PRIVACY, SECURITY AND USABILITY

Security Warnings

SECURITY WARNINGS

Security Warnings and Context

- Some hazards are context dependent
- Security warning dialogs more like warnings on wine than warnings on poison
- Software developers place burden of assessing risk on users

Security Warnings

- A good warning helps users determine whether they are at risk
- Stops users from doing something dangerous in risky context
- Doesn't interfere with non-risky contexts
- Need to test warnings in both contexts

Attracting users' attention

- How can we focus users' attention on key information?
  - So they can make informed decisions?
- Use **attractors** to draw attention
  - Bold letters, etc.
- Force delay so users can process information
  - E.g., before users can install new software
- Force interaction before user can continue

Attractors Performance

- Do attractors and other techniques prevent suspicious installs without preventing benign installs?

- How much do attractors delay benign installs?

Usability Study of Attractors

- Your Attention Please: Designing security-decision UIs to make genuine risks harder to ignore [Brav—Lilo et. Al, SOUPS 2013]

Usability Study of Attractors

- Three experiments
- Using Mechanical Turk
- Tested user-interface modifications to draw users' attention to the most important information for making decisions
  - Control group UI did not include attractors

Usability Study of Attractors

- Tasks included:
  - Installing software
  - Granting permission
    - E.g., storing of website cookies
  - Decision making after habituation
    - User exposed repeatedly to dialog box without relevant info
    - Info needed for decision making then entered into the dialog box
      - Would user notice it?

Usability Study of Attractors

- Results:
  - Attractors found to be effective
    - User more likely to consider the factors when making security-related decisions
  - However, were also found to delay users' workflow
    - Decreased with repeated exposure
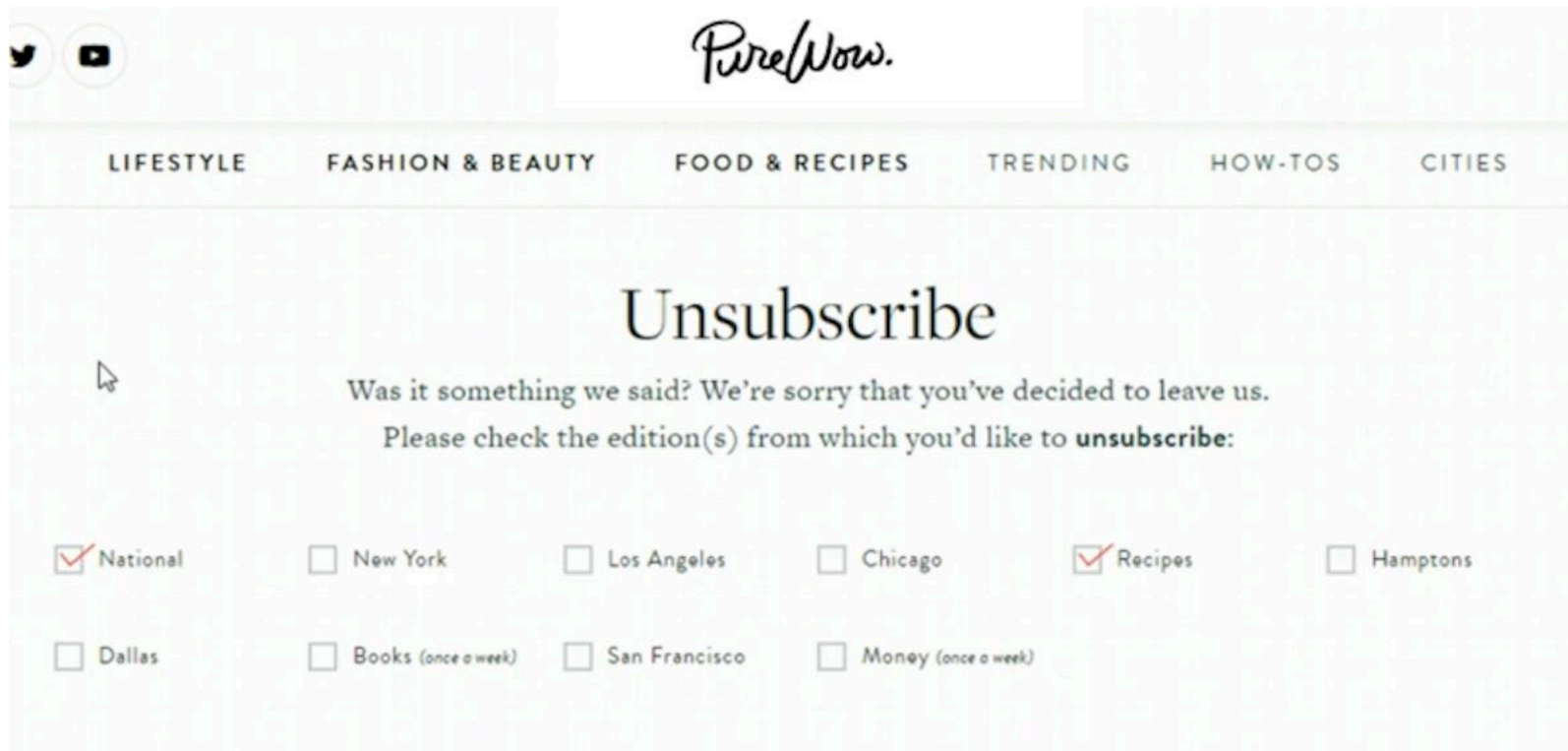
UNSUBSCRIBING

Unsubscribing

- Applications provide methods of unsubscribing
  - Are they usable?
- Study found multiple usability issues [Nielsen NG, Marketing Email and Newsletter Design to Increase Conversion and Loyalty

Unsubscribing Issues

- Email footers not optimized for mobile
- Unsubscribe links that are difficult to locate
- Too many choices and too much work to unsubscribe
- Confusing checkboxes

Confusing Checkboxes

https://www.nngroup.com/articles/unsubscribe-mistakes/

Unsubscribing Issues (cont.)

- Asking users to log in or provide personal information
- Asking for feedback before confirming the unsubscribe
- Annoying tone

Aēsop.

Thank you and goodbye

You have been successfully removed from our subscriber list, and will no longer receive Aesop communications.

If you unsubscribed by accident, you are welcome to resubscribe on **our homepage.**

'But fate ordains that dearest friends must part.'
Edward Young
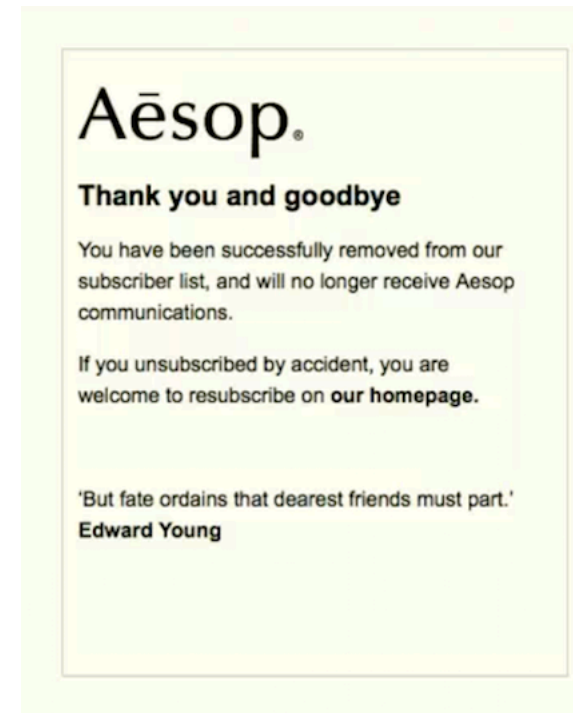
Unsubscribing Issues (cont.)

- Pushing users to resubscribe
- Delayed removal

- [The agony of unsubscribing](#)

Questions?