

Privacy economics, attitudes, and behavior

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September 10, 2013

8-533 / 8-733 / 19-608 / 95-818:
Privacy Policy, Law, and Technology

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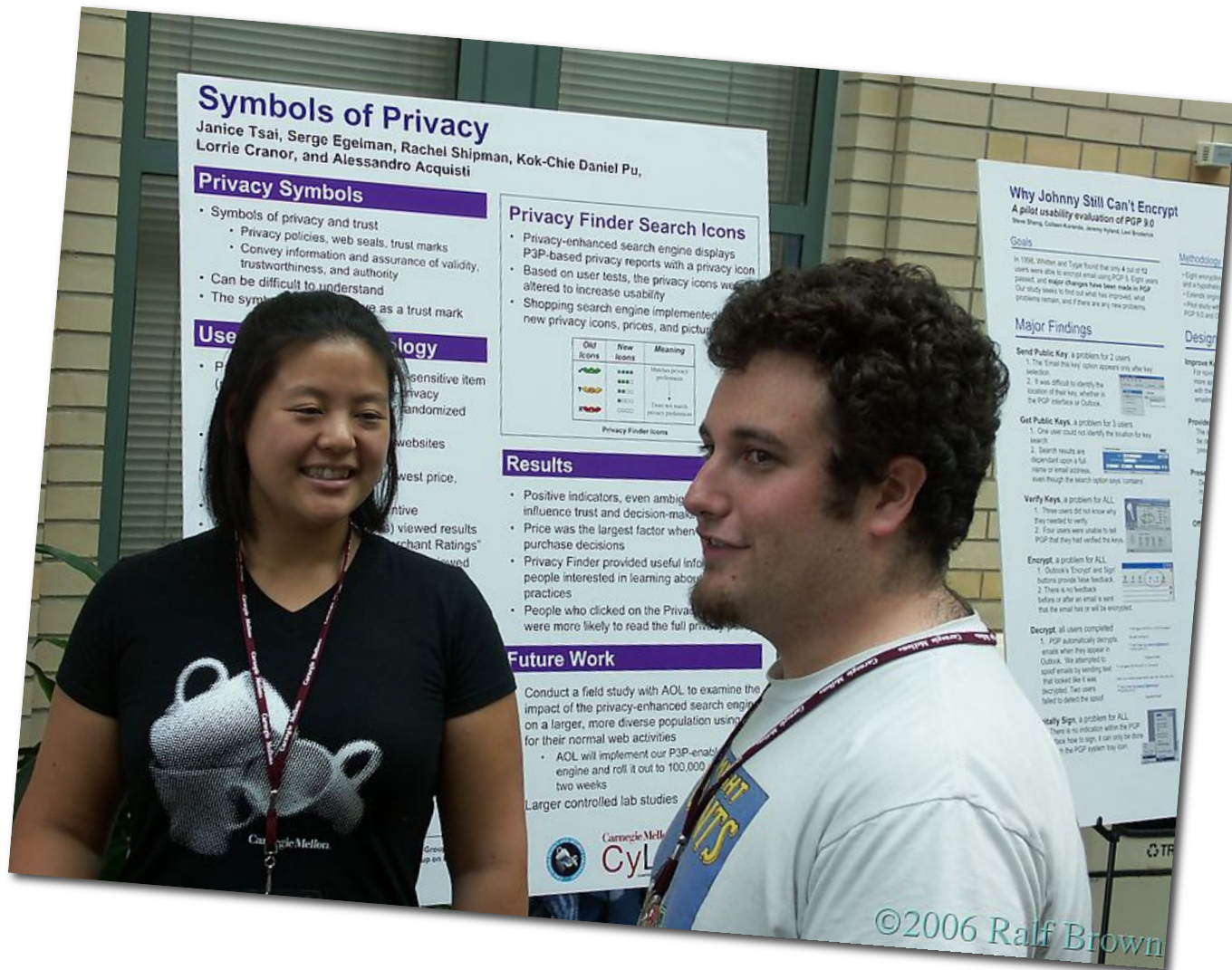
Privacy and the control paradox

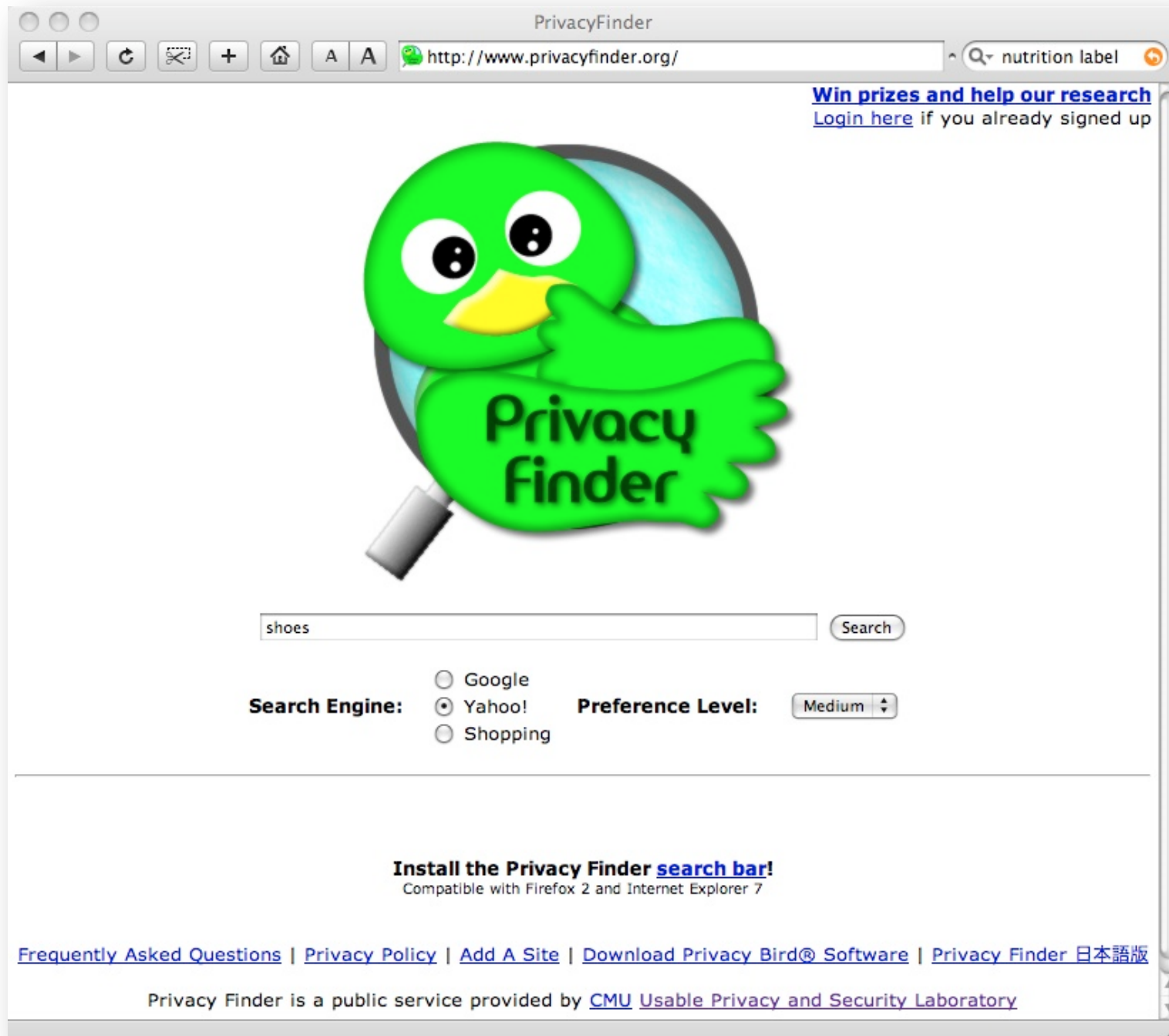
- What is the control paradox?
- Which actually gives you more control?
 - Control over release of personal info
 - Control over access and use of personal info
- What did the study find?
- When does control enhance privacy? When does it reduce privacy?

Effect of privacy info on purchasing

Will the salient display of privacy information cause consumers to take privacy into account when making online purchasing decisions?

- J. Gideon, S. Egelman, L. Cranor, and A. Acquisti. **Power Strips, Prophylactics, and Privacy, Oh My!** SOUPS 2006. http://cups.cs.cmu.edu/soups/2006/proceedings/p133_gideon.pdf
- S. Egelman, J. Tsai, L. Cranor, and A. Acquisti. 2009. Timing is Everything? The Effects of Timing and Placement of Online Privacy Indicators. CHI2009.
- J. Tsai, S. Egelman, L. Cranor, and A. Acquisti. The Effect of Online Privacy Information on Purchasing Behavior: an Experimental Study. Information Systems Research. Published online 2010.





Research questions

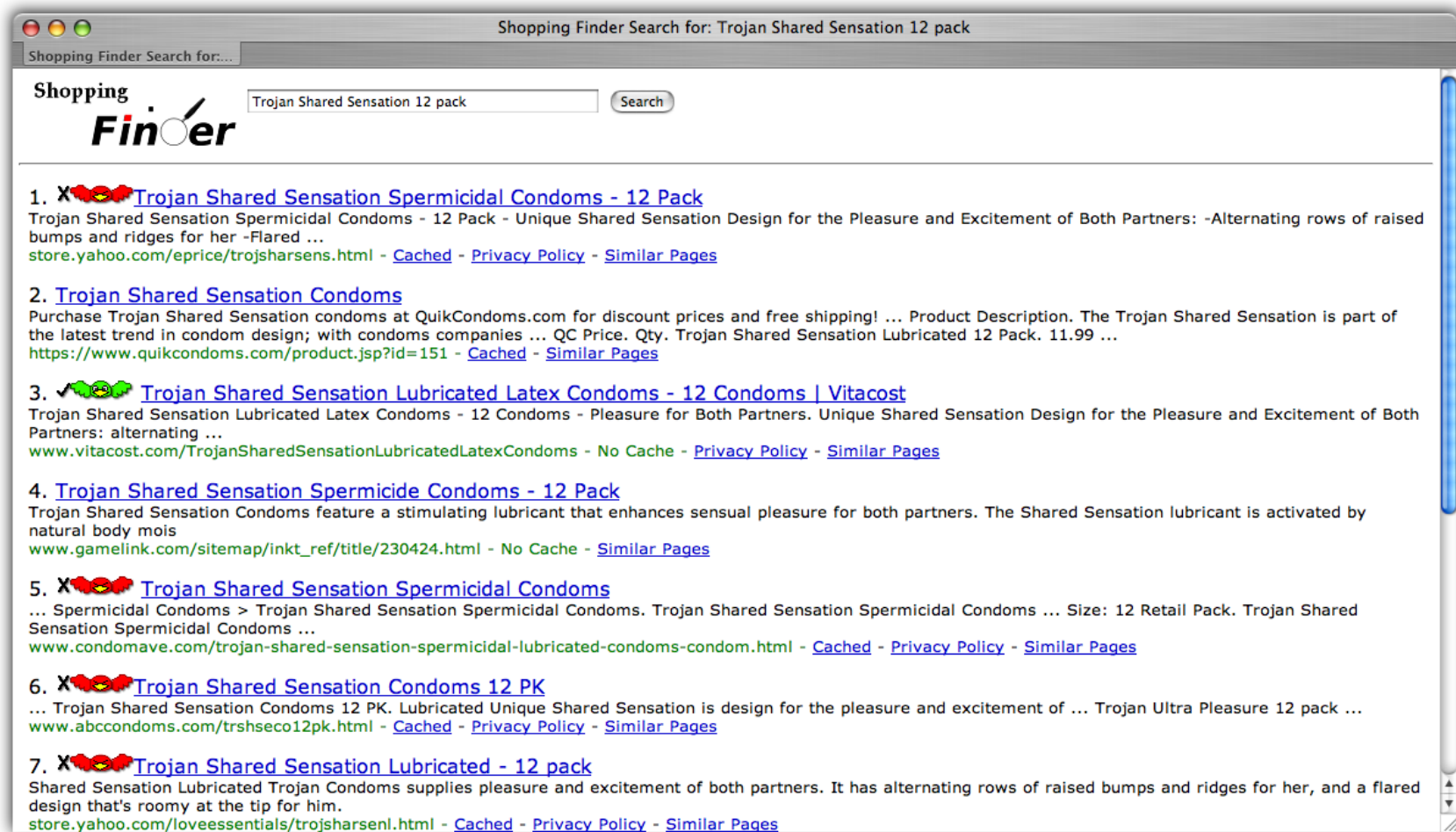
- Do privacy icons influence purchase decisions?
- Will people pay for privacy?

Laboratory study

- 24 students recruited for “online shopping study”
- Paid \$10 plus reimbursement for purchases made with their own credit cards
- Participants used “Shopping Finder” search engine
 - Control condition (no privacy icons)
 - Experimental condition (privacy icons)
- Asked to search for 6 outlet serge protector

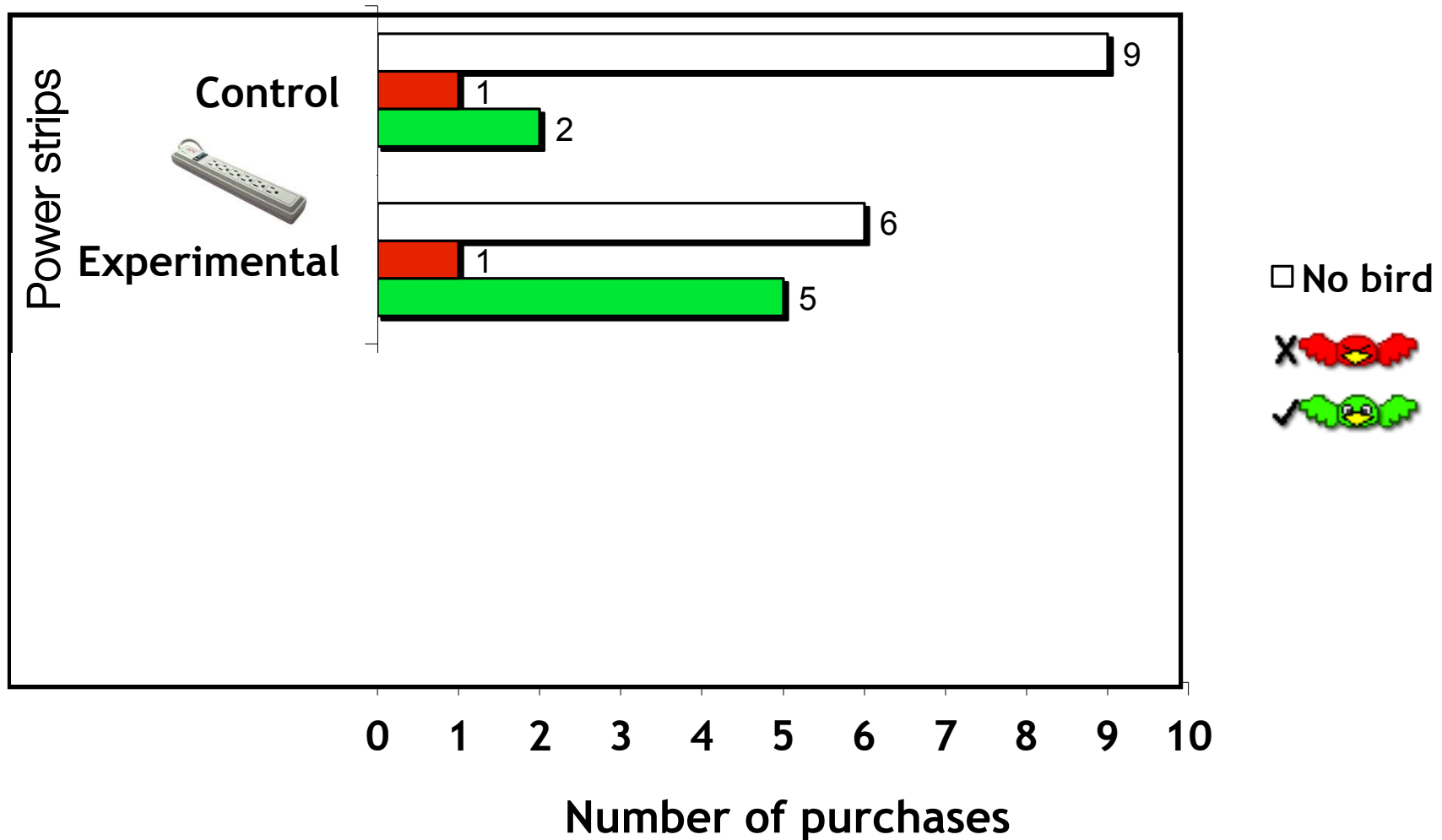
But maybe we should have them search for something more privacy sensitive?

Power Strips, Prophylactics, and Privacy, Oh My!





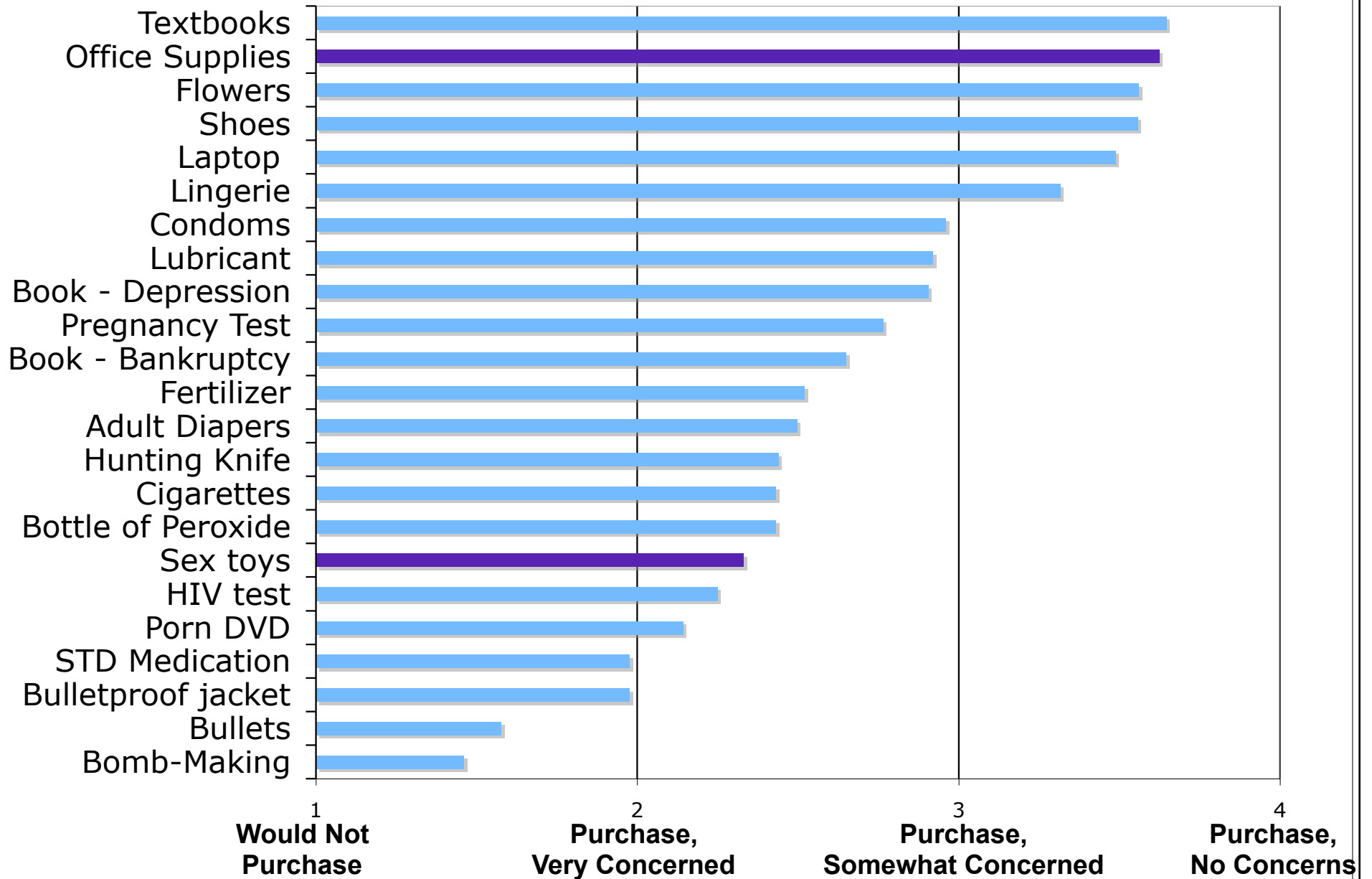
Sites selected for purchases



Good, but we can do better

- Provide fixed payment rather than reimbursement to create price incentive
- Make price/privacy tradeoff more clear
 - Display price in search results
 - Order results based on price and privacy
 - Eliminate confusion about blank indicator
- Test whether people are attracted to pretty indicators
- Find more privacy-sensitive items to purchase

User Study Items



Condition 1

No information



Duracell Alkaline Battery, AA, 8/PK

Duracell Coppertop Alkaline AA Batteries Long-life alkaline batteries provide the best, longest power source. Recommended for use in smoke alarms, flashlights, lanterns, calculators, pagers, cameras, recorders, radios, CD players

www.ccvsoftware.com/c/product.html?record@56119



\$14.45 (w/shipping)

Duracell AA8 DURACELL - Alkaline Batteries Value Packs

Duracell AA8 DURACELL Alkaline Battery Value Packs...

discountofficeitems.zoovy.com/product/DURMN15RT12Z



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Duracell Alkaline Battery Value Packs

Duracell AA8 DURACELL Alkaline Battery Value Packs DURACELL AA ALKALINE BATTERY - 8 PACK Cardboard card for peg hook 8 pack Specifications Weight 0.45 lbs Length 4.5 inches Width 3.75 inches Height 1 inches Manufactures Web site www.duracell.com

www.instawares.com/Coppertop-Alkaline-Lithium-Bat...



\$14.80 (w/shipping)

Duracell Coppertop Alkaline AA Batteries

Long-life alkaline batteries provide the best, longest power source. Recommended for use in smoke alarms, flashlights, lanterns, calculators, pagers, cameras, recorders, radios, CD players, medical equipment, toys and electronic games. Dependable after seven years of storage.

www.officequarters.com/product.php/item/DUR-MN1500B8...



\$15.14 (w/shipping)

Condition 2

Irrelevant information



☐☐☐☐
Handicap
Accessibility

☒☒☐☐
Handicap
Accessibility

☒☒☒☒
Handicap
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Height 1 inches Manufactures Web site www.duracell.com
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\$14.45 (w/shipping)



\$14.60 (w/shipping)



\$14.80 (w/shipping)



\$15.14 (w/shipping)

Condition 3

Privacy information



Privacy premium:
\$0.69 4.8%

□□□□
[Privacy Report](#)

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[Privacy Report](#)

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[Duracell Alkaline Battery, AA, 8/PK](#)
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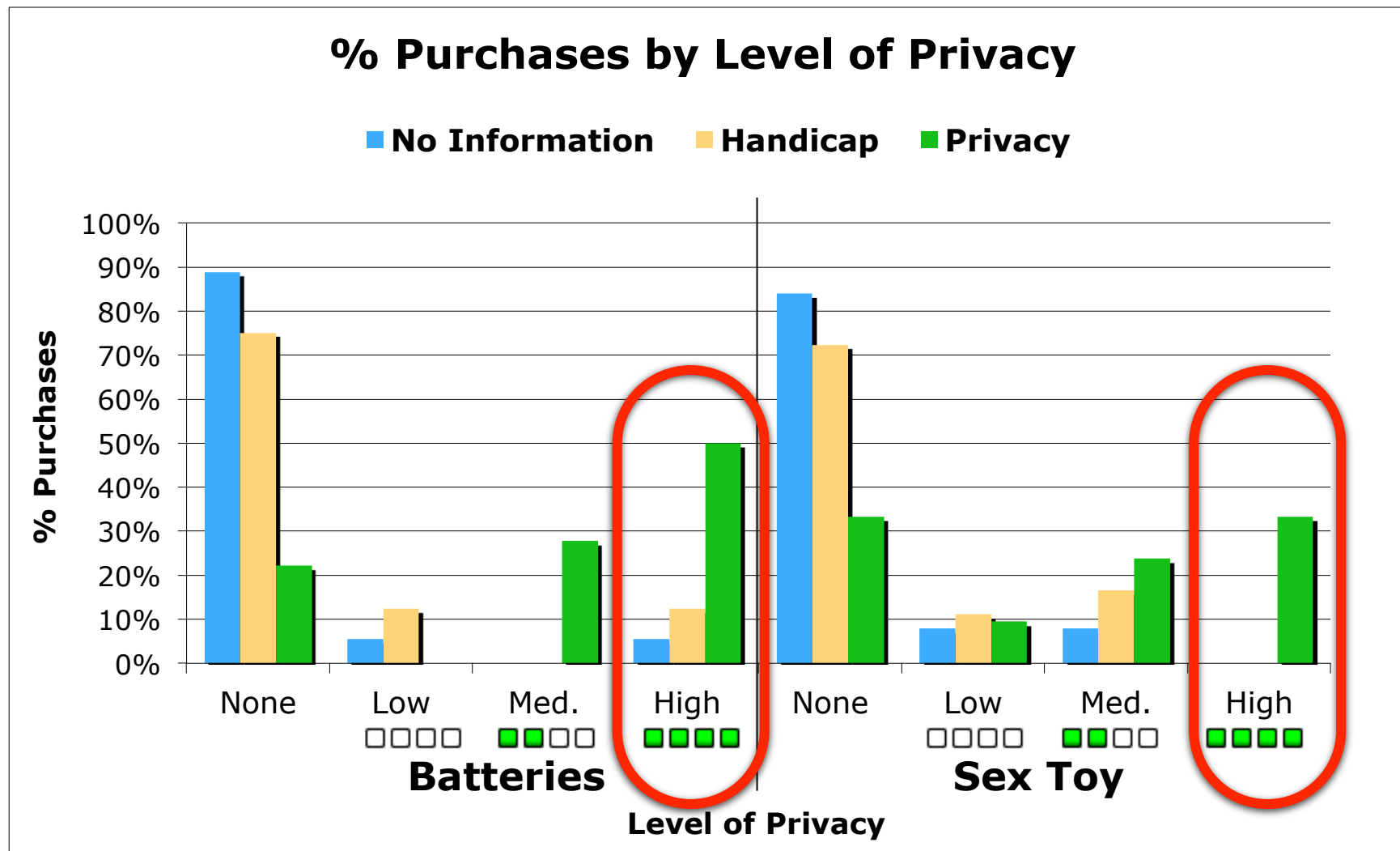
\$14.80 (w/shipping)



\$15.14 (w/shipping)



Results



Results

- Demonstrated the following:
 - Privacy can be leveraged for profit
 - Prominent privacy information reduces information asymmetry gap
 - Indicators can provide people with an ability to choose a site based on privacy

Problems remain

- No significant difference between battery and sex toy purchases
- But the privacy premium for sex toys was twice the premium for batteries
- We need better control over the prices
- Time to enlist the assistance of the online vendors

Contacting vendors

- Contacted 46 battery and sex toy vendors through postal mail, fax, and phone
- Convinced 8 vendors to adjust their prices for our study
- Most raised their prices but one had to lower prices
- Promised to pay difference to vendor who lowered prices
 - Sent \$140 check to The Dirty Bunny for “research project assistance”



Timing Study

- Research Question
 - Does the timing of privacy information have an impact on the value of prominent privacy information?
- Controlled for price
 - Same privacy premiums for both products

S. Egelman, J. Tsai, L. Cranor, A. Acquisti. Timing is Everything? The Effects of Timing and Placement of Online Privacy Indicators. CHI '09.

ontimesupplies.com

http://cups.cs.cmu.edu/search/frame.php?id=b4

Google

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You have: 0 items worth 0.00

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[Home](#) [Office Supplies](#) [Office Furniture](#) [Toner & Ink](#) [Janitorial](#) **Clearance!**

Quick Search... [Go!](#) » Shop by Brand... March 2nd, 2009

Coppertop Alkaline Batteries, AA, 8/pack

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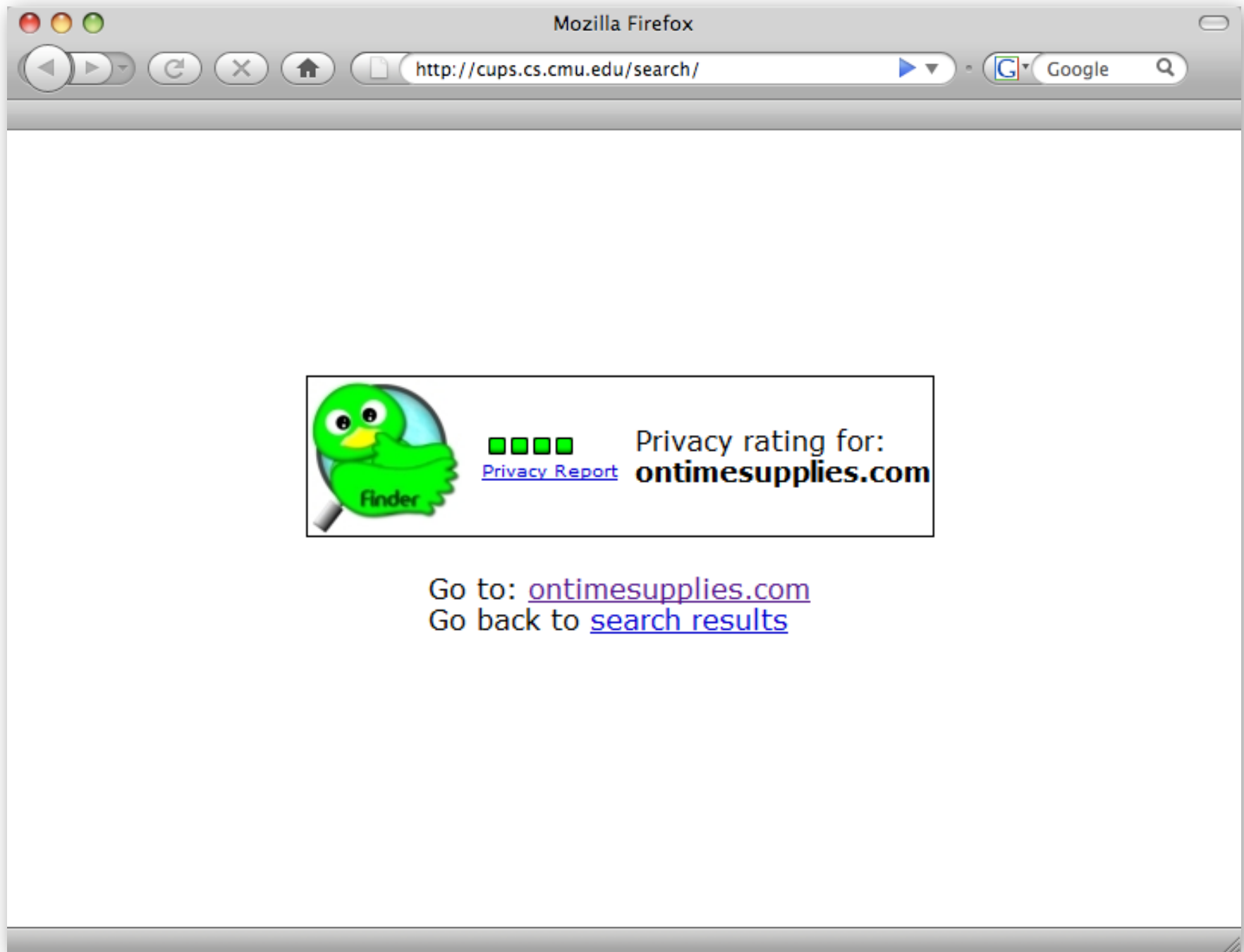
Customer Login

» E-mail address

[Login](#) 

[Forgot Password?](#)

Done



Results

- Privacy information had the greatest impact when presented alongside search results
- Privacy-sensitive nature of product has an impact on the amount of desired privacy

Homework 1

Reading highlights

- Interesting observations
- Questions
- Disagreements

Privacy in pop culture

Sharing your photo collage

Privacy harms from social networking

- What service did you pick?
- What were the key harms you identified?
- Why is this service popular despite these potential harms?

Homework 2

- <http://cups.cs.cmu.edu/courses/pp1t-fa13/hw/hw2.html>



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