Opt Out option and click >>.

- ○ Opt Out

Page 11 (if information was sold)

SOLD!

Your value, $[*participant's WTA*], is less than the randomly drawn value, $[*system generated WTA*]. Therefore, you will earn an additional $[*Random WTA minus the WTA entered*] at the end of this experiment. Please proceed to the next page and enter the requested information.

Page 11 (if information was not sold)

NO SALE

Unfortunately your selling price, $[*participant's WTA*] was greater than the randomly drawn value, $[*system generated WTA*]. You are not required to enter your information. Please proceed to the next page.

Table A8: Post-Experiment Survey Items

Demographics
Sex
Age
Highest level of education
Average daily Internet usage
Some websites ask you to register with the website by providing personal information. When asked for such information, how often do you falsify the information? (5-point Likert scale)
How frequently have you personally been the victim of what you felt was an improper invasion of privacy?
Additional Measures
Do you trust Google Inc. to follow through with what they tell consumers?
How does the inclusion of Name, Date of birth, and Email with other private information affect the risk associated with disclosing your private information?
How does the knowledge that Google Inc. will provide your private information to a third party affect the risk associated with disclosing your private information?

**All items use a 7-point Likert-type scale unless otherwise specified.

Table A9: Breakdown of participants removed from each study (percentage of total observations are shown in parentheses)

Population	Study	Total Obs	Failed Attention or Manipulation Checks	Incomplete	Opt Out	Usable Obs
Student	1	394	26 (6.60%)	66 (16.75%)	2 (0.51%)	300 (76.14%)
Student	2	270	23 (8.52%)	41 (15.19%)	4 (1.48%)	202 (74.81%)
Student	3	175	12 (6.86%)	20 (11.43%)	3 (1.71%)	140 (80.00%)
AMT	2	450	8 (1.78%)	0	6 (1.33%)	436 (96.89%)
AMT	3	200	12 (6.00%)	0	6 (3.00%)	182 (91.00%)

Table A10: Breakdown of participants removed from each study by treatment

Population	Study	Total Obs	Failed Attention or Manipulation Checks	Incomplete	Opt Out	Usable Obs
Student	**1**	**394**	**26**	**66**	**2**	**300**
Med-SU-Id		47	4	8	2	33
Med-No SU-Id		57	7	7	0	43
Med-SU-No Id		52	3	9	0	40
Med-No SU- No Id		46	1	10	0	35
Shop-SU-Id		50	3	8	0	39
Shop-No SU-Id		48	1	9	0	38
Shop-SU-No Id		47	5	7	0	35
Shop-No SU-No Id		47	2	8	0	37

Student	**2**	**270**	**23**	**41**	**4**	**202**
Med-SU-Id		33	3	7	2	21
Med-No SU-Id		36	1	8	0	27
Med-SU-No Id		39	5	6	1	27
Med-No SU- No Id		36	4	6	1	25
Shop-SU-Id		33	4	4	0	25
Shop-No SU-Id		29	2	3	0	24
Shop-SU-No Id		32	3	5	0	24
Shop-No SU-No Id		32	1	2	0	29
Student	**3**	**175**	**12**	**20**	**3**	**140**
Shop-SU-Id		44	7	3	2	32
Shop-No SU-Id		44	2	6	0	36
Shop-SU-No Id		41	1	5	1	34
Shop-No SU-No Id		46	2	6	0	38
AMT	**2**	**450**	**8**	**0**	**6**	**436**
Med-SU-Id		61	0	0	3	58
Med-No SU-Id		52	2	0	1	49
Med-SU-No Id		65	0	0	0	65
Med-No SU- No Id		55	1	0	0	54
Shop-SU-Id		53	2	0	2	49
Shop-No SU-Id		58	0	0	0	58
Shop-SU-No Id		55	1	0	0	54
Shop-No SU-No Id		51	2	0	0	49
AMT	**3**	**200**	**12**	**0**	**6**	**182**
Shop-SU-Id		50	2	0	2	46
Shop-No SU-Id		51	2	0	3	46
Shop-SU-No Id		51	5	0	1	45
Shop-No SU-No Id		48	3	0	0	45

Note: Med = Medical Context; Shop = Shopping Context; SU = Secondary Use; Id = Identifying Information

Table A11: AMT Study 3 Heteroscedasticity Robustness Models

	GMM		Symmetric LS	
Variables	(1)	(2)	(3)	(4)
Gender	-0.086	-0.107	-0.086	-0.107
	(0.216)	(0.216)	(0.229)	(0.229)
Age	0.081	0.089	0.081	0.089
	(0.091)	(0.096)	(0.095)	(0.100)
Education	-0.027	-0.008	-0.027	-0.008
	(0.079)	(0.080)	(0.082)	(0.084)
False Information	0.063	0.051	0.063	0.051
	(0.118)	(0.117)	(0.129)	(0.129)
Web Usage	-0.147	-0.144	-0.147	-0.144
	(0.089)	(0.088)	(0.093)	(0.092)
Breach History	-0.063	-0.082	-0.063	-0.082
	(0.076)	(0.078)	(0.081)	(0.083)
Secondary Use		-0.119		-0.119
		(0.212)		(0.226)
Identifying Information		0.318		0.318
		(0.221)		(0.233)
Constant	4.223**	4.109**	4.223**	4.109**
	(0.544)	(0.554)	(0.571)	(0.579)
Observations	182	182	182	182

Robust standard errors in parentheses, †$p \leq 0.10$, * $p \leq 0.05$, ** $p \leq 0.01$.

References

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