
Putting Disclosures to the Test
an FTC Workshop
September 15, 2016

Your attention please!

- **Moderator:**
  Michael Ostheimer
  Division of Advertising Practices, FTC
- Nathaniel J. Evans
  Department of Advertising & Public Relations
  University of Georgia
- Mariea Grubbs Hoy
  School of Advertising & Public Relations
  University of Tennessee
- David Hyman
  Epstein Program in Health Law & Policy
  University of Illinois
- Rebecca Balebako
  Information Scientist
  RAND Corporation

Nathaniel J. Evans

Department of Advertising & Public Relations
University of Georgia

The University of Georgia

Disclosure Modality in Advergames: Effects and Implications for Policy

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

Evans, Nathaniel J. and **Mariea Grubbs Hoy** (2016), "Parents Presumed Persuasion Knowledge of Children's Advergames: The Influence of Advertising Disclosure Modality and Cognitive Load," *Journal of Current Issues and Research in Advertising,* 37(2), 146-164.

**The research presented is funded in part by the American Academy of Advertising*

adpr@UGA

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

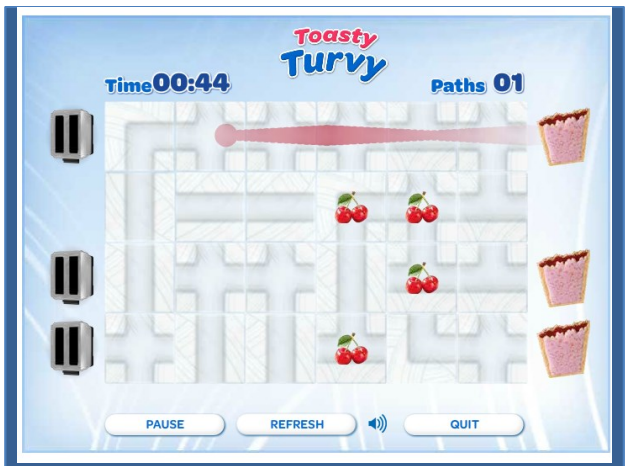
- Single vs. Dual modality
- Dual (simultaneous disclosure presentation in auditory and visual forms)
- Enhances consumer message processing
- Does this work when playing an advergame?

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)

No Disclosure

Single Modality Disclosure



Hey Kids! This Game is an Advertisement.

Dual Modality Disclosure

Hey Kids! This Game is an Advertisement.

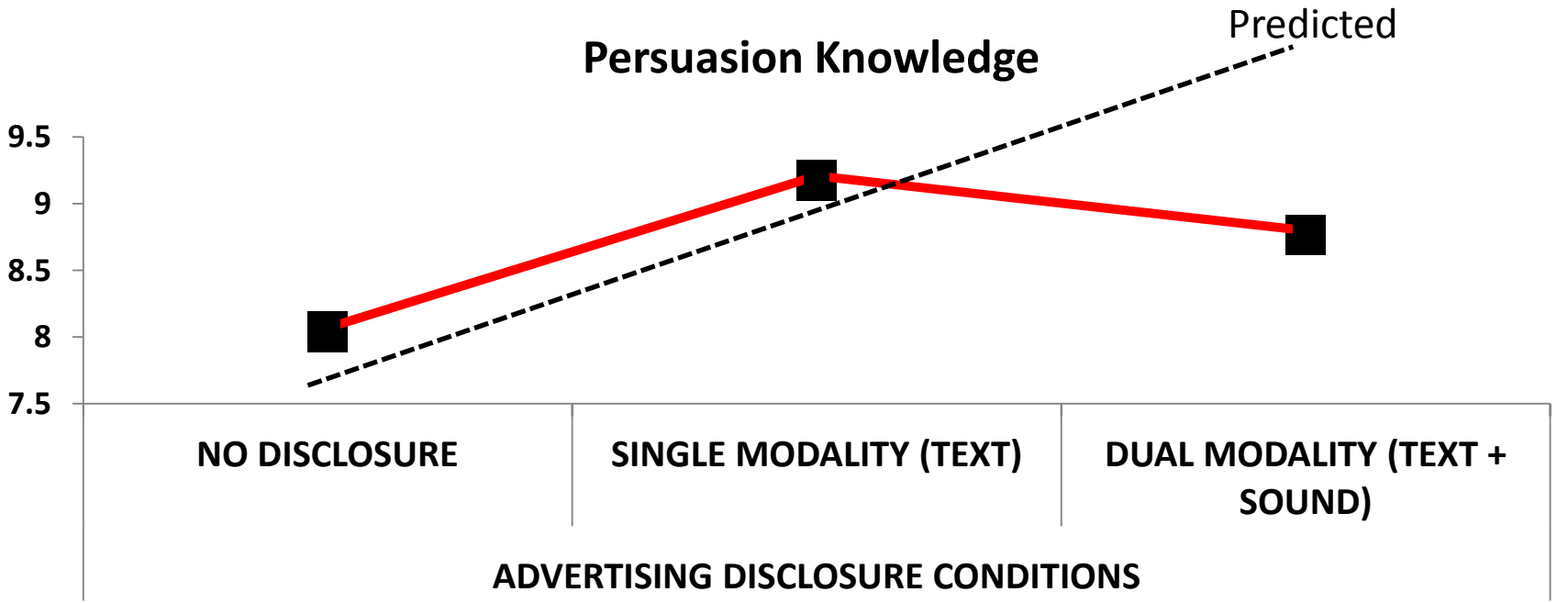
+

Voice Over (repeat 10s)

- Disclosure language pretested for reading level: Flesch-Kincaid Grade Level = 4.3

adpr@UGA

What Did We Find?



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

adpr@UGA

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

THE UNIVERSITY OF TENNESSEE KNOXVILLE

Hoy, Mariea Grubbs and Abbey Blake Levenshus (2016 online), "A Mixed-Methods Approach to Assessing Actual Risk Readership on Branded Drug Websites," *Journal of Risk Research.*

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?

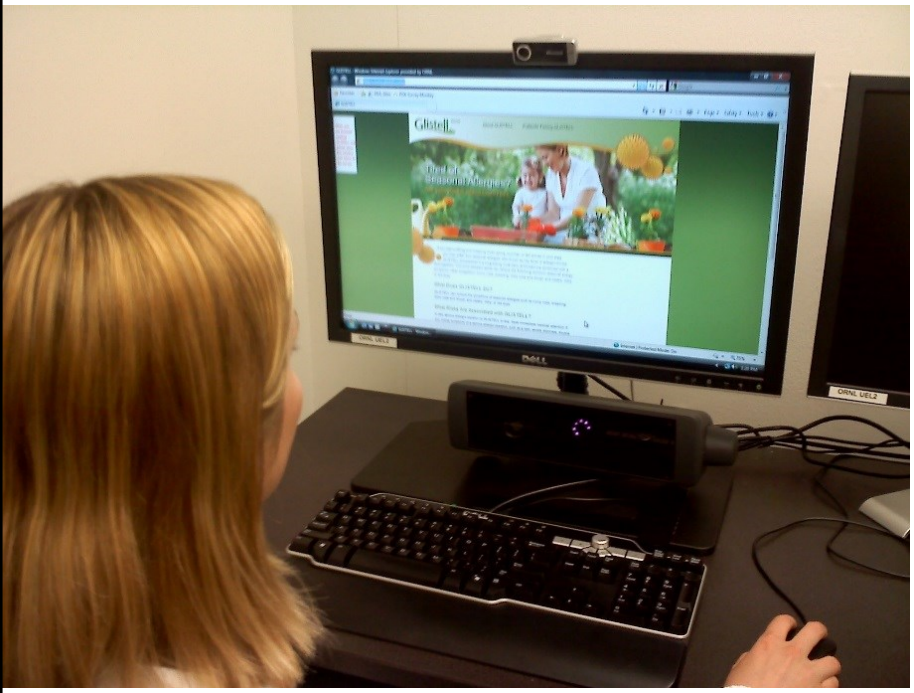
They self-report that they do:

- 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.”

Sources: FDA 1999; Menon et al. 2003, AARP 2010, Experian 2005-2014

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

Risks On Homepage

When you are finished reading GLISTELL.com, please close this window and return to the survey.

If you start sniffling and sneezing when spring, summer, or fall arrives in your area, you may suffer from seasonal allergies, also known as hay fever or allergic rhinitis. GLISTELL (torreladine) is a long-acting once-daily 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 dizziness, trouble breathing, or itching or swelling (especially around your face, tongue, or throat).

Do not give GLISTELL to children younger than two years old unless directed to 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. Do 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.

GLISTELL Home | About GLISTELL | Patients Taking GLISTELL

The FDA provided the website stimuli and survey.

Benefits

Risks

Novel Risks

Risks on Homepage w/Signal to Risks

Homepage with link to Risks Page

Eye-Tracking Measures

Fixation: where the person looked

Duration: how long the person looked

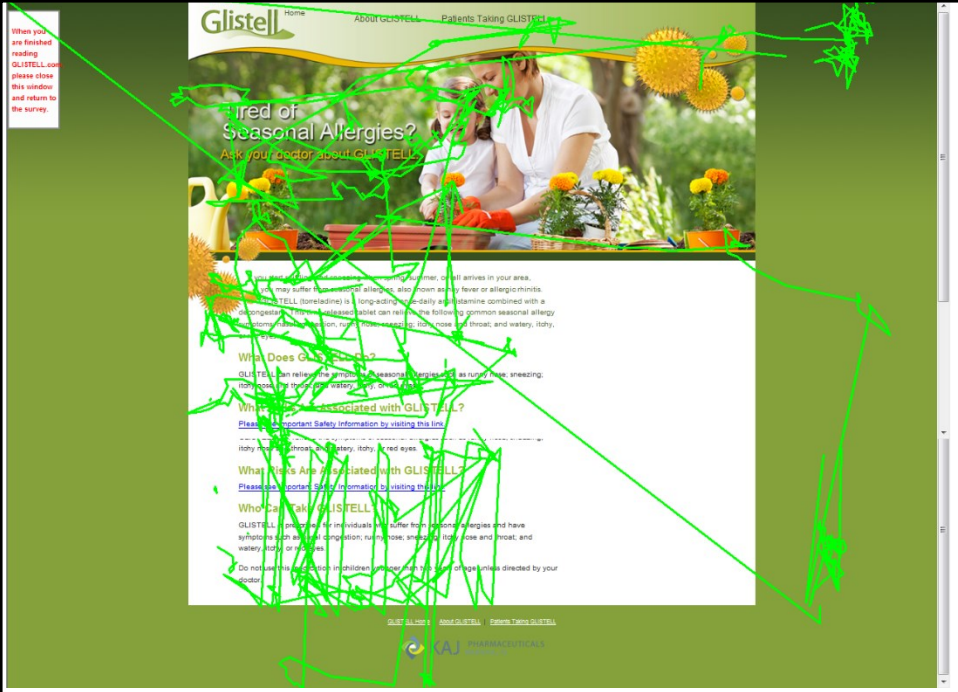
Fixation Sequence: order in which they looked

Numbers = fixations of .2 seconds or longer

"Reading"

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



Participant 2: Just looking around

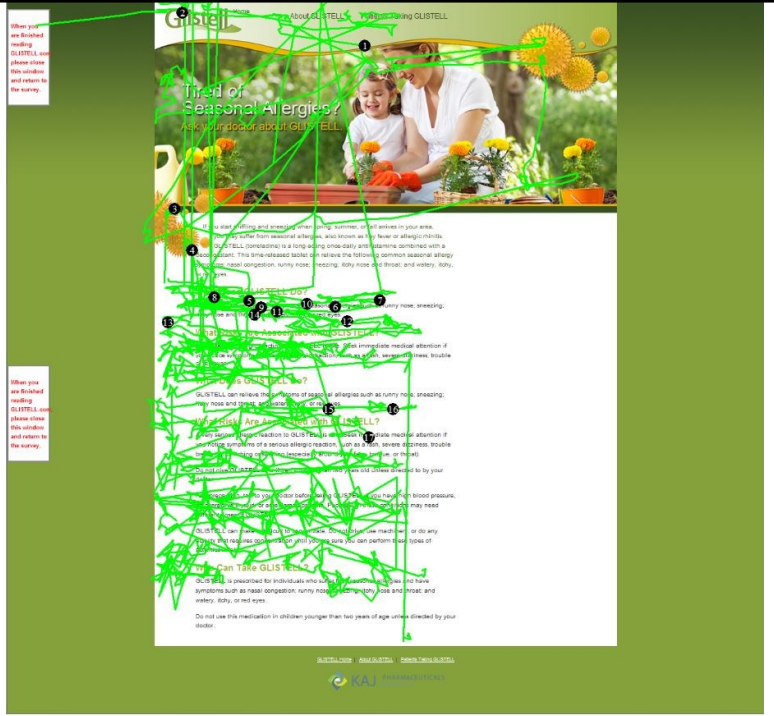
No fixation (of .2 seconds or longer)

Participant 3: Reading

Numerous fixation points

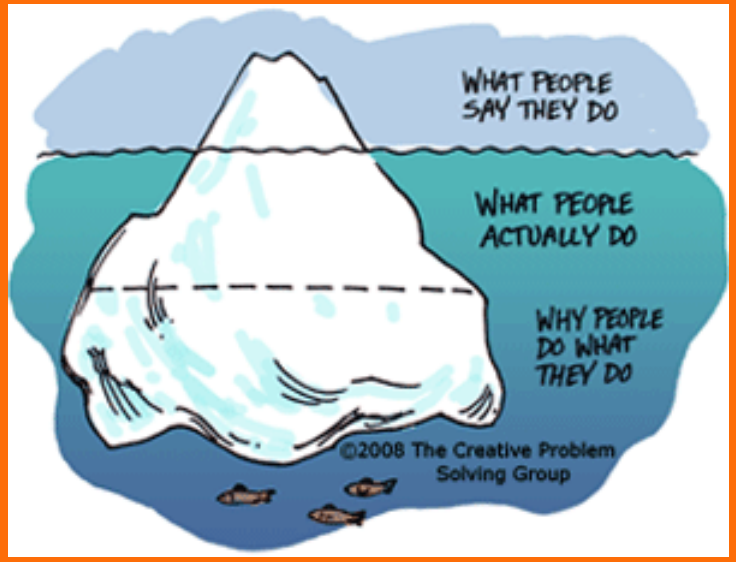
Participant 3: Risk Page

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?

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

David Hyman

Epstein Program in Health Law and Policy
University of Illinois

Putting Disclosures to the Test: (What) Do Consumers Notice?

David A. Hyman
University of Illinois

David Franklyn
University of San Francisco

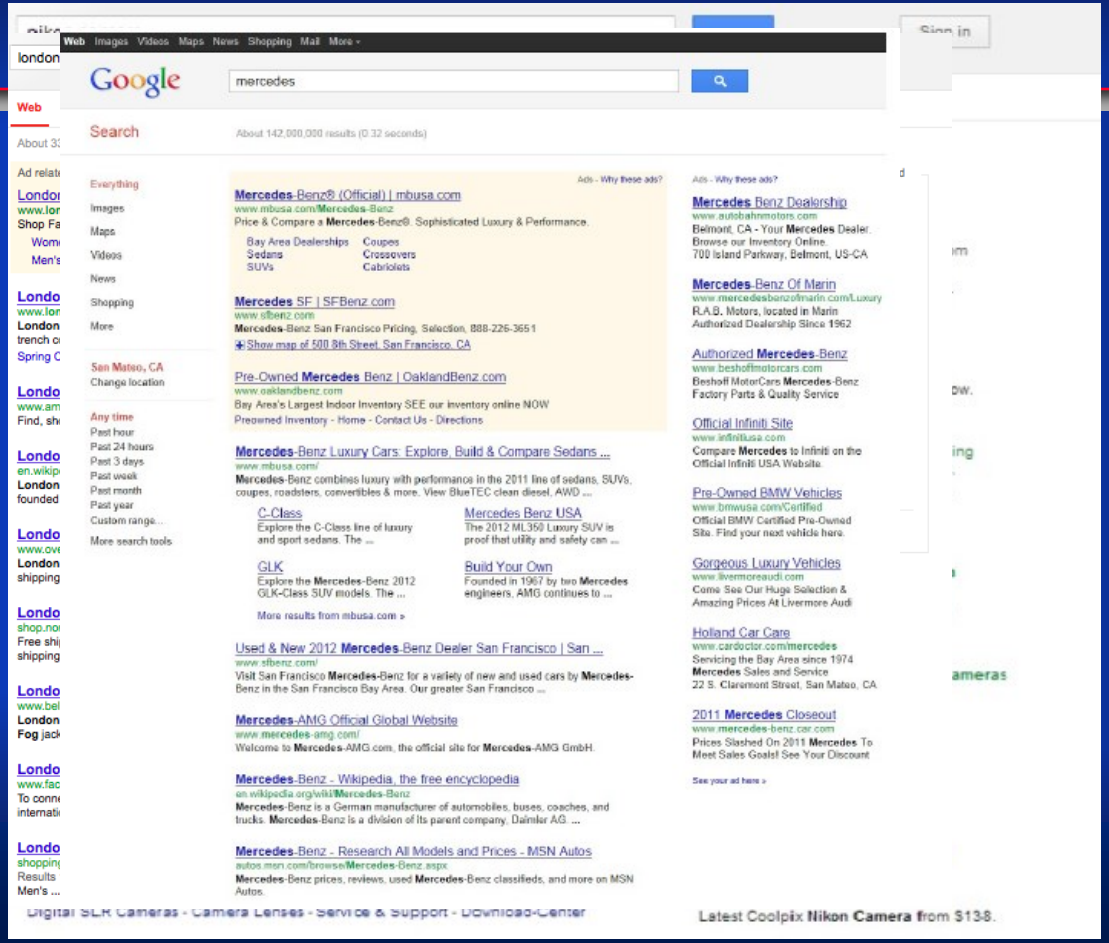
Our Studies

- 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.

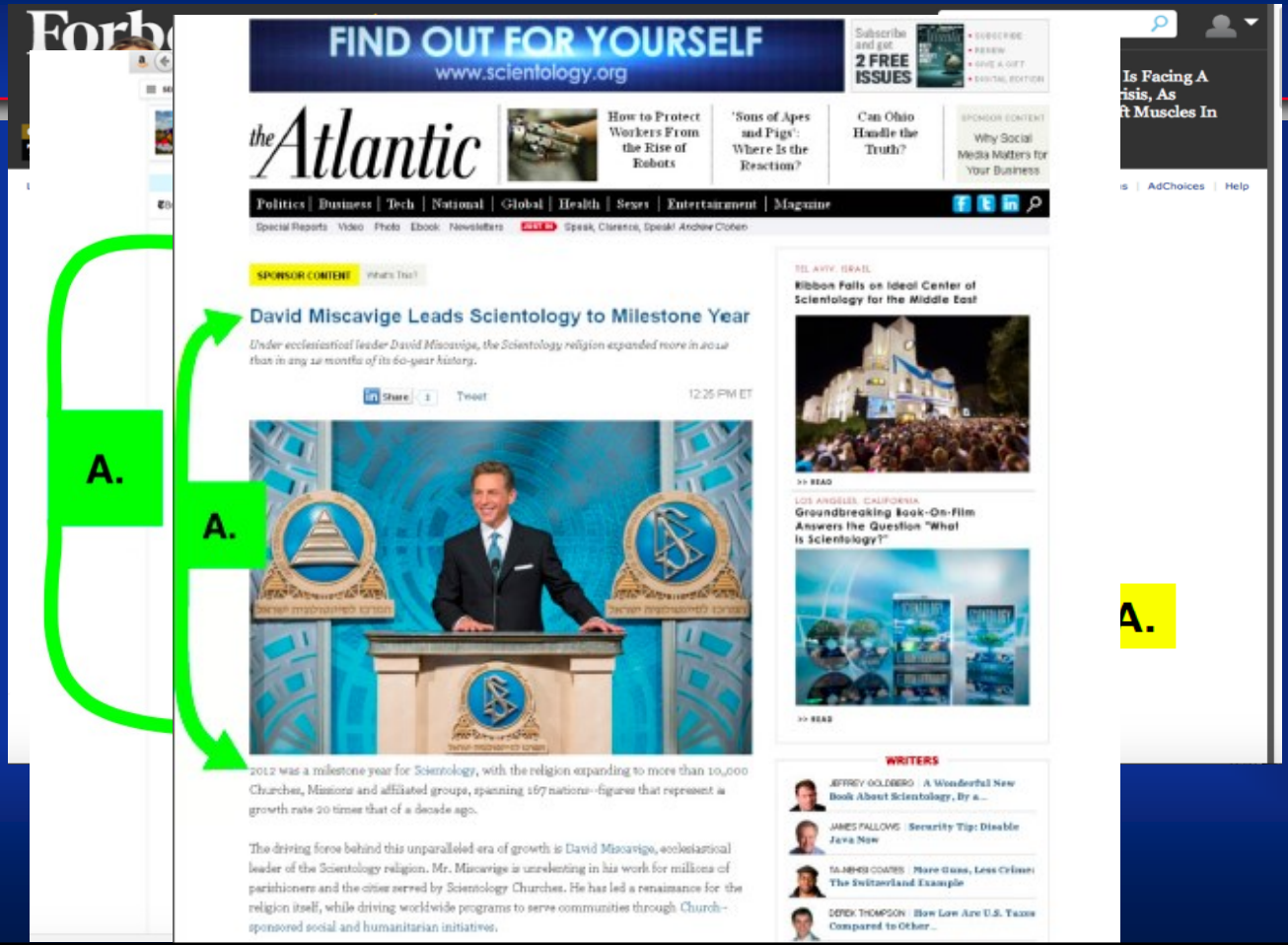
Basic Methodology

- 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.

SRP Examples



Native Ads Examples



What do Labels Signify to Consumers?

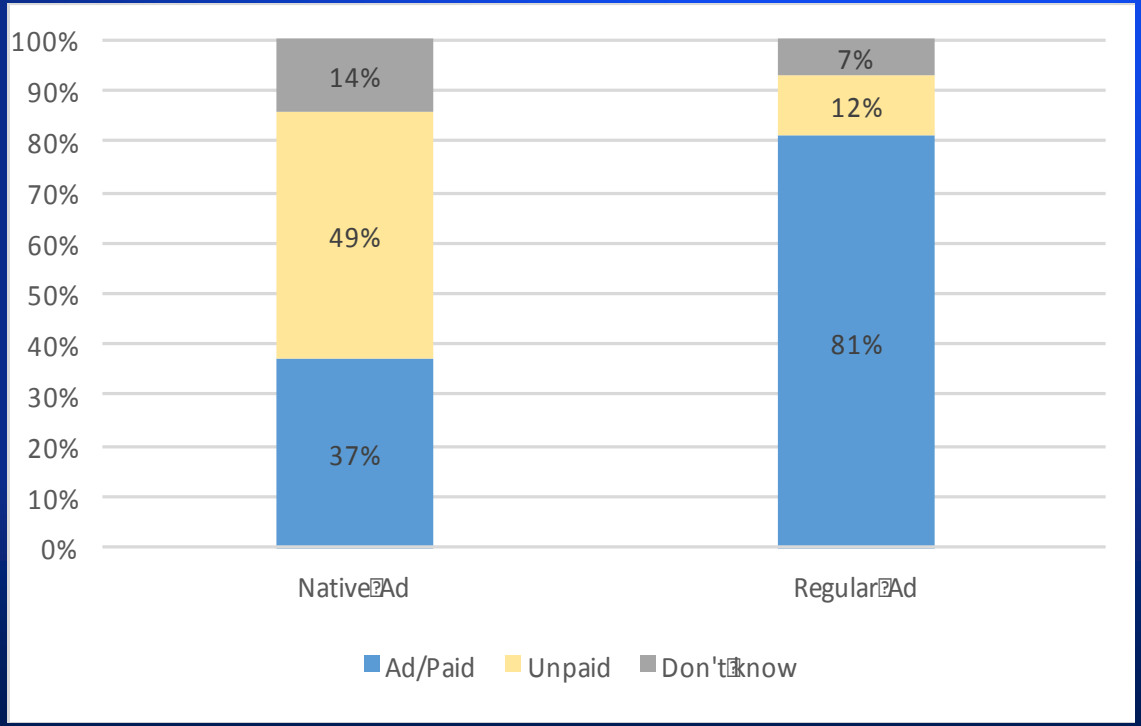
Label	Ad/paid content	Unpaid content	Don't know
Paid Ad	89%	4%	6%
Paid Content	87%	5%	8%
This content was paid for by	86%	6%	8%
Paid Post	83%	7%	10%
Ad	81%	7%	12%
Sponsored	79%	11%	10%
Sponsored Content	76%	12%	12%
Sponsored Post	76%	13%	11%
Brand Voice	64%	16%	20%
Brand Publisher	61%	19%	20%
Presented By	60%	20%	20%
Partnered Content	57%	19%	24%
Partner	57%	17%	26%
Written By	23%	52%	25%

"Which of these labels have you seen in the past month?" (Jan. 2012)

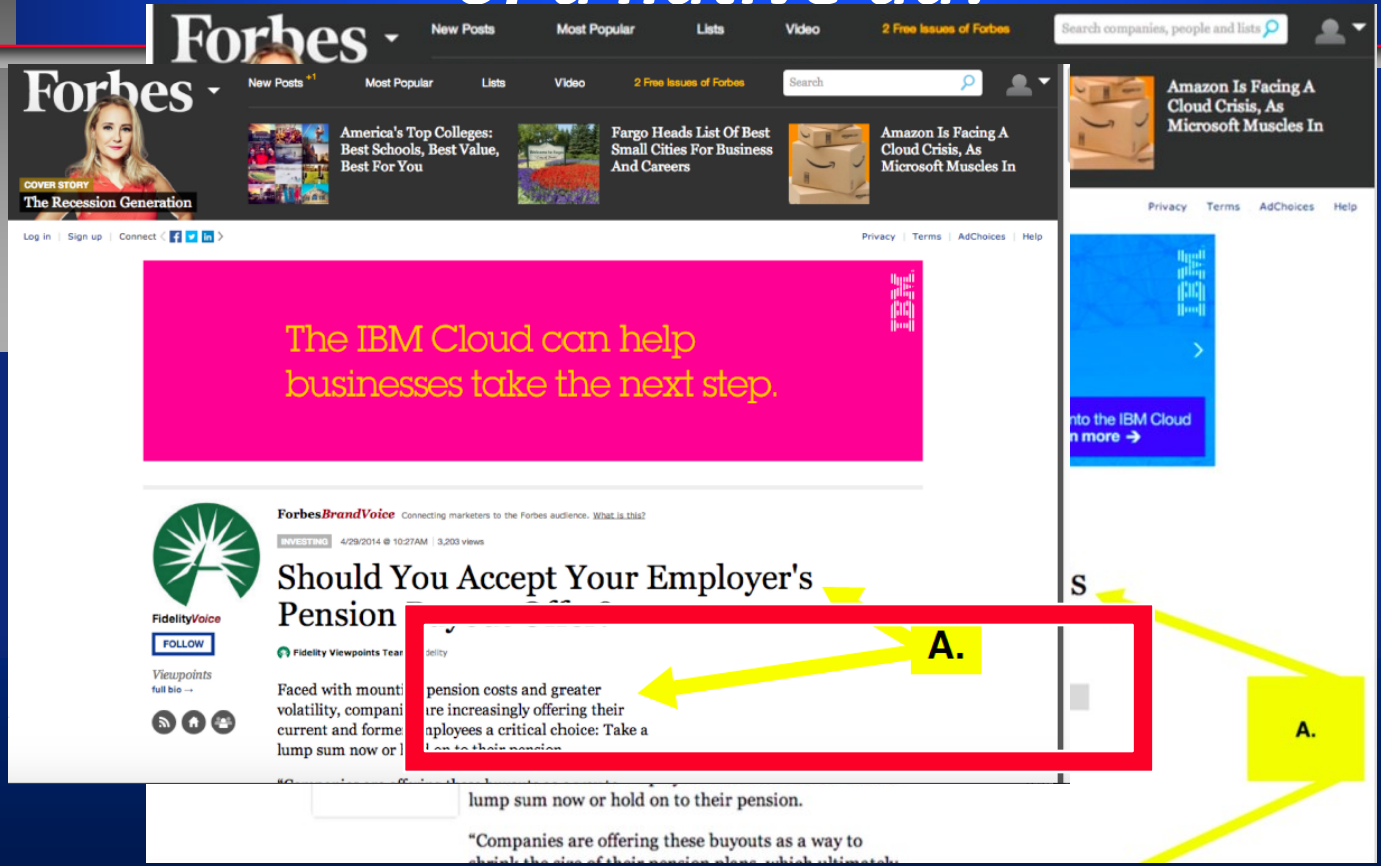
		Comments
Sponsored Links	55%	Last used by Google in 2010
Sponsored Results	**49%**	**Yahoo only**
Ads	**46%**	**Google**
Commercial Ads	33%	Never used
Not noticed any labels	22%	N/A

Exploit variation and changes in labeling.
Use controls!

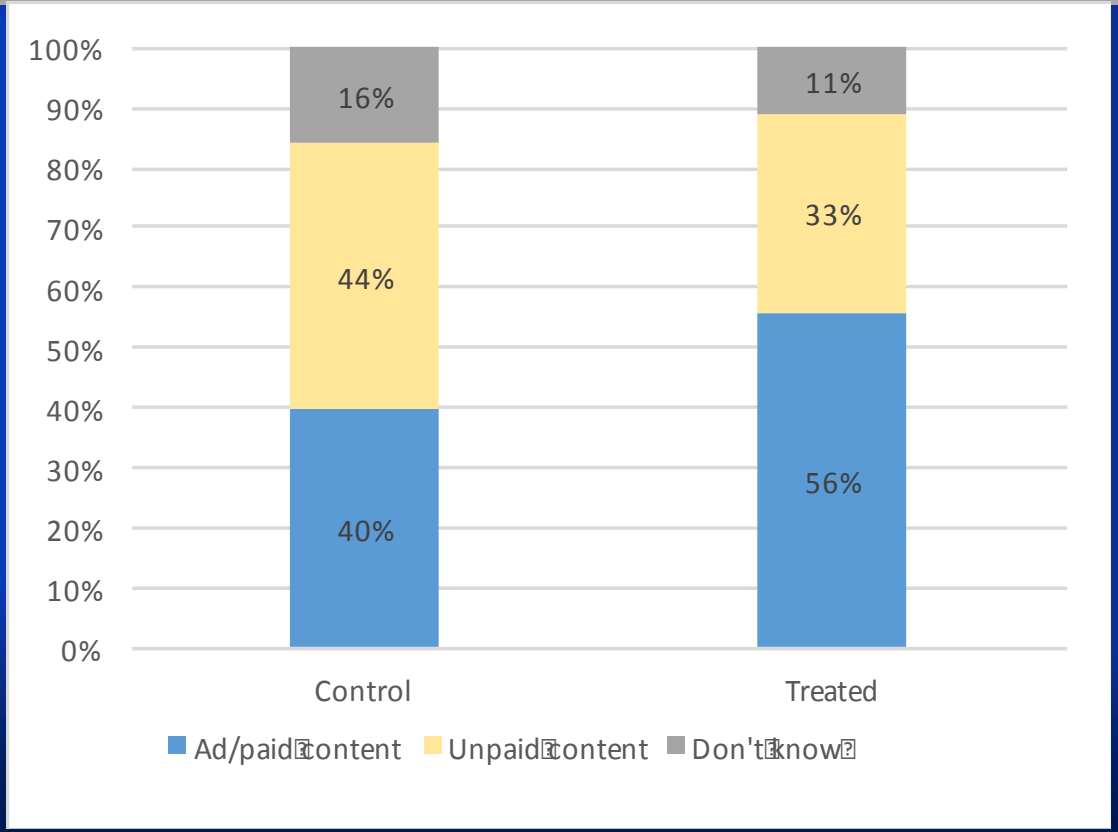
Respondents Have Difficulty Determining Whether Native Ads are Ads



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)
- Search Bias and the Limits of Antitrust: An Empirical Perspective on Remedies, 55 JURIMETRICS 339-380 (2015)
- Going Native: Can Consumers Recognize Native Advertising? (forthcoming, 2017)
- Search Bias and the Limits of Antitrust Revisited: Dominance and Its Discontents (work in progress)

Rebecca Balebako

Information Scientist
RAND Corporation

The Impact of Timing on the Salience of Smartphone App Privacy Notices

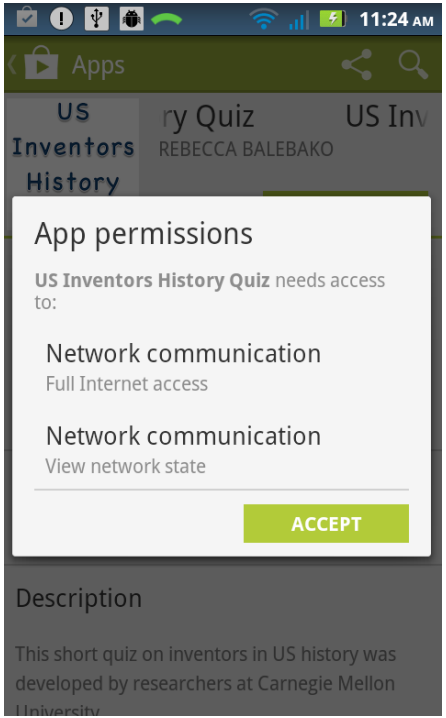
Rebecca Balebako (RAND Corporation),
Florian Schaub (Carnegie Mellon University)
Idris Adjerid (Notre Dame University),
Alessandro Acquisti (Carnegie Mellon University)
Lorrie Faith Cranor (Carnegie Mellon University)

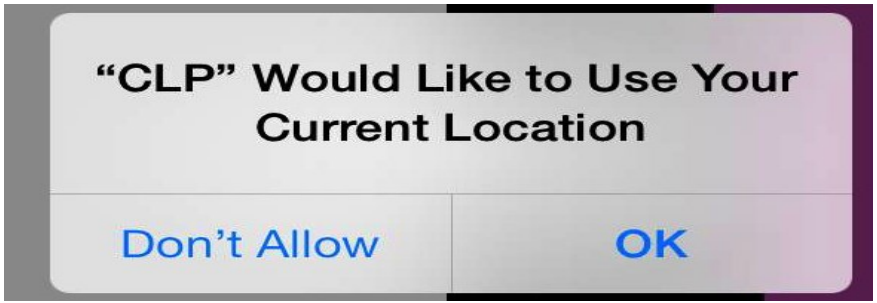
5th Annual ACM CCS Workshop on Security and Privacy in Smartphones and Mobile Devices (SPSM 2015)

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

The privacy notice

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

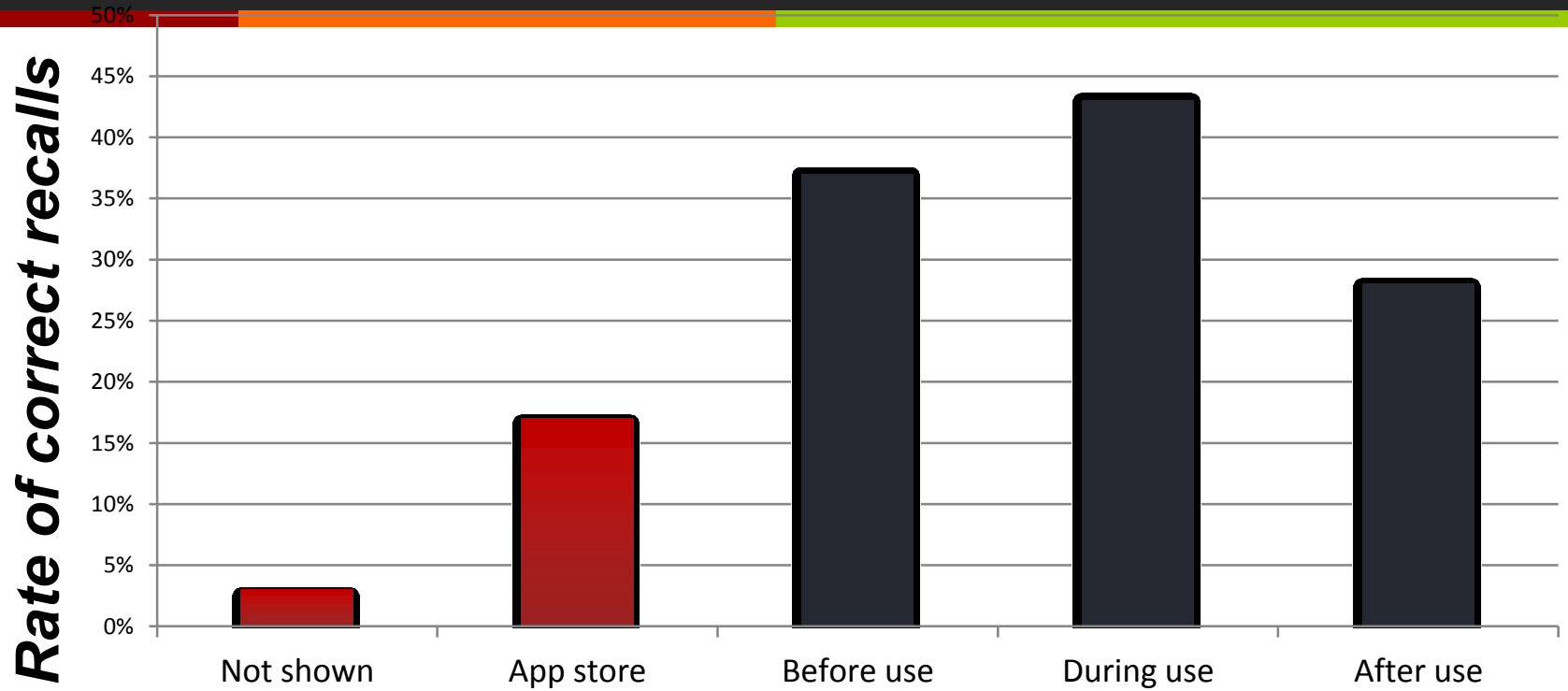
Field study participant recruitment

- 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)

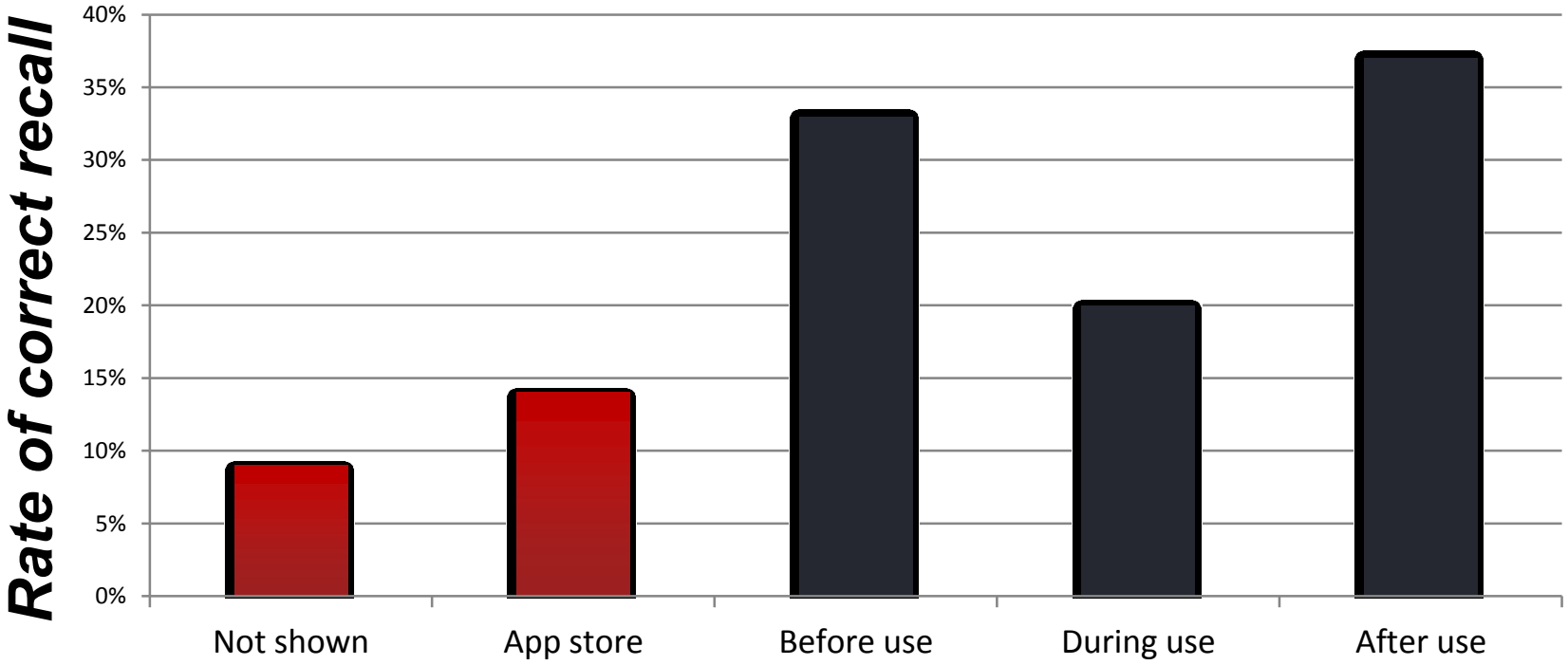
All participants completed following steps

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 Recall for Notice – Field Study



Thank you

The Impact of Timing on the Salience of Smartphone App Privacy Notices

Rebecca Balebako: balebako@rand.org

Your attention please!

- **Moderator:**
  Michael Ostheimer
  Division of Advertising Practices, FTC
- Nathaniel J. Evans
  Department of Advertising & Public Relations
  University of Georgia
- Mariea Grubbs Hoy
  School of Advertising & Public Relations
  University of Tennessee
- David Hyman
  Epstein Program in Health Law & Policy
  University of Illinois
- Rebecca Balebako
  Information Scientist
  RAND Corporation


Putting Disclosures to the Test
an FTC Workshop
September 15, 2016

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

Daniel Goldstein

Principal Researcher
Microsoft Research Lab – New York City

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

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

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

Bleich, S. N., Herring, B. J., Flagg, D. D., & Gary-Webb, T. L. (2012).

Possibilities for disclosures

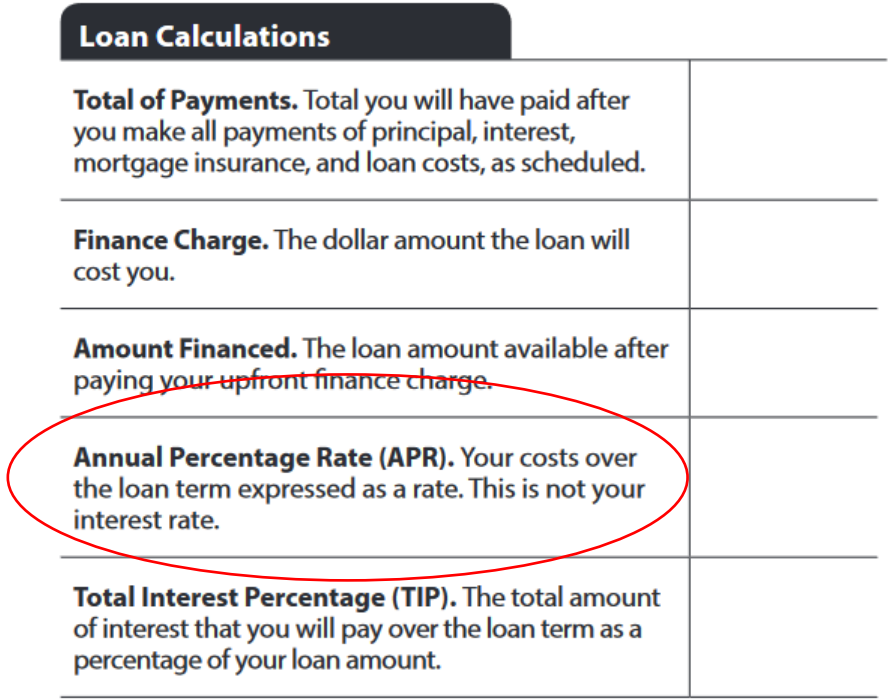
Front-end load of 5.25%

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

APR

- Open question

Empirical testing needed



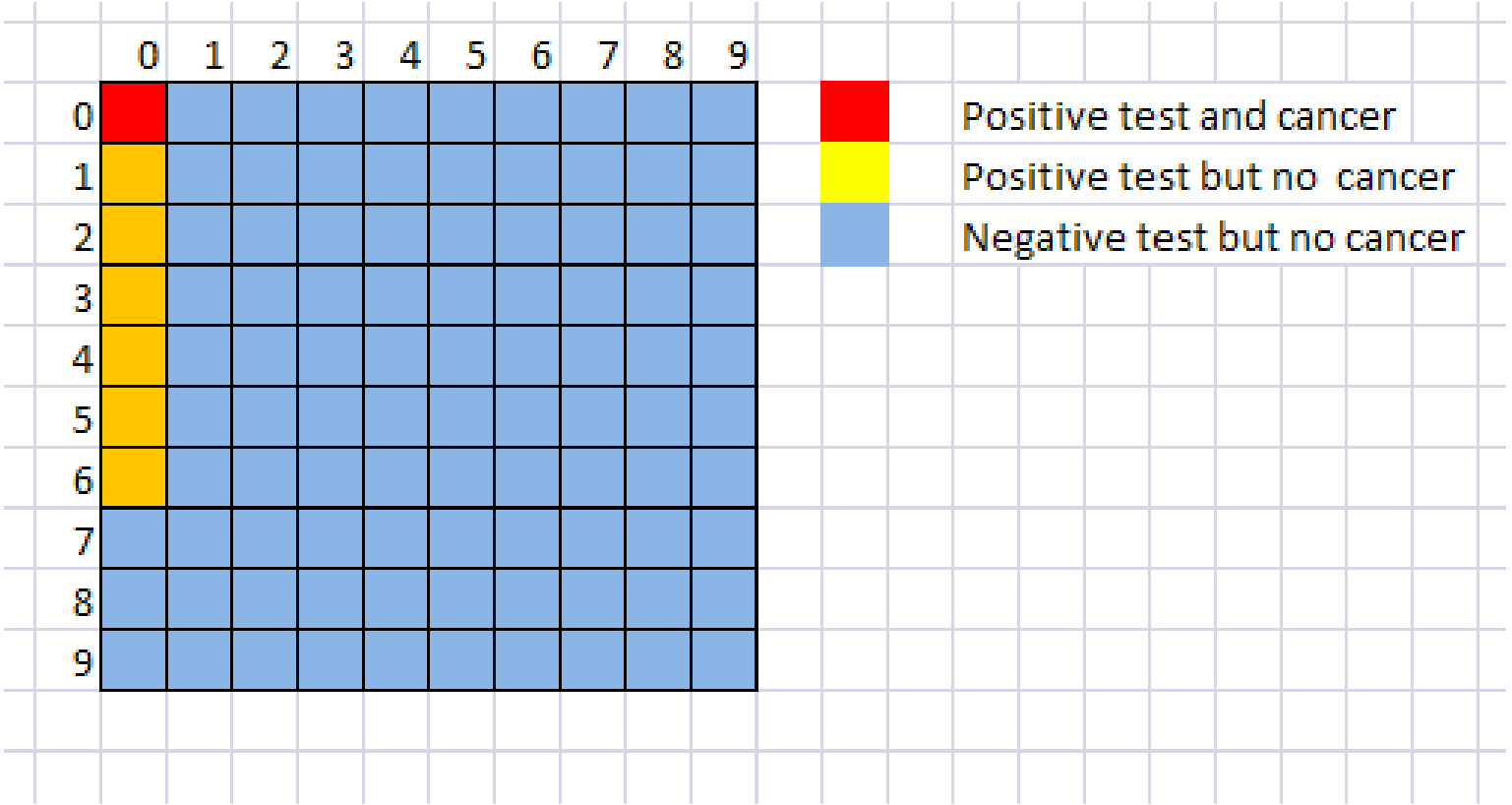
Loan Calculations	
Total of Payments. Total you will have paid after you make all payments of principal, interest, mortgage insurance, and loan costs, as scheduled.	
Finance Charge. The dollar amount the loan will cost you.	
Amount Financed. The loan amount available after paying your upfront finance charge.	
Annual Percentage Rate (APR). Your costs over the loan term expressed as a rate. This is not your interest rate.	
Total Interest Percentage (TIP). The total amount of interest that you will pay over the loan term as a percentage of your loan amount.	

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 & Gigerenezer, 1998).
  - Lead to more accurate statistics in elicitation tasks in which the ground truth is known (Goldstein & Rothschild, 2014)

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

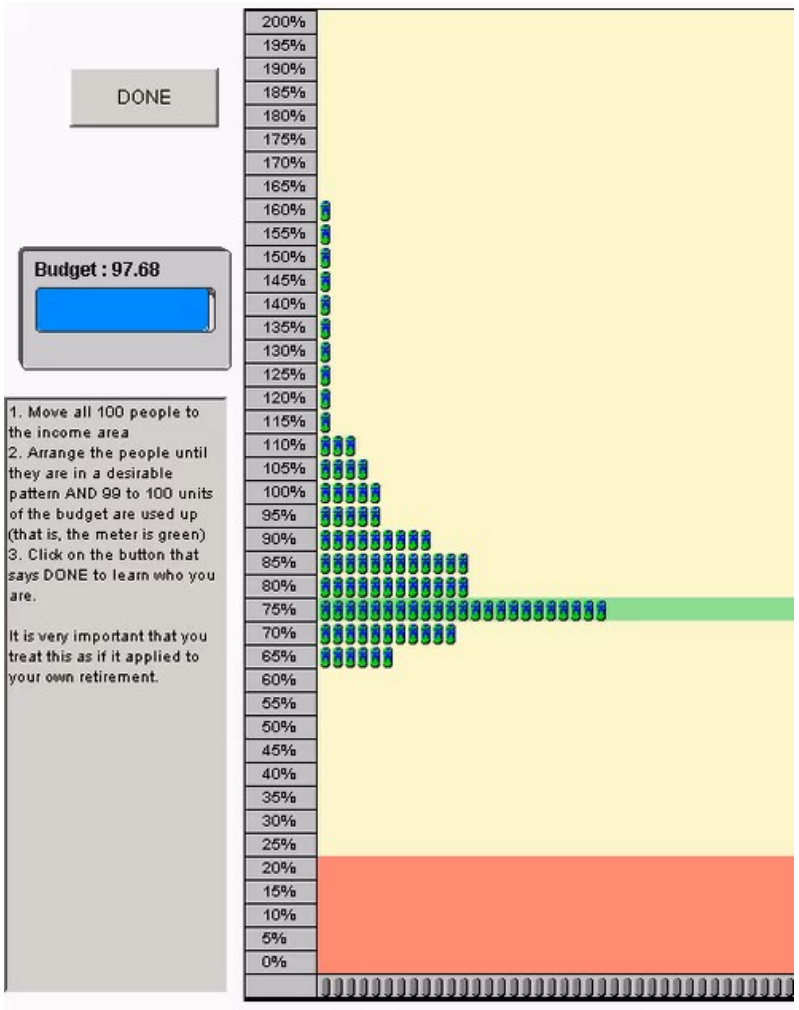
Icon Arrays



Simulations

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

Simulations



Goldstein, Johnson, & Sharpe, 2003

Elizabeth Howlett

Department of Marketing
University of Arkansas, Fayetteville

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

UNIVERSITY OF ARKANSAS

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.

UNIVERSITY OF ARKANSAS

Healthy Eating Research
Robert Wood Johnson Foundation

THE UNIVERSITY of MISSISSIPPI
1848

The product package is a crowded place

UNIVERSITY OF ARKANSAS

Nutrition Facts

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.

UNIVERSITY OF ARKANSAS

Front-of-package Nutrition Labeling Programs

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)

UNIVERSITY OF ARKANSAS

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)

UNIVERSITY OF ARKANSAS

Conceptual Framework

- Comparative vs. Non-Comparative Processing

  Influences attitudes, intentions, and behavior differently

comparative

non-comparative

UNIVERSITY OF ARKANSAS

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

Fop Labeling System Dichotomy

OBJECTIVE

EVALUATIVE

UNIVERSITY OF ARKANSAS

FOP Labeling System

TYPE OF ICON	PROCESSING MODE	
	Non-comparative	Comparative
OBJECTIVE *precise*	More diagnostic, More helpful with comprehension	Less diagnostic, Less helpful with comprehension
EVALUATIVE *interpretative*	Less diagnostic, Less helpful with comprehension	More diagnostic, More helpful with comprehension

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

UNIVERSITY OF ARKANSAS

Perceived healthfulness

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

not at all nutritious highly nutritious

1 2 3 4 5 6 7

very unhealthy very healthy

1 2 3 4 5 6 7

UNIVERSITY OF ARKANSAS

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?

very unlikely very likely

1 2 3 4 5 6 7

not probable very probable

1 2 3 4 5 6 7

definitely would not definitely would

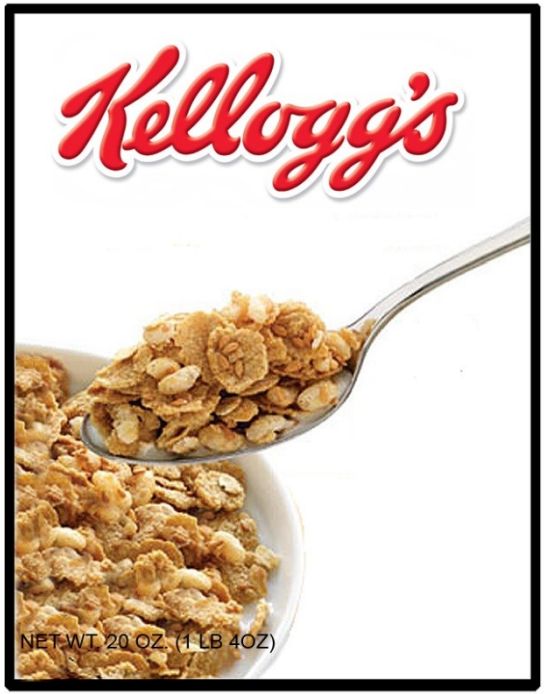
1 2 3 4 5 6 7

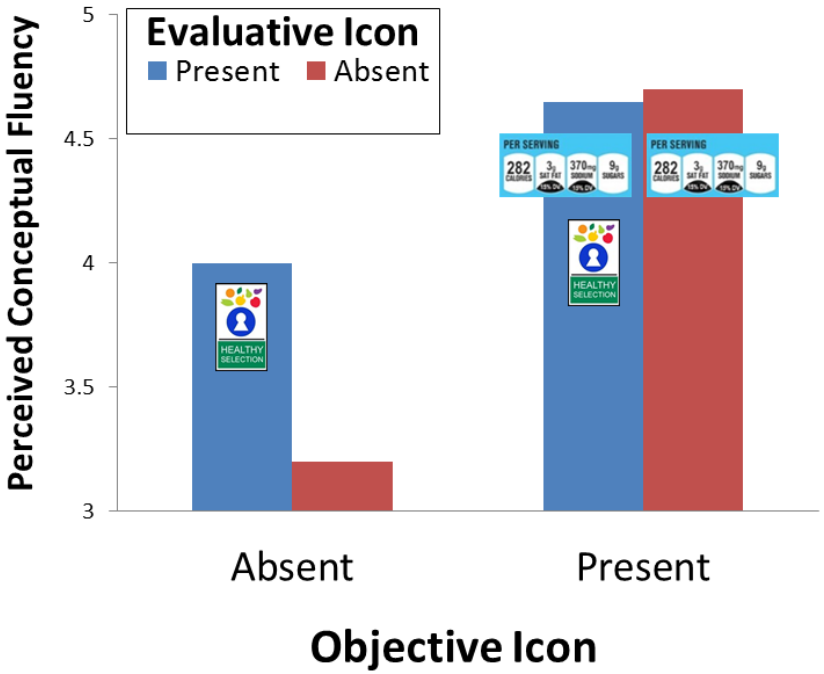
UNIVERSITY OF ARKANSAS

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



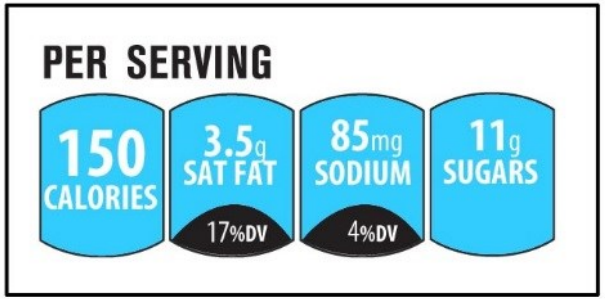


UNIVERSITY OF ARKANSAS

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



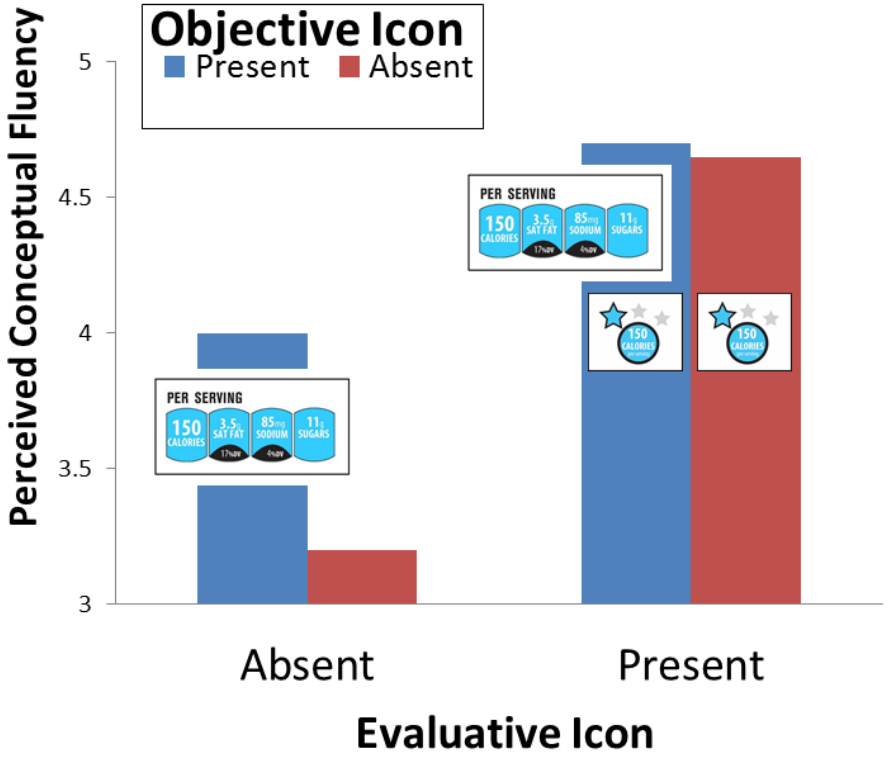
UNIVERSITY OF ARKANSAS

Research Lab

UNIVERSITY OF ARKANSAS

Results: Comparative Processing

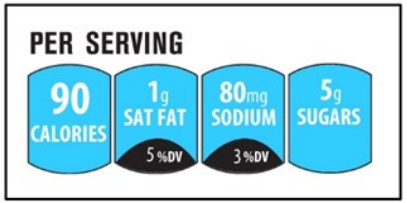
Conceptual fluency

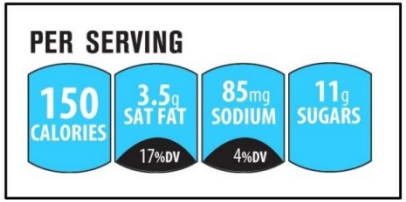


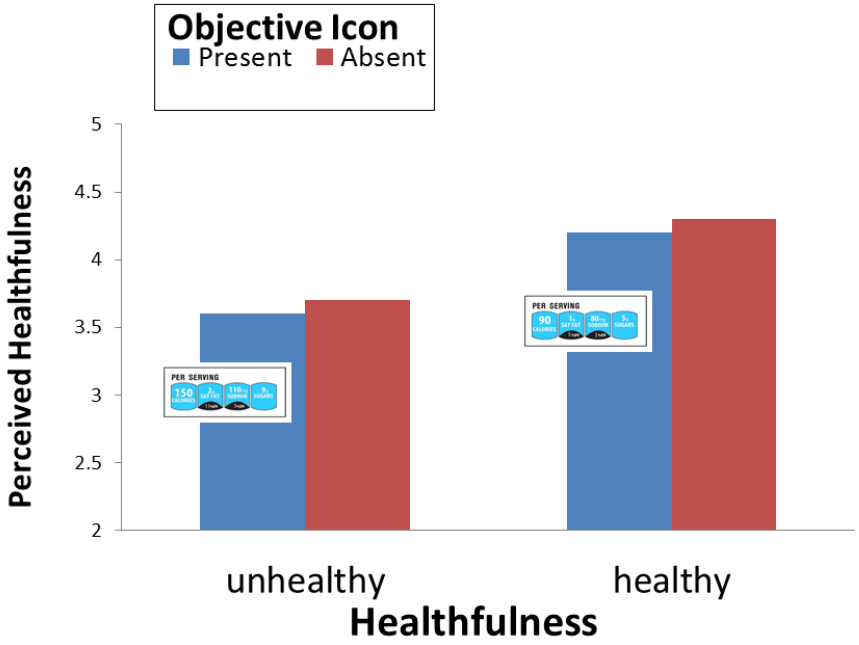
UNIVERSITY OF ARKANSAS

Results: Comparative Processing Objective Icon

Perceived healthfulness



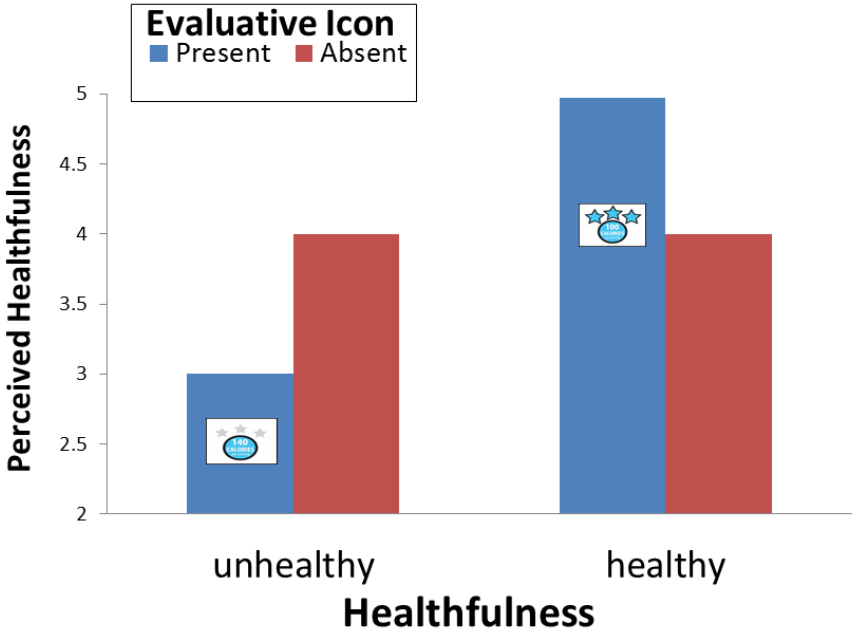




UNIVERSITY OF ARKANSAS

Results: Comparative Processing Evaluative Icon

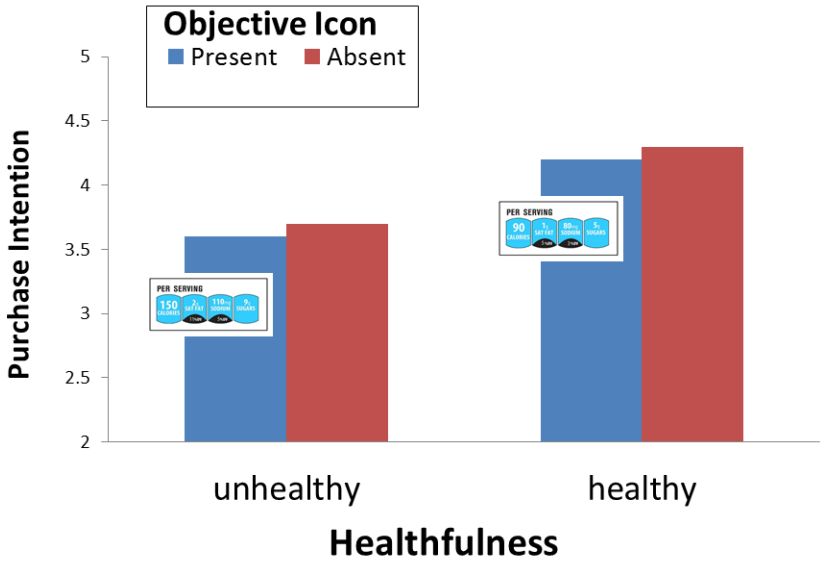
Perceived healthfulness

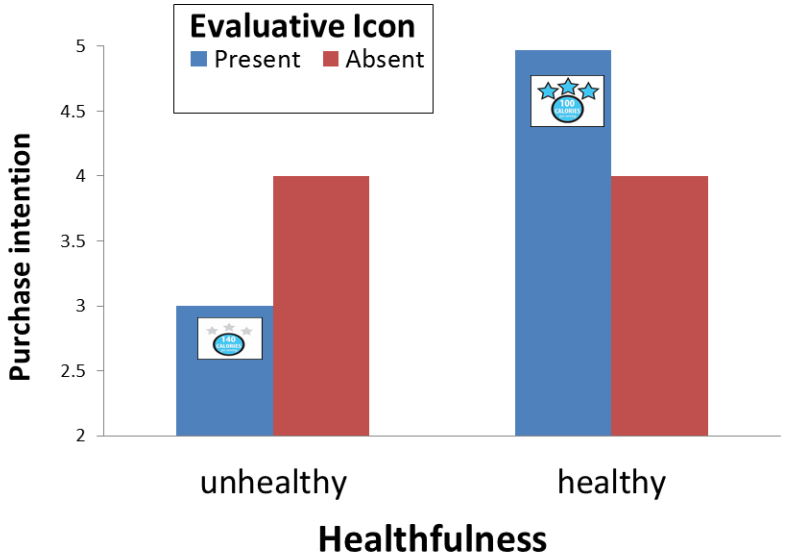


UNIVERSITY OF ARKANSAS

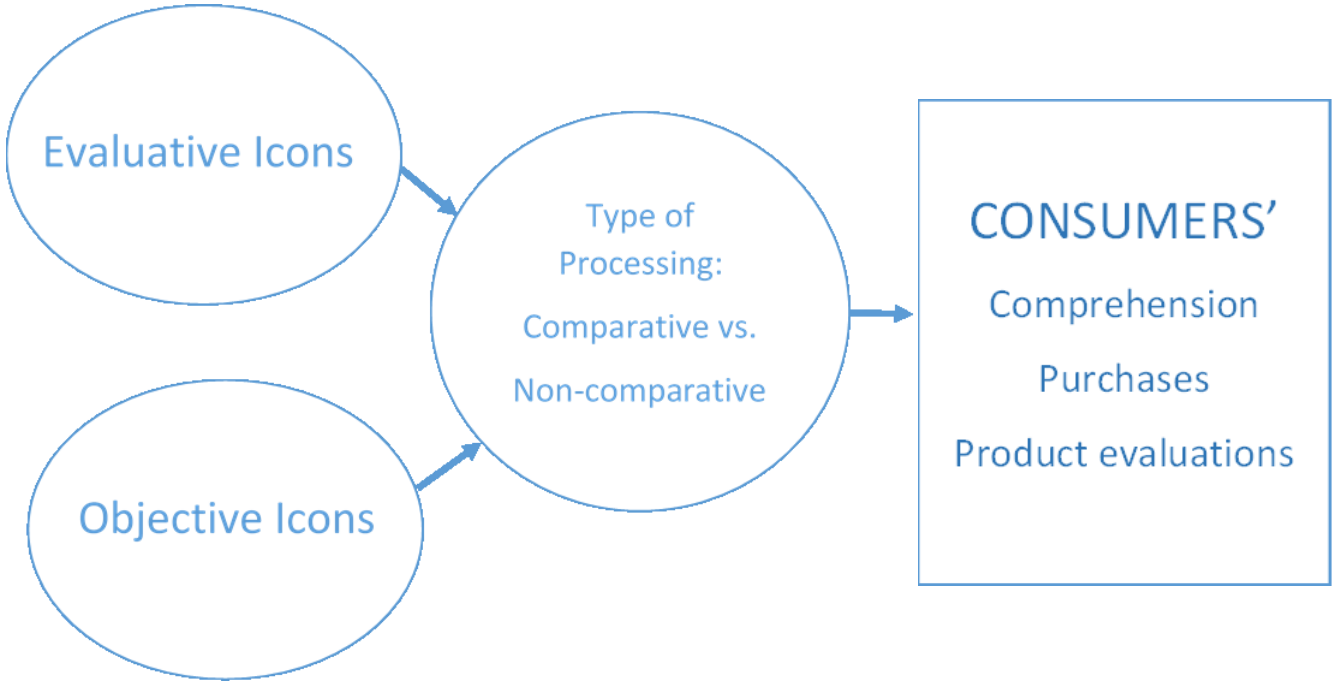
Results: Comparative Processing

Purchase intention





Conceptual Model



UNIVERSITY OF ARKANSAS

Conclusions

- The type of processing mode used by consumers influences the effectiveness of information disclosures.

VS.

UNIVERSITY OF ARKANSAS

Thank you for your attention and interest.

UNIVERSITY OF ARKANSAS

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

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 – 3 parts

FICUS BANK
4321 Random Boulevard • Somecity, ST 12340

Save this Loan Estimate to compare with your Closing Disclosure.

Loan Estimate

DATE ISSUED 2/15/2013
APPLICANTS Michael Jones and Mary Stone
123 Anywhere Street
Anytown, ST 12345
PROPERTY 456 Somewhere Avenue
Anytown, ST 12345
SALE PRICE $180,000

LOAN TERM 30 years
PURPOSE Purchase
PRODUCT Fixed Rate
LOAN TYPE ☒ Conventional ☐ FHA ☐ VA ☐ _____
LOAN ID # 123456789
RATE LOCK ☐ NO ☒ YES, until 4/16/2013 at 5:00 p.m. EDT
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		**Can this amount increase after closing?**
Loan Amount	$162,000	**NO**
Interest Rate	3.875%	**NO**
Monthly Principal & Interest *See Projected Payments below for your Estimated Total Monthly Payment*	$761.78	**NO**
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**

Projected Payments

Payment Calculation	**Years 1-7**	**Years 8-30**
Principal & Interest	$761.78	$761.78
Mortgage Insurance	+ 82	+ —
Estimated Escrow *Amount can increase over time*	+ 206	+ 206
Estimated Total Monthly Payment	$1,050	$968

		This estimate includes	**In escrow?**
Estimated Taxes, Insurance & Assessments *Amount can increase over time*	$206 a month	☒ Property Taxes	**YES**
		☒ Homeowner's Insurance	**YES**
		☐ Other:	

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

Costs at Closing

Estimated Closing Costs	$8,054	Includes $5,672 in Loan Costs + $2,382 in Other Costs – $0 in Lender Credits. *See page 2 for details.*
Estimated Cash to Close	$16,054	Includes Closing Costs. *See Calculating Cash to Close on page 2 for details.*

Visit **www.consumerfinance.gov/mortgage-estimate** for general information and tools.

LOAN ESTIMATE PAGE 1 OF 3 • LOAN ID # 123456789

Part1: Loan terms

FICUS BANK

4321 Random Boulevard • Somecity, ST 12340

Save this Loan Estimate to compare with your Closing Disclosure.

Loan Estimate

DATE ISSUED 2/15/2013
APPLICANTS Michael Jones and Mary Stone
123 Anywhere Street
Anytown, ST 12345
PROPERTY 456 Somewhere Avenue
Anytown, ST 12345
SALE PRICE $180,000

LOAN TERM 30 years
PURPOSE Purchase
PRODUCT Fixed Rate
LOAN TYPE ☒ Conventional ☐ FHA ☐ VA ☐ _____
LOAN ID # 123456789
RATE LOCK ☐ NO ☒ YES, until 4/16/2013 at 5:00 p.m. EDT
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		Can this amount increase after closing?
Loan Amount	$162,000	**NO**
Interest Rate	3.875%	**NO**
Monthly Principal & Interest *See Projected Payments below for your Estimated Total Monthly Payment*	$761.78	**NO**
		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

Projected Payments

Payment Calculation	Years 1-7	Years 8-30
Principal & Interest	$761.78	$761.78
Mortgage Insurance	+ 82	+ —
Estimated Escrow *Amount can increase over time*	+ 206	+ 206
Estimated Total Monthly Payment	$1,050	$968

		This estimate includes	In escrow?
Estimated Taxes, Insurance & Assessments *Amount can increase over time*	$206 a month	☒ Property Taxes ☒ Homeowner's Insurance ☐ Other:	**YES** **YES**

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

Part 3: Affordability over short term

Costs at Closing		
Estimated Closing Costs	$8,054	Includes $5,672 in Loan Costs + $2,382 in Other Costs – $0 in Lender Credits. *See page 2 for details.*
Estimated Cash to Close	$16,054	Includes Closing Costs. *See Calculating Cash to Close on page 2 for details.*

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*

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

GINGKO BANK

4321 Random Boulevard • Somecity, ST 12340

Save this Loan Estimate to compare with your Closing Disclosure.

Loan Estimate

DATE ISSUED 2/15/2013
APPLICANTS John A. and Mary B.
123 Anywhere Street
Anytown, ST 12345
PROPERTY 456 Somewhere Avenue
Anytown, ST 12345
SALE PRICE $240,000

LOAN TERM 30 years
PURPOSE Purchase
PRODUCT 5 Year Interest Only, 5/3 Adjustable Rate
LOAN TYPE ☒ Conventional ☐ FHA ☐ VA ☐ _____
LOAN ID # 123456789
RATE LOCK ☐ NO ☒ YES, until 4/16/2013 at 5:00 p.m. EDT
Before closing, your interest rate, points, and lender credits can change unless you lock the interest rate. All other estimated closing costs expire on ***3/22/2013*** *at 5:00 p.m. EDT*

Loan Terms

		Can this amount increase after closing?
Loan Amount	$211,000	NO
Interest Rate	4%	YES • Adjusts **every 3 years** starting in year 6 • Can go **as high as 12%** in year 15 • See **AIR Table on page 2** for details
Monthly Principal & Interest *See Projected Payments below for your Estimated Total Monthly Payment*	$703.33	YES • Adjusts **every 3 years** starting in year 6 • Can go **as high as $2,068** in year 15 • Includes **only interest** and **no principal** until year 6 • See **AIR Table on page 2** for details
		Does the loan have these features?
Prepayment Penalty		NO
Balloon Payment		NO

Projected Payments

Payment Calculation	Years 1-5	Years 6-8	Years 9-11	Years 12-30
Principal & Interest	$703.33 *only interest*	$1,028 min $1,359 max	$1,028 min $1,604 max	$1,028 min $2,068 max
Mortgage Insurance	+ 109	+ 109	+ 109	+ —
Estimated Escrow *Amount can increase over time*	+ 0	+ 0	+ 0	+ 0
Estimated Total Monthly Payment	$812	$1,137–$1,468	$1,137–$1,713	$1,028–$2,068

		This estimate includes	In escrow?
Estimated Taxes, Insurance & Assessments *Amount can increase over time*	$533 a month	☒ Property Taxes ☒ Homeowner's Insurance ☐ Other:	NO NO

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

Costs at Closing

Estimated Closing Costs	$8,791	Includes $5,851 in Loan Costs + $2,940 in Other Costs – $0 in Lender Credits. *See page 2 for details.*
Estimated Cash to Close	$27,791	Includes Closing Costs. *See Calculating Cash to Close on page 2 for details.* ☒ From ☐ To Borrower

HORNBEAM BANK

4321 Random Boulevard • Somecity, ST 12340

Save this Loan Estimate to compare with your Closing Disclosure.

Loan Estimate

DATE ISSUED 2/15/2013
APPLICANTS John A. and Mary B.
123 Anywhere Street
Anytown, ST 12345
PROPERTY 456 Somewhere Avenue
Anytown, ST 12345
SALE PRICE $240,000

LOAN TERM 30 years
PURPOSE Purchase
PRODUCT 7 Year Interest Only, 7/1 Adjustable Rate
LOAN TYPE ☒ Conventional ☐ FHA ☐ VA ☐ _____
LOAN ID # 123456789
RATE LOCK ☐ NO ☒ YES, until 4/16/2013 at 5:00 p.m. EDT
Before closing, your interest rate, points, and lender credits can change unless you lock the interest rate. All other estimated closing costs expire on ***3/22/2013*** *at 5:00 p.m. EDT*

Loan Terms

		Can this amount increase after closing?
Loan Amount	$211,000	NO
Interest Rate	4.25%	YES • Adjusts **every year** starting in year 8 • Can go **as high as 8%** in year 11 • See **AIR Table on page 2** for details
Monthly Principal & Interest *See Projected Payments below for your Estimated Total Monthly Payment*	$747.29	YES • Adjusts **every year** starting in year 8 • Can go **as high as $1,651** in year 11 • Includes **only interest** and **no principal** until year 8 • See **AP Table on page 2** for details
		Does the loan have these features?
Prepayment Penalty		NO
Balloon Payment		NO

Projected Payments

Payment Calculation	Years 1-7	Year 8	Year 9	Years 10-30
Principal & Interest	$747.29 *only interest*	$1,228 min $1,318 max	$1,228 min $1,439 max	$1,228 min $1,651 max
Mortgage Insurance	+ 109	+ 109	+ 109	+ 109
Estimated Escrow *Amount can increase over time*	+ 446	+ 446	+ 446	+ 446
Estimated Total Monthly Payment	$1,302	$1,783–$1,873	$1,783–$1,994	$1,783–$2,206

		This estimate includes	In escrow?
Estimated Taxes, Insurance & Assessments *Amount can increase over time*	$446 a month	☒ Property Taxes ☒ Homeowner's Insurance ☐ Other:	YES YES

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

Costs at Closing

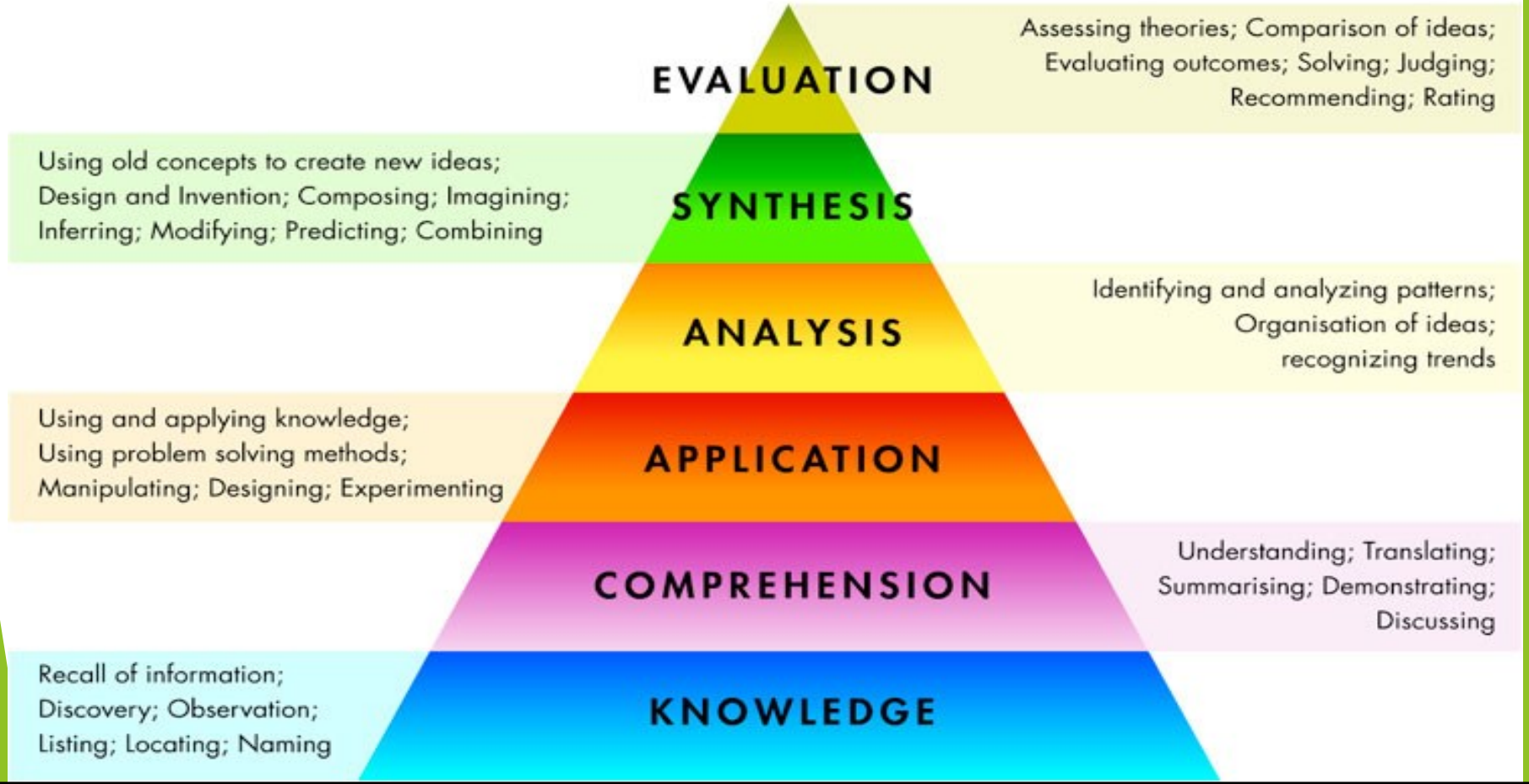
Estimated Closing Costs	$7,296	Includes $4,241 in Loan Costs + $3,055 in Other Costs – $0 in Lender Credits. *See page 2 for details.*
Estimated Cash to Close	$26,296	Includes Closing Costs. *See Calculating Cash to Close on page 2 for details.* ☒ From ☐ To Borrower

Comparison of part 1

Loan Terms		Can this amount increase after closing?
Loan Amount	$211,000	NO
Interest Rate	4%	YES • Adjusts **every 3 years** starting in year 6 • Can go **as high as 12%** in year 15 • See **AIR Table on page 2** for details
Monthly Principal & Interest *See Projected Payments below for your Estimated Total Monthly Payment*	$703.33	YES • Adjusts **every 3 years** starting in year 6 • Can go **as high as $2,068** in year 15 • Includes **only interest** and **no principal** until year 6 • See **AIR Table on page 2** for details
		Does the loan have these features?
Prepayment Penalty		NO
Balloon Payment		NO

Loan Terms		Can this amount increase after closing?
Loan Amount	$211,000	NO
Interest Rate	4.25%	YES • Adjusts **every year** starting in year 8 • Can go **as high as 8%** in year 11 • See **AIR Table on page 2** for details
Monthly Principal & Interest *See Projected Payments below for your Estimated Total Monthly Payment*	$747.29	YES • Adjusts **every year** starting in year 8 • Can go **as high as $1,651** in year 11 • Includes **only interest** and **no principal** until year 8 • See **AP Table on page 2** for details
		Does the loan have these features?
Prepayment Penalty		NO
Balloon Payment		NO

BLOOMS TAXONOMY



Knowledge

- Recall of Information
- Listing
- Naming
- Finding

"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."

Comprehension

- Translating
- Summarizing
- Discussing

"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."

Synthesis & Evaluation

- Imagining
- Inferring
- Assessing
- Evaluating

"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."

Synthesis & Evaluation

- Imagining
- Inferring
- Assessing
- Evaluating

"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."

Synthesis & Evaluation

- Imagining
- Inferring
- Assessing
- Evaluating

"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 *

* statistically significant

- 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 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

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

Joel R. Reidenberg

Center on Law and Information Policy
Fordham University

Ambiguity in Privacy Policies

Joel R. Reidenberg
Stanley D. and Nikki Waxberg Chair in Law
Fordham University School of Law
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

- ***Ambiguity in Privacy Policies and the Impact of Regulation***, **45 JOURNAL OF LEGAL STUDIES -- (forthcoming 2016)**

- ***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

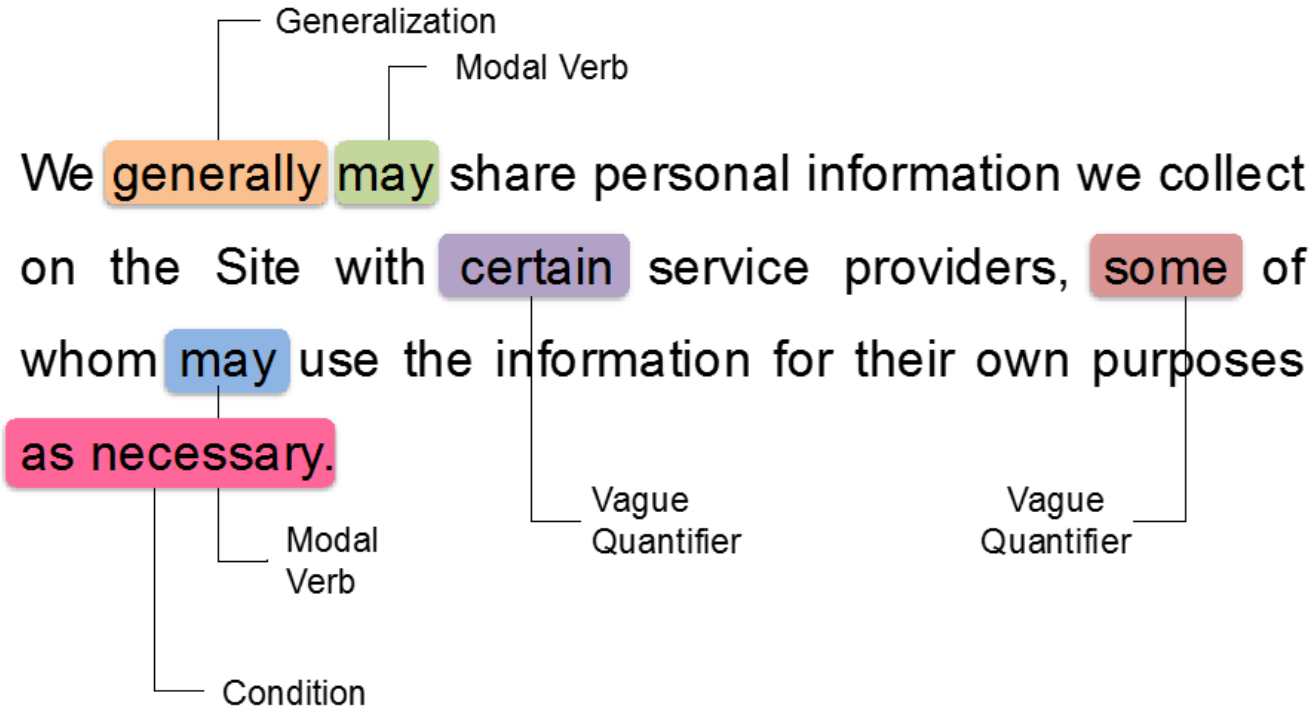
Research Goals

- **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

Categories of Vague Terms	
Category	***Description***
Condition	Action(s) to be performed are dependent on a variable or unclear trigger
Generalization	Action(s)/Information Types are vaguely abstracted with unclear conditions
Modality (including modal verbs)	Vague likelihood of action(s) or ambiguous possibility of action or event
Numeric quantifier	Vague quantifier of action/information type

Annotated Example



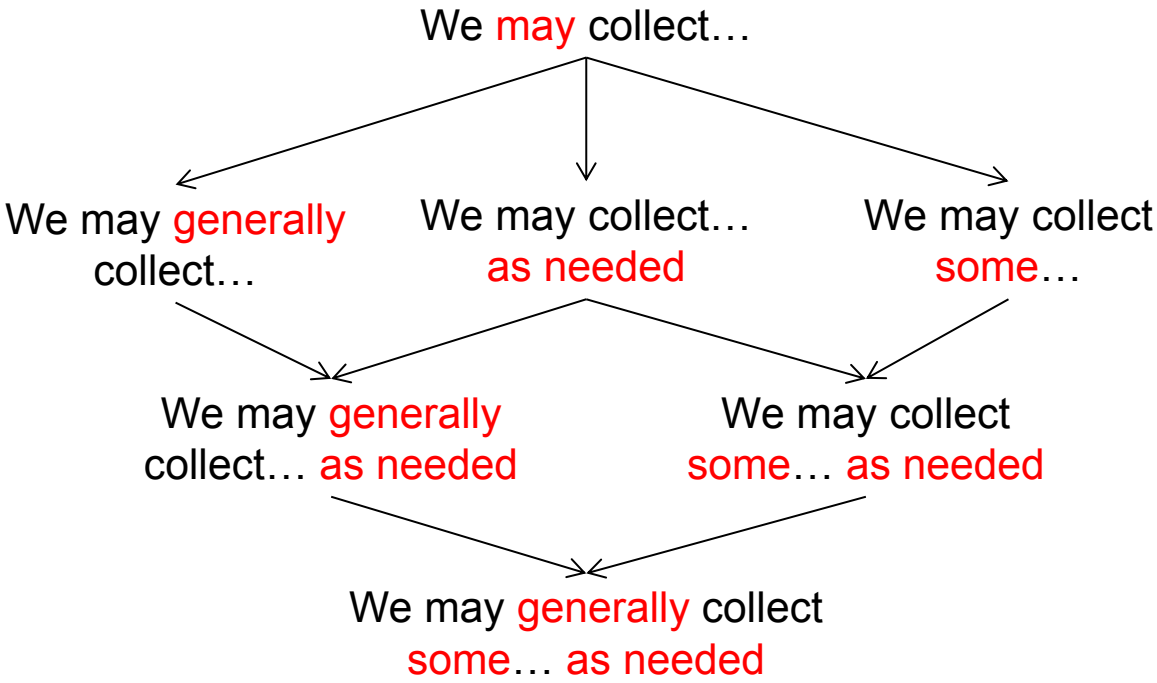
Grounded analysis

Type of Site	Policy	Last policy update
Shopping	Barnes and Noble	05/07/2013
Shopping	Costco	12/31/2013
Shopping	JC Penny	05/22/2015
Shopping	Lowes	04/25/2015
Shopping	Over Stock	01/09/2013
Telecommunications	AT&T	09/16/2013
Telecommunications	Charter Communication	05/04/2009
Telecommunications	Comcast	03/01/2011
Telecommunications	Time Warner	09/2012
Telecommunications	Verizon	10/2014
Employment	Career Builder	05/18/2014
Employment	Glassdoor	09/09/2014
Employment	Indeed	2015
Employment	Monster	03/31/2014
Employment	SimplyHired	4/21/2010

Taxonomy from Grounded Analysis

Category	Examples of Vague Terms
Condition	depending, necessary, appropriate, inappropriate, as needed
Generality	generally, mostly, widely, general, commonly, usually, normally, typically, largely
Modality	may, might, can, could, would, likely, possible, possibly, unsure, often
Numeric Quantifier	anyone, certain, everyone, numerous, some, most, few, much, many, various

Vagueness Lattice



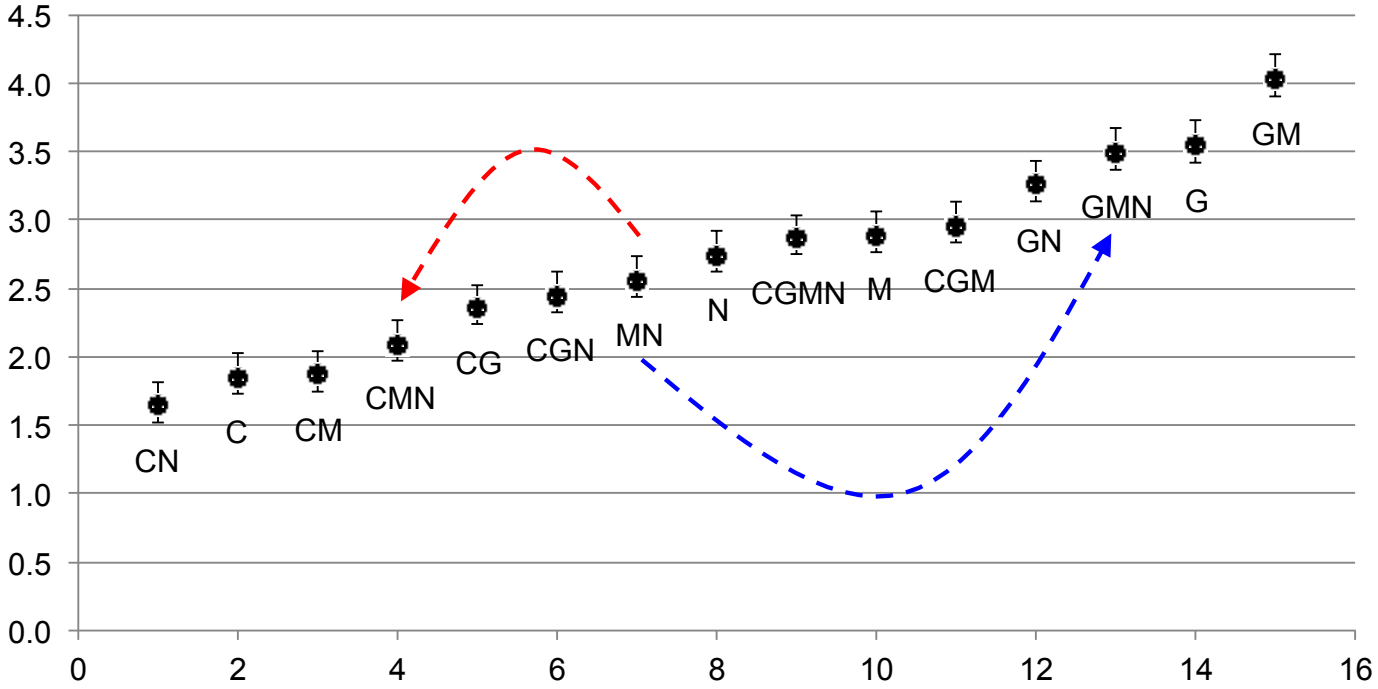
Paired Comparison Study

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.

Herbert A. David, The Method of Paired Comparisons, Oxford, 1988

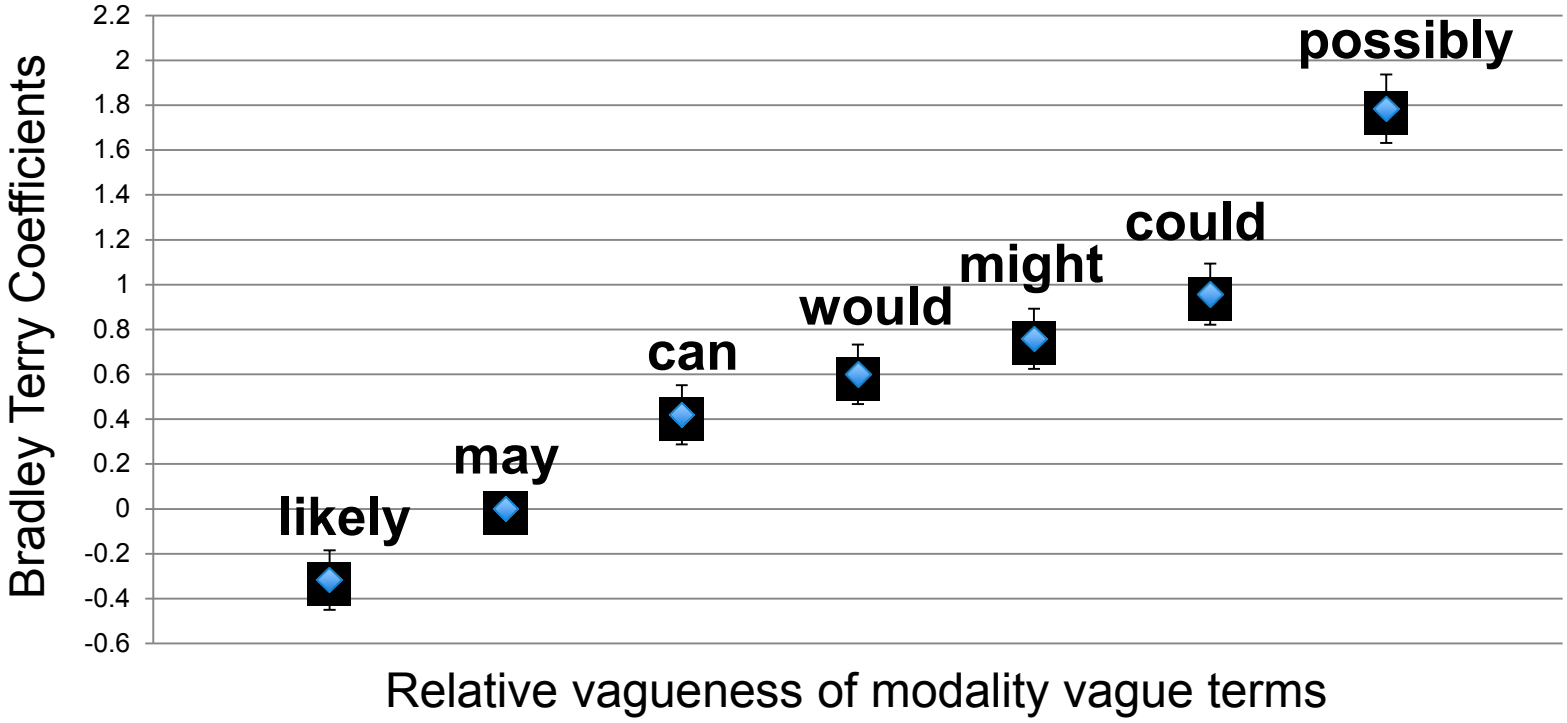
Bradley-Terry Coefficients



- Source: J. Bhatia & T. Breaux, Technical Report: Automated Measurement of Privacy Policy Ambiguity (work-in-progress)

Bradley Terry Model

Modality Category Survey



Scoring Model and Benchmarks

$$V = \frac{\sum (BTC^{A\text{-}I})}{\sum (A\text{-}I)}$$

Regulatory Models

Model Privacy Form Policies

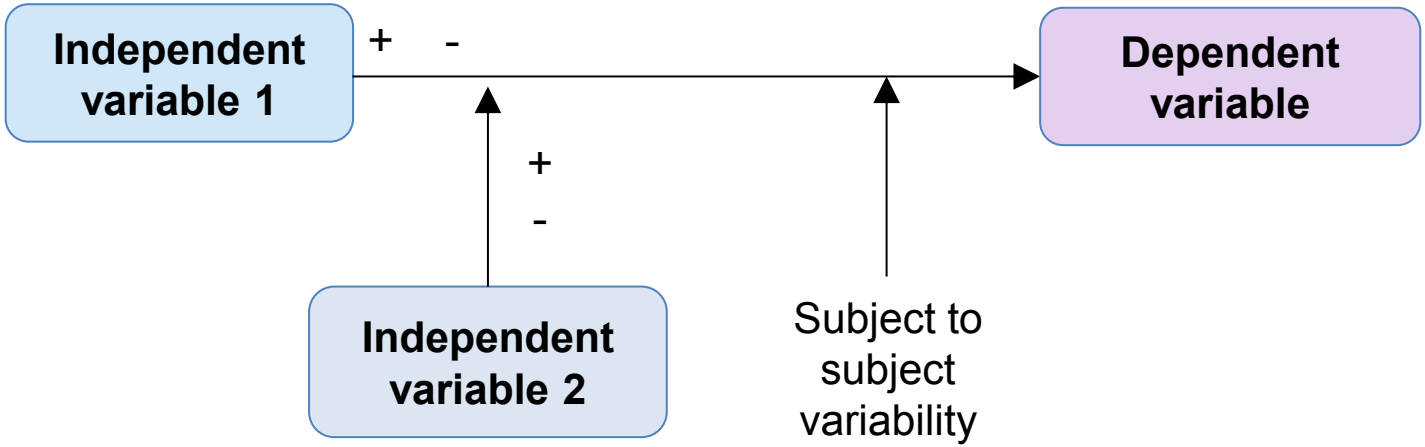
Safe Harbor Certified Policies

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

Factors	Levels
Risk Likelihood ($RL)	only one person in your family
	only one person in your workplace
	only one person in your city
	only one person in your state
	only one person in your country
Vague Statement ($VS)	(C) We share your personal information as necessary.
	(G) We generally share your personal information.
	(M) We may share your personal information.
	(N) We share some of your personal information.

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.

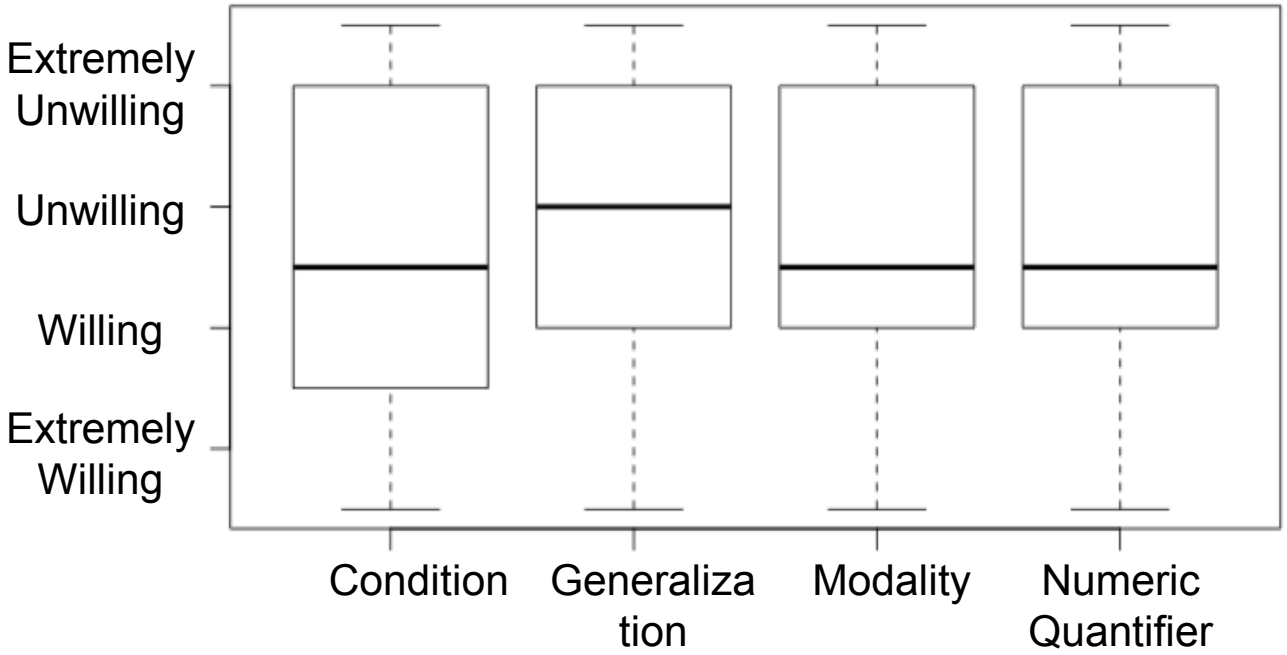
Benefits: convenience, discounts and price comparisons, anonymous and discreet shopping, certainty that the product is available, wider product variety, and informative customer reviews

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.

	Extremely Willing	Very Willing	Willing	Somewhat Willing	Somewhat Unwilling	...
$VagueStatement	○	○	○	○	○	

Vagueness and Risk



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