Putting Disclosures to the Test

an FTC Workshop

September 15, 2016
Your attention please!

Moderator: Michael Ostheimer
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Disclosure Modality in Advergames: Effects and Implications for Policy

Nathaniel J Evans, Department of Advertising & Public Relations, University of Georgia


*The research presented is funded in part by the American Academy of Advertising*
Why Disclosures in Advergames?

• Low level of disclosure prevalence
• Children don’t recognize them as advertising
• Parents have limited understanding
• Advergames require “cognitive effort” to play
  – Mental resources devoted to gameplay
  – Affects advertising recognition (persuasion knowledge)
Clear and Conspicuous Standards (CCS)

- What is the role of disclosures in ensuring parents understand the “nature” of child-directed advergames?

  - Modality
  - Type Size
  - Contrast
  - Single Background
  - Presentation Rate
  - Distraction
  - Proximity
  - Consider the Audience

  - Single vs. Dual modality
  - Dual (simultaneous disclosure presentation in auditory and visual forms)
  - Enhances consumer message processing
  - Does this work when playing an advergame?
What Did We Do?

- Examined the effect of disclosure modality on parents’ persuasion knowledge (ad recognition) of child-directed advergames.
- Between subjects online experiment hosted by Research Now
- Panel of 202 parents with children between 7-11
- Played a Pop Tarts “Toasty Turvy” Advergame for 3 minutes
- Random assignment to one of 3 disclosure conditions manipulated within the advergame
  - None/Single modality (text crawl)/Dual modality (text crawl + voice over)
• Disclosure language pretested for reading level: Flesch-Kincaid Grade Level = 4.3
What Did We Find?

Persuasion Knowledge

- NO DISCLOSURE
- SINGLE MODALITY (TEXT)
- DUAL MODALITY (TEXT + SOUND)

ADVERTISING DISCLOSURE CONDITIONS
Implications

- Superiority of single modality over dual modality
- Advergames naturally result in increased cognitive load
- The auditory disclosure “competed” with the sound of the game
- Dotcom (2013) disclosure guideline recommendation:
  - “use of disclosures that align with the modality of the environment in which they appear”
  - LED TO A REDUCTION IN ADVERTISING RECOGNITION FOR OUR ADVERGAME
Applications

• What lessons did we learn about disclosure effectiveness?

• How can we apply insights about disclosure modality to other formats that combine advertising and gaming?
Applications

- What is the predominant modality of the environment?
Applications

• What cognitive systems are at use when playing?

• Avoid “competing modality” to increase consumer understanding
Mariea Grubbs Hoy

School of Advertising & Public Relations
University of Tennessee
Do Consumers Read Disclosures: Field of Dreams or Impossible Dream?

Mariea Grubbs Hoy, PhD

If you make it clear and conspicuous...

they will notice and read it.
If you make it clear and conspicuous...

they will notice and read it.
Do consumers read (drug risk) disclosures?

They self-report that they do:

• 40% read half of more
• 73% read half or more if really interested in advertised drug
• 25% agree “I always read the small print in magazine/newspaper pharmaceutical ads.”

What’s social desirability got to do with it?

- Western societal norms encourage and expect information seeking.
- Rather than ASKING if they’ve read the disclosure, is there a better way to determine if they REALLY read the disclosure?
Eye-Tracking While Free-Viewing Website & Online Survey & Retroactive Think Aloud Interview
The FDA provided the website stimuli and survey.

Benefits

Risks

Novel Risks

The FDA provided the website stimuli and survey.

Seasonal Allergies?
Ask your doctor about GLISTELL

If you start sneezing and sneezing when spring, summer, or fall comes in your area, you may suffer from seasonal allergies, also known as hay fever or allergic rhinitis.

GLISTELL (bontril®) is a long-acting oral antihistamine combined with a decongestant. This time-released tablet can relieve the following common seasonal allergy symptoms: nasal congestion, runny nose, sneezing, itchy nose and throat, and watery, itchy, or red eyes.

What Does GLISTELL Do?

GLISTELL can relieve the symptoms of seasonal allergies such as runny nose, sneezing, itchy nose and throat, and watery, itchy, or red eyes.

What Risks Are Associated with GLISTELL?

A very serious allergic reaction to GLISTELL is rare. Seek immediate medical attention if you notice symptoms of a serious allergic reaction, such as a rash, severe difficulty breathing, or itching or swelling (especially around the face, tongue, or throat).

Do not give GLISTELL to children younger than 6 years of age unless directed by your doctor.

As a precaution, talk to your doctor before taking GLISTELL if you have high blood pressure, an overactive thyroid, or an enlarged prostate. People with these conditions may need different doses of GLISTELL.

GLISTELL can make it difficult to concentrate, be not drive, use machinery, or do any activity that requires concentration until you are sure you can perform these types of activities safely.

Who Can Take GLISTELL?

GLISTELL is prescribed for individuals who suffer from seasonal allergies and have symptoms such as nasal congestion, runny nose, sneezing, itchy nose and throat, and watery, itchy, or red eyes.

Do not use this medication in children younger than two years of age unless directed by your doctor.
Please are important safety information below.

If you are taking and/or using Glistell, read this printed information and all other materials given to you by your doctor or pharmacist. These materials may contain information that may be different from what you read here. What are the possible risks associated with Glistell? Make sure you read and understand all of this material and any other information given to you by your doctor or pharmacist.

What is Glistell? This medicine is a prescription drug used to treat the symptoms of seasonal allergies such as hay fever, runny nose, sneezing, and itchy or watery eyes. Glistell is available in the following strengths: 125 mg, 250 mg, and 500 mg. This medicine is not for use in children younger than two years of age unless directed by your doctor.

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Eye-Tracking Measures

Fixation: where the person looked
Duration: how long the person looked
Fixation Sequence: order in which they looked

Numbers = fixations of .2 seconds or longer
What we found

• **Self-Report:** 80% of participants **claimed** to have read **half or more** of the drug risk disclosure

• **Reality:** Eye-tracking data revealed **limited to no** reading of drug risk disclosure

School of Advertising & Public Relations
Participant 2: Just looking around
No fixation (of .2 seconds or longer)

Participant 3: Reading
Numerous fixation points
Participant 3: Risk Page
Notice the information they missed: novel risks

Participant 6: Reading benefits but just glancing at risks.
WHAT WERE THEY THINKING?

Why do they seek out, ignore or avoid drug risk information?
What were they looking for?

Benefits

/be-ne-fit-s/
def: Advantages or rewards obtained from doing certain actions or from a proposal
Why didn’t they read the risk disclosure?

- Social Desirability?
- Information Avoidance?
- Optimism Bias?
- *Perceived* Familiarity? Of particular concern because of novel risks.
Is disclosure reading the impossible dream?

- Consumers will likely self-report higher readership than actual readership
- Consumers are focused on benefits
- Identify why they aren’t reading
- Present (drug) risks before benefits
- Create a sense of “unfamiliarity” if there is novel information
- Signal novel information
Do you see the baseball men right now?

Of course I do.
Putting Disclosures to the Test: (What) Do Consumers Notice?

David A. Hyman
University of Illinois

David Franklyn
University of San Francisco
Our Studies

Series of studies (and articles) evaluating consumer knowledge/understanding of:

- Search Results Page ("SRP") architecture (i.e., layout of paid and unpaid content);
- "Native" advertising;
- Labels on SRP and on native advertising.
Basic Methodology

- Online surveys of ≈1k respondents (per study).
  - Mostly U.S., but a few U.K. studies.
- Conduct simulated searches and/or show static images of SRPs and examples of native advertising.
- Examine:
  - Knowledge of which regions are paid v. unpaid;
  - Comprehension and/or recollection of labels;
  - Perceptions:
    - Is it clear and conspicuous what is paid?
    - What do particular labels signify?
- Exploit changes in SRP architecture and labeling
- Manipulate SRP architecture and labeling.
## What do Labels Signify to Consumers?

<table>
<thead>
<tr>
<th>Label</th>
<th>Ad/paid content</th>
<th>Unpaid content</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid Ad</td>
<td>89%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Paid Content</td>
<td>87%</td>
<td>5%</td>
<td>8%</td>
</tr>
<tr>
<td>This content was paid for by</td>
<td>86%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>Paid Post</td>
<td>83%</td>
<td>7%</td>
<td>10%</td>
</tr>
<tr>
<td>Ad</td>
<td>81%</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>Sponsored</td>
<td>79%</td>
<td>11%</td>
<td>10%</td>
</tr>
<tr>
<td>Sponsored Content</td>
<td>76%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Sponsored Post</td>
<td>76%</td>
<td>13%</td>
<td>11%</td>
</tr>
<tr>
<td>Brand Voice</td>
<td>64%</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>Brand Publisher</td>
<td>61%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>Presented By</td>
<td>60%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Partnered Content</td>
<td>57%</td>
<td>19%</td>
<td>24%</td>
</tr>
<tr>
<td>Partner</td>
<td>57%</td>
<td>17%</td>
<td>26%</td>
</tr>
<tr>
<td>Written By</td>
<td>23%</td>
<td>52%</td>
<td>25%</td>
</tr>
</tbody>
</table>
“Which of these labels have you seen in the past month?” (Jan. 2012)

<table>
<thead>
<tr>
<th>Sponsored Links</th>
<th>55%</th>
<th>Last used by Google in 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsored Results</td>
<td>49%</td>
<td>Yahoo only</td>
</tr>
<tr>
<td>Ads</td>
<td>46%</td>
<td>Google</td>
</tr>
<tr>
<td>Commercial Ads</td>
<td>33%</td>
<td>Never used</td>
</tr>
<tr>
<td>Not noticed any labels</td>
<td>22%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Exploit variation and changes in labeling. Use controls!
Respondents Have Difficulty Determining Whether Native Ads are Ads

- 37% of respondents think Native Ads are ads
- 49% think they are regular ads
- 14% don't know

- 81% of respondents think Regular Ads are ads
- 12% think they are paid/unpaid
- 7% don't know
What if we “tweak” the label of a native ad?
Effect of “Tweaking the Native Ad Label”
Specific Studies

- Trademarks as Keywords: Much Ado About Something? 26 HARVARD J. L. & TECHNOLOGY 481-543 (2013)
- Going Native: Can Consumers Recognize Native Advertising? (forthcoming, 2017)
- Search Bias and the Limits of Antitrust Revisited: Dominance and Its Discontents (work in progress)
The Impact of Timing on the Salience of Smartphone App Privacy Notices

Rebecca Balebako (RAND Corporation), Florian Schaub (Carnegie Mellon University), Idris Adjerid (Notre Dame University), Alessandro Acquisti (Carnegie Mellon University), Lorrie Faith Cranor (Carnegie Mellon University)

5th Annual ACM CCS Workshop on Security and Privacy in Smartphones and Mobile Devices (SPSM 2015)
What makes a privacy notice effective?

- The notice should have information people care about.
- A privacy notice should be salient.
- The ability to remember a notice is a measure of salience.
Smartphone permission notices are ignored
Does timing matter? Which option is best?

- Smartphone apps can display privacy notices at many points
  - In the app store
  - During install
  - Before app use
  - During app use
  - After app use
Does timing matter? Which option is best?

- Smartphone apps can display privacy notices at many points
  - In the app store
  - During install (not tested)
  - Before app use
  - During app use
  - After app use
Timing does matter

Smartphone apps can display privacy notices at many points

**THE WORST**

- In the app store
- During install (not tested)
- Before app use
- During app use
- After app use
Simple app quiz on American inventors

**Question 10 of 11**

Madame C. J. Walker (1867-1919) was the first African-American female millionaire. Her business included products she invented such as:

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>bifocals</td>
</tr>
<tr>
<td>the parachute</td>
</tr>
<tr>
<td>the lightening rod</td>
</tr>
<tr>
<td>hair-growing lotion</td>
</tr>
</tbody>
</table>

Oops!! The correct answer is "hair-growing lotion"
The privacy notice

US Inventors History Quiz

Privacy Notice

What do we collect?

- Browser History
  A list of websites visited, or the calls or texts made or received.

Who do we share with?

- Ad Networks
  Companies that display ads to you through apps.
Both web surveys and a field experiment

- Web Survey (277 Mturk participants)
  - Participants played a virtual app online
- Field Experiment (126 participants)
  - Participants downloaded and played an app quiz
Field study participant recruitment

- Two pools of university participants with funded phones
  - Notre Dame University (n=29)
  - Phone-lab at University of Buffalo (n=37)

- One pool of participants for multiple studies
  - Carnegie Mellon University and community (n=42)

- Online boards open to public
  - Craigslist and reddit (n=18)
All participants completed following steps

1. Completed consent form and demographic questions
2. Installed and played the app
3. Experienced a distractor or delay
   - Web survey: questions about privacy preferences
   - Field experiment: 24 hours
4. Answered memory questions about the app
5. Evaluated the notice
Rate of Recall for Notice – Web Survey

Rate of correct recalls

- Not shown
- App store
- Before use
- During use
- After use
Rate of Recall for Notice – Field Study

Rate of correct recall

- Not shown
- App store
- Before use
- During use
- After use
Thank you

The Impact of Timing on the Salience of Smartphone App Privacy Notices
Rebecca Balebako: balebako@rand.org
Your attention please!

- **Moderator:**
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Putting Disclosures to the Test

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Comprehension

Moderator: Ryan Mehm
Division of Privacy and Identity Protection, FTC

Daniel Goldstein
Principal Researcher
Microsoft Research Lab – New York City

Elizabeth Howlett
Department of Marketing
University of Arkansas, Fayetteville

Susan Kleimann
President
Kleimann Communication Group

Joel R. Reidenberg
Center on Law and Information Policy
Fordham University
Presenting unfamiliar numbers to laypeople (and checking comprehension)

Dan Goldstein & Jake Hofman
Principal Researcher
Microsoft

Original research in this presentation was funded by Microsoft and Columbia University's Center for the Decision Sciences.
Written and graphical techniques

• Written
  • Perspective sentences
  • Frequency formats

• Graphical
  • Icon arrays
  • Simulations
How many times larger is a trillion than a million?

• One thousand times
• Ten thousand times
• One hundred thousand times
• One million times
• Ten million times
• Don’t know
How many times larger is a trillion than a million?

• One thousand times – 18%
• Ten thousand times – 12%
• One hundred thousand times – 21%
• One million times – 21%
• Ten million times – 17%
• Don’t know – 12%
How big is 100 million acres?

• As big as Rhode Island
• As big as Connecticut
• As big as South Carolina
• As big as Illinois
• As big as Utah
• As big as California
Perspectives

Sentences that begin “To put this in perspective” + a specific syntax (Barrio, Goldstein, & Hofman, 2016).
President Obama plans to convene his Cabinet for the first time today, and he will order its members to identify a combined $100 million in budget cuts over the next 90 days, according to a senior administration official.

—washingtonpost.com

To put this in perspective ...

100 million dollars is about # % of the attribute of entity

100 million dollars is about equal to the attribute of entity

100 million dollars is about # times larger than the attribute of entity

100 million dollars is about # times smaller than the attribute of entity

100 million dollars is about # dollars for every entity

100 million dollars is about one for every # entity

100 million dollars is in the top # % of the attribute of all entity

100 million dollars is in the bottom # % of the attribute of all entity

100 million dollars is the attribute of the # largest entity

100 million dollars is the attribute of the # smallest entity

100 million dollars is entity
“The storm killed thousands of people in Honduras, left one million homeless and destroyed what was left of a declining banana industry, once the country’s lifeblood, as well as other vital crops”

To put this into perspective ...
“The storm killed thousands of people in Honduras, left one million homeless and destroyed what was left of a declining banana industry, once the country’s lifeblood, as well as other vital crops”

To put this into perspective ...

One million people is about 12% of the population of Honduras
Perspectives improve comprehension in empirical tests

- Recall
- Estimation
- Error Detection
- Long-term recall

See Barrio, Goldstein, & Hofman, 2016
Possibilities for disclosures

To put 250 calories into perspective

• 11% of daily calories
• 1/3 of a meal
• 50 minutes of walking
• 31 cups shredded lettuce

Possibilities for disclosures

Front-end load of 5.25%

- “If you invested $50,000 in this fund, you would pay $2,625 of that as a fee."

APR

- Open question

Empirical testing needed
Frequency formats

• Representing risks as frequencies
  • Proportions and percentages not in use before French Revolution
  • Older texts express chance in natural frequencies
  • Increases correct solutions to tough Bayesian problems (compared to percentages and proportions). (Kurzenhauser & Hertwig, 2006; Hoffrage & Gigerenzer, 1998).
  • Lead to more accurate statistics in elicitation tasks in which the ground truth is known (Goldstein & Rothschild, 2014)
Icon Arrays

- Sedlmeier & Gigerenzer, 2001
- http://www.iconarray.com/

Positive test and cancer
Positive test but no cancer
Negative test but no cancer
Simulations

- People understand forecasts and portfolio returns better when simulated (Kaufmann, Weber, Haisley, 2013; Hogarth & Soyer, 2011).
Simulations

1. Move all 100 people to the income area.
2. Arrange the people until they are in a desirable pattern AND 98 to 100 units of the budget are used up (that is, the meter is green).
3. Click on the button that says DONE to learn who you are.

It is very important that you treat this as if it applied to your own retirement.

Goldstein, Johnson, & Sharpe, 2003
Consumers’ Understanding of Information Disclosures on Product Packaging

Elizabeth Howlett
University of Arkansas, Fayetteville

Federal Trade Commission
Constitution Center
400 7th St. SW
Washington, DC 20024
Research Stream

• Research supported in part by Healthy Eating Research, a program of the Robert Woods Johnson Foundation

• Colleagues involved in this research include
  • Scot Burton, Distinguished Professor and Tyson Chair in Food and Consumer Products Retailing, Department of Marketing, University of Arkansas, Fayetteville.
  • Christopher Newman, Assistant Professor, Department of Marketing, University of Mississippi.
The product package is a crowded place
Ingredients
Salmon, chicken meal, whole brown rice, soybean meal, whole barley, whole oatmeal, animal fat preserved with mixed-tocopherols (form of Vitamin E), soy protein isolate, dried yeast, dried egg product, dried beet pulp, natural flavor, fish oil, phosphoric acid, caramel color, calcium carbonate, whole cranberries, dried tomatoes, dried spinach, salt, potassium chloride, choline chloride, taurine, calcium phosphate, Vitamin E supplement, zinc sulfate, ferrous sulfate, niacin, manganese sulfate, Vitamin A supplement, calcium pantothenate, thiamine mononitrate, copper sulfate, riboflavin supplement, Vitamin B-12 supplement, pyridoxine hydrochloride, folic acid, Vitamin D-3 supplement, calcium iodate, biotin, menadione sodium bisulfite complex (source of Vitamin K activity), sodium selenite, B-4261.
What is the number one health concern of parents today regarding their children?

**Childhood Obesity**

✓ not smoking, drinking, or drug use (C.S. Mott Children’s Hospital National Poll on Children’s Health 2010)
Constituencies

- Scholars/Theory: Are contrasting types of FOP icons processed differently under varying decision tasks?

- Food Marketers/Managers: Higher proportion of healthy food sales = superior sales growth, returns to shareholders, operating profits, and company reputations (Hudson Institute 2011)

- Consumers/Public Policy Makers: Can marketers create an environment in which consumers can make accurate judgments about product healthfulness?
Primary Research Question

• How does front of package (FOP) information affect consumer evaluations at the shelf?
  • Processing Fluency (e.g., Jacoby & Dallas 1981; Schwarz 2004; Labroo & Lee 2004; Novemsky et al. 2007; Hong & Sternthal 2010)
    • Perceptual - the ease of processing perceptual features of a stimulus such as modality and shape (e.g., Jacoby & Kelley 1987)
    • Conceptual - the ease of processing the meaning of a stimulus (e.g., Whittlesea 1993)
Conceptual Framework

- Comparative vs. Non-Comparative Processing

Influences attitudes, intentions, and behavior differently

(Oakley et al. 2008; Olsen 2002; Hsee and Leclerc 1998; Nowlis and Simonson 1997)
Fop Labeling System Dichotomy

OBJECTIVE

EVALUATIVE

The Nutrition Keys icon, also known as “Facts Up Front,” on each big C cereal box helps consumers quickly view the per-serving information about calories, saturated fat, and added sugars, as well as key nutrients from the Nutrition Facts panel.

Nutrition Facts

The Nutrition Facts panel provides a detailed nutrition breakdown of the cereal inside. It provides another way to see and compare how a particular food might fit into one’s diet.

Cheerios

Guiding Stars®

Nutritious choices made simple®

100 CALORIES

0g Trans Fat

PER SERVING

PER CUP SERVING

450 CALORIES

150 CALORIES
## FOP Labeling System

<table>
<thead>
<tr>
<th>TYPE OF ICON</th>
<th>PROCESSING MODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-comparative</td>
</tr>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td>More diagnostic,</td>
</tr>
<tr>
<td><em>precise</em></td>
<td>More helpful with</td>
</tr>
<tr>
<td></td>
<td>comprehension</td>
</tr>
<tr>
<td><strong>EVALUATIVE</strong></td>
<td>Less diagnostic,</td>
</tr>
<tr>
<td><em>interpretative</em></td>
<td>Less helpful with</td>
</tr>
<tr>
<td></td>
<td>comprehension</td>
</tr>
</tbody>
</table>
Perceived Conceptual Fluency

Scale Items: Endpoints: strongly disagree/strongly agree

• Given the information on the front of the package, it is easy to determine how healthy the product is...

• Given the information on the front of the package, it is clear whether the product is high or low in its level of nutritiousness...

• I feel confident about whether this product is a healthy or unhealthy choice based on the information on the front of the package...

• It is easy to understand whether this product is a healthy or unhealthy choice given the information shown on the front of the package...

modified from Fang, Singh, and Ahluwalia 2007; Lee and Aaker 2004; Moorman 1990
Perceived healthfulness

- Please consider the nutrition level of the food product shown. Do you believe that the food product is:

<table>
<thead>
<tr>
<th>not at all nutritious</th>
<th>highly nutritious</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>very unhealthy</th>
<th>very healthy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5</td>
<td>6 7</td>
</tr>
</tbody>
</table>
## Purchase Intentions

- Assuming you were interested in purchasing this type of food, how likely are you to buy this specific item given the information shown on the package?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>very unlikely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>not probable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>definitely would not</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>very likely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very probable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>definitely would</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Study 1: Design And Procedures

• n = 600
• Online experiment
• 2 (Objective Icon: Present vs. Absent) x 2 (Evaluative Icon: Present vs. Absent) Between Subjects Design
• Randomly assigned to 1 of 4 conditions
• Non-Comparative processing
Results: Non-Comparative Processing
Study 2: Design And Procedures

• n = 200 adults
• Lab experiment
• 2 (Objective Icon: Present vs. Absent) x 2 (Evaluative Icon: Present vs. Absent) Between Subjects Design
• Randomly assigned to 1 of 4 conditions
• Comparative processing
Study 2

PER SERVING

150 CALORIES
3.5g SAT FAT
85mg SODIUM
11g SUGARS

17% DV
4% DV
Results: Comparative Processing

Conceptual fluency

Perceived Conceptual Fluency

Objective Icon
- Present
- Absent

Evaluative Icon
- Present
- Absent
Results: Comparative Processing Objective Icon

Perceived healthfulness

![Comparative Processing Objective Icon Chart]

- **PER SERVING**
  - 90 CALORIES
  - 1g SAT FAT (5% DV)
  - 80mg SODIUM (3% DV)
  - 5g SUGARS

- **PER SERVING**
  - 150 CALORIES
  - 3.5g SAT FAT (17% DV)
  - 85mg SODIUM (4% DV)
  - 11g SUGARS

Bar chart showing perceived healthfulness for unhealthy and healthy options with objective icon present or absent.
Results: Comparative Processing Evaluative Icon

Perceived healthfulness

![140 CALORIES per serving icon]

![100 CALORIES per serving icon]

Bar graph showing perceived healthfulness:
- **Healthy**
  - Present: 5
  - Absent: 3
- **Unhealthy**
  - Present: 3.5
  - Absent: 2
Results: Comparative Processing

Purchase intention

- **Objective Icon**
  - Present  vs. Absent
  - Unhealthy: 3.5 vs. 4
  - Healthy: 4.5 vs. 5

- **Evaluator Icon**
  - Present  vs. Absent
  - Unhealthy: 2.5 vs. 4
  - Healthy: 4.5 vs. 5
Conceptual Model

Evaluative Icons

Type of Processing:
Comparative vs.
Non-comparative

Objective Icons

CONSUMERS’
Comprehension
Purchases
Product evaluations
Conclusions

• The type of processing mode used by consumers influences the effectiveness of information disclosures.
Thank you for your attention and interest.
Susan Kleimann

President
Kleimann Communication Group
Going Beyond Words: Assessing Comprehension at a Deeper Level

September 15, 2016
Susan Kleimann, Ph.D.
Kleimann Communication Group
The Project - Funded by the Consumer Financial Protection Bureau

**Mandate**

The Bureau shall propose...model disclosures that combine the disclosures required under [TILA] and [RESPA] into a single, integrated disclosure for mortgage loan transactions covered by those laws.

- Dodd Frank Act § 1032(f)

**Result**

- A Loan Estimate disclosure replaces the Good Faith Estimate and the TILA disclosure
- A Closing Disclosure replaces the HUD-1 and the TILA disclosure

Susan Kleimann, Ph.D./Putting Disclosures to the Test/FTC/9.15.16
The 3 goals of the project

**Comprehension**
- understand the basic terms of a loan and its costs
- Understand immediate costs and costs over time

**Comparison**
- compare one Loan Estimate with another
- compare a Loan Estimate with the Closing Disclosure

**Choice**
- choose the best loan for their situation with the Loan Estimate
- see differences between the Loan Estimate and Closing Disclosure to decide whether to close
## Loan Estimate

### FICUS BANK
4321 Random Boulevard - Somewhere, ST 12340

**Save this Loan Estimate to compare with your Closing Disclosure.**

### Loan Estimate

<table>
<thead>
<tr>
<th>DATE ISSUED</th>
<th>2/15/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICANTS</td>
<td>Michael Jones and Mary Stone</td>
</tr>
<tr>
<td>ADDRESS</td>
<td>123 Anywhere Street, Anytown, ST 12345</td>
</tr>
<tr>
<td>PROPERTY</td>
<td>456 Somewhere Avenue, Anytown, ST 12345</td>
</tr>
<tr>
<td>SALE PRICE</td>
<td>$198,000</td>
</tr>
</tbody>
</table>

**Loan Terms**

<table>
<thead>
<tr>
<th>Loan Amount</th>
<th>$162,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Rate</td>
<td>3.875%</td>
</tr>
<tr>
<td>Monthly Principal &amp; Interest</td>
<td>$761.78</td>
</tr>
</tbody>
</table>

**Projected Payments**

<table>
<thead>
<tr>
<th>Year 1-7</th>
<th>Year 8-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal &amp; Interest</td>
<td>$761.78</td>
</tr>
<tr>
<td>Mortgage Insurance</td>
<td>+ 82</td>
</tr>
<tr>
<td>Estimated Escrow Amount</td>
<td>+ 206</td>
</tr>
<tr>
<td>Estimated Total Monthly Payment</td>
<td>$1,050</td>
</tr>
</tbody>
</table>

**Costs at Closing**

<table>
<thead>
<tr>
<th>Estimated Closing Costs</th>
<th>$8,054</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Cash to Close</td>
<td>$16,054</td>
</tr>
</tbody>
</table>

### Notes:

- Before closing, your interest rate, points, and lender credits can change unless you lock the interest rate. All other estimated closing costs expire on 3/4/2013 at 5:00 p.m. EDT.
- See Section 6 on page 2 for escrowed property costs. You must pay for other property costs separately.
### Loan Estimate

**FICUS BANK**  
4321 Random Boulevard • Somewhere, ST 12340

**Save this Loan Estimate to compare with your Closing Disclosure.**

<table>
<thead>
<tr>
<th>Date Issued</th>
<th>2/15/2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicants</td>
<td>Michael Jones and Mary Stone</td>
</tr>
<tr>
<td></td>
<td>123 Anywhere Street</td>
</tr>
<tr>
<td></td>
<td>Anytown, ST 12345</td>
</tr>
<tr>
<td>Property</td>
<td>456 Somewhere Avenue</td>
</tr>
<tr>
<td></td>
<td>Anytown, ST 12345</td>
</tr>
<tr>
<td>Sale Price</td>
<td>$180,000</td>
</tr>
</tbody>
</table>

| Loan Term   | 30 years |
| Purpose     | Purchase |
| Product     | Fixed Rate |
| Loan Type   | Conventional |
| Loan ID #   | 123456789 |
| Rate Lock   | NO |

**Before closing, your interest rate, points, and lender credits can change unless you lock the interest rate. All other estimated closing costs expire on 3/4/2013 at 5:00 p.m. EDT.**

---

**Loan Terms**

<table>
<thead>
<tr>
<th>Loan Amount</th>
<th>$162,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest Rate</td>
<td>3.875%</td>
</tr>
</tbody>
</table>

**Monthly Principal & Interest**  
See Projected Payments below for your Estimated Total Monthly Payment

| Monthly Principal & Interest | $761.78 |

**Does the loan have these features?**

- **Prepayment Penalty**  
  - Yes  
  - As high as $3,240 if you pay off the loan during the first 2 years

- **Balloon Payment**  
  - No
### Part 2. Affordability over long term

<table>
<thead>
<tr>
<th>Payment Calculation</th>
<th>Years 1-7</th>
<th>Years 8-30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal &amp; Interest</td>
<td>$761.78</td>
<td>$761.78</td>
</tr>
<tr>
<td>Mortgage Insurance</td>
<td>+ 82</td>
<td>+ —</td>
</tr>
<tr>
<td>Estimated Escrow</td>
<td>+ 206</td>
<td>+ 206</td>
</tr>
<tr>
<td><strong>Estimated Total Monthly Payment</strong></td>
<td><strong>$1,050</strong></td>
<td><strong>$968</strong></td>
</tr>
</tbody>
</table>

**Estimated Taxes, Insurance & Assessments**
- **Amount can increase over time**
- $206 a month

**This estimate includes**
- [x] Property Taxes
- [x] Homeowner's Insurance
- [ ] Other:

*See Section G on page 2 for escrowed property costs. You must pay for other property costs separately.*

**In escrow?**
- YES
- YES

*Susan Kleimann, Ph.D. / Putting Disclosures to the Test / FTC / 9.15.16*
Part 3: Affordability over short term

<table>
<thead>
<tr>
<th>Costs at Closing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Closing Costs</td>
<td>$8,054</td>
</tr>
<tr>
<td></td>
<td>Includes $5,672 in Loan Costs + $2,382 in Other Costs – $0 in Lender Credits. See page 2 for details.</td>
</tr>
<tr>
<td>Estimated Cash to Close</td>
<td>$16,054</td>
</tr>
<tr>
<td></td>
<td>Includes Closing Costs. See Calculating Cash to Close on page 2 for details.</td>
</tr>
</tbody>
</table>
A 3-stage testing phase

- Testing was done in English and Spanish with industry and consumer participants
  - Stage 1: evolving the Loan Estimate: 5 rounds of qualitative testing
  - Stage 2: developing and testing Closing Disclosure AND making sure it worked with the Loan Estimate: 5 rounds of qualitative testing
  - Stage 3: ensuring it worked for modifications after quantitative test: 3 rounds for Spanish; 3 rounds for refinancing version; 2 rounds for closing costs

Susan Kleimann, Ph.D./Putting Disclosures to the Test/FTC/9.15.16
Testing characteristics

► Of the protocol

1. Introduce a task
   - Buying a house - here is Loan Estimate from one bank
2. Think aloud
3. Here’s a second offer
   - Which do you choose?
   - Why?
   - No right or wrong answers
4. Standard detail questions

► Of the participants

1. Consumers
   - Mixed gender, age, education, race, income
   - Experienced and inexperienced buyers
   - Geographic variations
2. Industry
   - Lenders, brokers, others
   - Large and small

Susan Kleimann, Ph.D./Putting Disclosures to the Test/FTC/9.15.16
## GINGKO BANK

**Loan Estimate**

- **Loan Term**: 30 years
- **Purpose**: Purchase
- **Product**: 3.5 Year Interest Only 7/1 Adjustable Rate
- **Loan Type**: Conventional FRM, FHA, VA
- **Loan ID**: #123456789
- **Rate Lock**: NO, subject to change until 4/16/2013 at 5:00 p.m. EDT

### Loan Terms

<table>
<thead>
<tr>
<th>Feature</th>
<th>Amount</th>
<th>Increase after closing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$211,000</td>
<td>NO</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>4%</td>
<td>YES</td>
</tr>
<tr>
<td>Monthly Principal &amp; Interest</td>
<td>$703.33</td>
<td>YES</td>
</tr>
</tbody>
</table>

### Projected Payments

- **Years 1-5**: $1,137 - $1,468
- **Years 6-8**: $1,137 - $1,713
- **Years 9-11**: $1,026 - $2,068

**Estimated Closing Costs**: $8,791

**Estimated Cash to Close**: $27,791

---

## HORNBEAM BANK

**Loan Estimate**

- **Loan Term**: 30 years
- **Purpose**: Purchase
- **Product**: 7/1 Year Interest Only 7/1 Adjustable Rate
- **Loan Type**: Conventional FRM, FHA, VA
- **Loan ID**: #123456789
- **Rate Lock**: NO, subject to change until 4/16/2013 at 5:00 p.m. EDT

### Loan Terms

<table>
<thead>
<tr>
<th>Feature</th>
<th>Amount</th>
<th>Increase after closing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$211,000</td>
<td>NO</td>
</tr>
<tr>
<td>Interest Rate</td>
<td>4.25%</td>
<td>YES</td>
</tr>
<tr>
<td>Monthly Principal &amp; Interest</td>
<td>$747.29</td>
<td>YES</td>
</tr>
</tbody>
</table>

### Projected Payments

- **Years 1-7**: $747.29
- **Year 8**: $1,238 max
- **Year 9**: $1,238 max
- **Year 10**: $1,238 max

**Estimated Closing Costs**: $7,296

**Estimated Cash to Close**: $26,296
## Comparison of part 1

### Loan Terms

<table>
<thead>
<tr>
<th>Loan Terms</th>
<th>Can this amount increase after closing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan Amount</td>
<td>$211,000</td>
</tr>
<tr>
<td>Interest Rate</td>
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<tr>
<td>Monthly Principal &amp; Interest</td>
<td>$703.33</td>
</tr>
<tr>
<td>Prepayment Penalty</td>
<td>NO</td>
</tr>
<tr>
<td>Balloon Payment</td>
<td>NO</td>
</tr>
</tbody>
</table>

### Loan Terms

<table>
<thead>
<tr>
<th>Loan Terms</th>
<th>Can this amount increase after closing?</th>
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<tr>
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<td>NO</td>
</tr>
<tr>
<td>Balloon Payment</td>
<td>NO</td>
</tr>
</tbody>
</table>

---

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BLOOMS TAXONOMY

KNOWLEDGE
- Recall of information; Discovery; Observation; Listing; Locating; Naming

COMPREHENSION
- Understanding; Translating; Summarising; Demonstrating; Discussing

APPLICATION
- Using and applying knowledge; Using problem solving methods; Manipulating; Designing; Experimenting

ANALYSIS
- Identifying and analyzing patterns; Organisation of ideas; recognizing trends

SYNTHESIS
- Using old concepts to create new ideas; Design and Invention; Composing; Imagining; Inferring; Modifying; Predicting; Combining

EVALUATION
- Assessing theories; Comparison of ideas; Evaluating outcomes; Solving; Judging; Recommending; Rating
“It is a loan that has an interest that is not set, meaning it’s not always going to be 3% or 4%, it’s going to be adjusting over time."

“...adjustable rate...means that you are going to get a low rate usually in the beginning and it is going to stay consistent for five years...So in Year 6 and 7 through 30 there are different numbers given.”
“The only thing on this one is that it doesn’t have any principal—meaning for five years you pay, but you haven’t paid anything for principal. Whereas the other ones, you have paid some amount. Meaning that everything is going towards the interest on the mortgage. In five years, nothing has gone towards your loan...”
Application & Analysis

- Using & applying
- Experimenting
- Identifying patterns
- Using problem solving

“When looking...I do see a higher interest rate on the Laurel loan, but I also see what appears to be a lesser monthly figure for Years 1 through 5...because I initially noticed that, at the beginning, this loan is slightly different. It’s a five year, interest-only loan which is reflected in the lesser amount for the first 60 months.”
“I’m looking at this and you notice a higher interest rate and then you see a lower payment. You’re like— hmmmm—but if you pay attention to the fact that your payment is going to go up by $315 in six years, that’s a lot of money. That’s kind of a scary process to be in anyway because after six years in a house you might need to be putting on a roof, you might need to be doing your plumbing and not looking forward to paying an extra $300 a month in your payment.”

Susan Kleimann, Ph.D./Putting Disclosures to the Test/FTC/9.15.16
“It was only 10% down...because I could then preserve as much of my money as possible. But at the same time I would still take that with a bit of caution, because that’s a good thing now, but maybe, obviously over the 30-year period, that’s 10% more or roughly $31,500 that I’m financing and maybe if I do have the funds, I should be putting more down.”
“So the bottom line is you have to make this decision on...the amount of money it will cost you to take a loan out: Are you in a position where you want to pay more money, $5,500 up front [Pecan] or the $633 [Poplar] and you’re going to sacrifice a little bit on interest rate...”
What did the Quant Study tell us about our success?

- 2 x 2 x 2 x 2 between subjects factorial design
- Four factors
  - Disclosure type: current vs. proposed
  - Loan type: Fixed vs. adjustable rate
  - Difficulty: easier vs. more challenging loans
  - Consumer: experienced vs. inexperienced
- 858 participants in 20 locations
- 5 parts
  1. Review 2 offers; choose 1; explain why
  2. Compare terms
  3. Answer questions about 1 of the offers
  4. Compare initial with final disclosure and answer questions about final disclosure
  5. Rate the initial disclosure & final disclosure.
- If bias in phrasing, advantage to current disclosures
What did the Quant Study tell us about our success?

- Proposed disclosures performed better on
  - Aggregate measures *
  - Tasks 2-5 *
  - All concept areas * (e.g., Interest rate, escrow account, loan amount, monthly payments, mortgage insurance, closing costs)
  - Regardless of experience level, loan type, and loan complexity *

- Participants with the proposed disclosures listed more comments to explain their choice

- Current disclosures performed statistically significant better in one place: a vocabulary issue—settlement costs vs. closing costs
  - Result: Modified the Loan Estimate and Closing Disclosure

* statistically significant

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Statistically Significant Findings

Comprehension
- Current: 70.0% correct
- Proposed: 80.5% correct

Comparison (Initial to Closing)
- Current: 54.9% correct
- Proposed: 69.0% correct

Choice
- Current: 57.3% correct
- Proposed: 81.4% correct
Final Takeaways

- Comprehension is more than understanding words, but rather understanding the implication and impact.

- Comparison requires the ability to see the salient information and mark differences and similarities.

- Choice requires integrating information and keying in on what makes most sense for you.

- For complex information with major consequences, you need to be able to show that consumers can comprehend the implications, not merely the words.

Susan Kleimann, Ph.D./Putting Disclosures to the Test/FTC/9.15.16
More information

- Copies of reports available at:
  http://www.consumerfinance.gov/know-before-you-owe/compare/

- Contact at: skleimann@kleimann.com
  Kleimann Communication Group
  www.Kleimann.com
Putting Disclosures to the Test

Joel R. Reidenberg
Center on Law and Information Policy
Fordham University

September 15, 2016
Ambiguity in Privacy Policies

Joel R. Reidenberg
Stanley D. and Nikki Waxberg Chair in Law
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New York, NY
jreidenberg@law.Fordham.edu
http://law.Fordham.edu/clip

Co-authors:
Jaspreet Bhatia (CMU), Travis D. Breaux (CMU) & Thomas B. Norton (Fordham CLIP)
Forthcoming publications


- *A Theory of Vagueness and Privacy Risk Perception*, IEEE 24th International Requirements Engineering Conference (RE'16), Sep 2016

This research was funded in part by National Science Foundation Awards #1330596 and #1330214 and by National Security Agency Award #141333
Research Goals

• Develop a theory for the measurement and comparison of vague and ambiguous terms in a privacy policy
• Test whether regulation improves the clarity of privacy policies
• Test how vagueness affects users’ perceptions of risk and willingness to share personal information
## Categories of Ambiguity

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition</strong></td>
<td>Action(s) to be performed are dependent on a variable or unclear trigger</td>
</tr>
<tr>
<td><strong>Generalization</strong></td>
<td>Action(s)/Information Types are vaguely abstracted with unclear conditions</td>
</tr>
<tr>
<td><strong>Modality (including modal verbs)</strong></td>
<td>Vague likelihood of action(s) or ambiguous possibility of action or event</td>
</tr>
<tr>
<td><strong>Numeric quantifier</strong></td>
<td>Vague quantifier of action/information type</td>
</tr>
</tbody>
</table>
Annotated Example

We generally may share personal information we collect on the Site with certain service providers, some of whom may use the information for their own purposes as necessary.
# Grounded analysis

<table>
<thead>
<tr>
<th>Type of Site</th>
<th>Policy</th>
<th>Last policy update</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shopping</td>
<td>Barnes and Noble</td>
<td>05/07/2013</td>
</tr>
<tr>
<td>Shopping</td>
<td>Costco</td>
<td>12/31/2013</td>
</tr>
<tr>
<td>Shopping</td>
<td>JC Penny</td>
<td>05/22/2015</td>
</tr>
<tr>
<td>Shopping</td>
<td>Lowes</td>
<td>04/25/2015</td>
</tr>
<tr>
<td>Shopping</td>
<td>Over Stock</td>
<td>01/09/2013</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>AT&amp;T</td>
<td>09/16/2013</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Charter Communication</td>
<td>05/04/2009</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Comcast</td>
<td>03/01/2011</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Time Warner</td>
<td>09/2012</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Verizon</td>
<td>10/2014</td>
</tr>
<tr>
<td>Employment</td>
<td>Career Builder</td>
<td>05/18/2014</td>
</tr>
<tr>
<td>Employment</td>
<td>Glassdoor</td>
<td>09/09/2014</td>
</tr>
<tr>
<td>Employment</td>
<td>Indeed</td>
<td>2015</td>
</tr>
<tr>
<td>Employment</td>
<td>Monster</td>
<td>03/31/2014</td>
</tr>
<tr>
<td>Employment</td>
<td>SimplyHired</td>
<td>4/21/2010</td>
</tr>
</tbody>
</table>
# Taxonomy from Grounded Analysis

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples of Vague Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Condition</strong></td>
<td>depending, necessary, appropriate, inappropriate, as needed</td>
</tr>
<tr>
<td><strong>Generality</strong></td>
<td>generally, mostly, widely, general, commonly, usually, normally, typically, largely</td>
</tr>
<tr>
<td><strong>Modality</strong></td>
<td>may, might, can, could, would, likely, possible, possibly, unsure, often</td>
</tr>
<tr>
<td><strong>Numeric Quantifier</strong></td>
<td>anyone, certain, everyone, numerous, some, most, few, much, many, various</td>
</tr>
</tbody>
</table>
Vagueness Lattice

We may collect...

We may generally collect...

We may collect... as needed

We may collect some...

We may generally collect... as needed

We may collect some... as needed

We may generally collect some... as needed
Paired Comparison Study

For each numbered question, please read each pair of statements, and identify which of the two statements best represents *a more clear description* of the company's treatment of personal information.

- We share your personal information as needed.
- We generally may share some of your personal information.

Bradley-Terry Coefficients

Bradley Terry Model
Modality Category Survey

Bradley Terry Coefficients

Relative vagueness of modality vague terms
Scoring Model and Benchmarks

\[ \sum (BTC^{A-I}) \]

\[ V = \frac{\sum (A-I)}{\sum (BTC^{A-I})} \]

*Regulatory Models*
- Model Privacy Form Policies
- Safe Harbor Certified Policies

\( V = \) vagueness

\( BTC = \) Bradley-Terry coefficient

\( A-I = \) Action-information pair
Vagueness, perceived risk and willingness to share

Factorial Vignettes
Multilevel Modeling
Vagueness and Risk

Vignette Factors and Levels

<table>
<thead>
<tr>
<th>Factors</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Likelihood</td>
<td>only one person in your family</td>
</tr>
<tr>
<td></td>
<td>only one person in your workplace</td>
</tr>
<tr>
<td></td>
<td>only one person in your city</td>
</tr>
<tr>
<td></td>
<td>only one person in your state</td>
</tr>
<tr>
<td></td>
<td>only one person in your country</td>
</tr>
<tr>
<td>Vague Statement</td>
<td>(C) We share your personal information as necessary.</td>
</tr>
<tr>
<td></td>
<td>(G) We generally share your personal information.</td>
</tr>
<tr>
<td></td>
<td>(M) We may share your personal information.</td>
</tr>
<tr>
<td></td>
<td>(N) We share some of your personal information.</td>
</tr>
</tbody>
</table>

Template for Vignette Generation

Please rate your willingness to share your personal information with a shopping website you regularly use, given the following benefits and risks of using that website.

Benefits: convenience, discounts and price comparisons, anonymous and discreet shopping, certainty that the product is available, wider product variety, and informative customer reviews.

Risks: In the last 6 months, $RiskLikelihood experienced a privacy violation while using this website.

When choosing your rating, given the above benefits and risks, also consider the following website's privacy policy statements. Website privacy policies are intended to protect your personal information.

<table>
<thead>
<tr>
<th>Extremely Willing</th>
<th>Very Willing</th>
<th>Willing</th>
<th>Somewhat Willing</th>
<th>Somewhat Unwilling</th>
<th>...</th>
</tr>
</thead>
<tbody>
<tr>
<td>$VagueStatement</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Vagueness and Risk

Extremely Unwilling
Unwilling
Willing
Extremely Willing

Condition  Generalization  Modality  Numeric Quantifier
Applications to Improve Clarity

• *Linguistic guidelines*: minimize/avoid combinations with generalization terms and, if using terms, favor those with lower BT coefficients

• *Reporting framework*: public reporting of scores to encourage ratchet effect
Possible Broader Applications

- Consumer contracts such as EULAs
- Boilerplate contracts
- Next steps: domain specific taxonomy, policy annotations, establishment of BT coefficients
Conclusion

For more information and copies of the papers:

http://www.usableprivacy.org

@jreidenberg
Comprehension

Moderator: Ryan Mehm
Division of Privacy and Identity Protection, FTC

Daniel Goldstein
Principal Researcher
Microsoft Research Lab – New York City

Elizabeth Howlett
Department of Marketing
University of Arkansas, Fayetteville

Susan Kleimann
President
Kleimann Communication Group

Joel R. Reidenberg
Center on Law and Information Policy
Fordham University
Lunch break

The next session begins at 2 pm
Putting Disclosures to the Test

an FTC Workshop

September 15, 2016