Encouraging Reading of Diverse Political Viewpoints with a Browser Widget

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HCDE Human Centered Design & Engineering

dub

MISC

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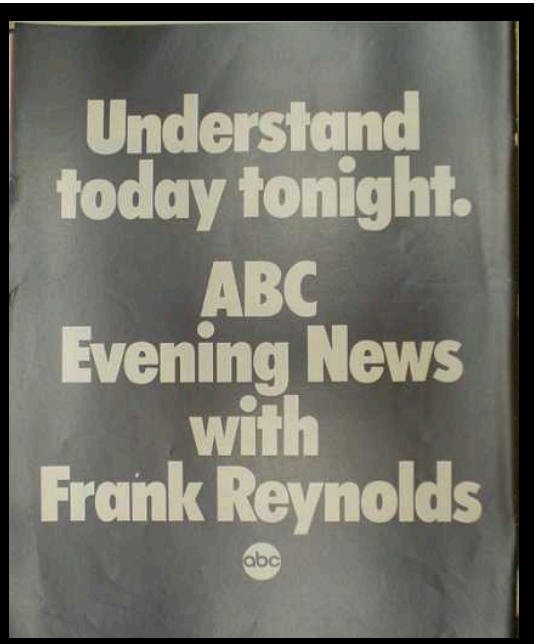

50% of adults watched one of three broadcasts in 1970.

by 2007, this had dropped to just **10%**

Prior 2007, Bennett & Iyengar 2008

NBC NIGHTLY NEWS
JOHN CHANCELLOR

Understand today tonight.
ABC Evening News with Frank Reynolds
abc

FOX NEWS Channel

MSNBC

CNN

ALJAZEERA

ESPNEWS

TiVo

CNN
Absent congressman being treated for 'mood disorder'
LZ: Mississippi's abortion end run
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Nearly Half of Newborns at Hospital Drug-Dependent
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Conservatives look beyond 'Obamacare' even if Romney loses
Manhattanhenge's sun show wows New Yorkers
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Alzheimer's researcher is also a patient
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SALES TAX IN SPRAIN JUMPS TO 21%
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Spears Impale Car With Woman Inside
HOT AIR
Romney: I expected to be booed by the NAACP when I mentioned ObamaCare
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Rep. Jackson under treatment for mood disorder, staff says
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Catching up with Rob Caggiano from Anthrax
Print Publishers—Extinction May Be Imminent
The New York Times
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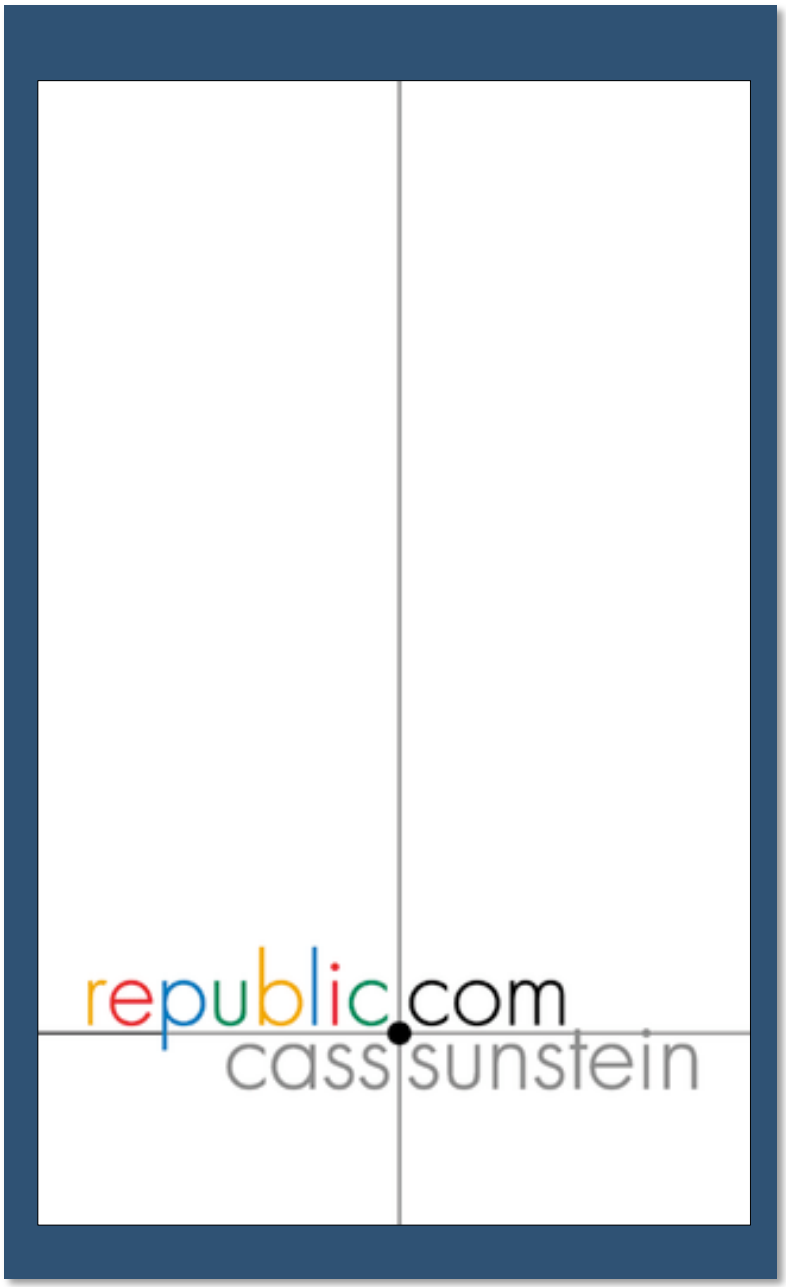
In Preventing Alzheimer's, Mutation May Aid Drug Quest
Clinton Sees Reminders of Vietnam in Laos
NEW YORK POST
'TOTAL SCREW UP'
DNA link between Sarah Fox murder & OWS scenes could be mistake: sources
newsvine.com
Small rise in college c for young adults


republic.com
cass sunstein

The Filter Bubble
What
the
Internet
Is
Hiding
From
You
Eli Pariser

Perils of choice

- People prefer to see **agreeable opinions.** (Selective Exposure)
- Technology makes it easier for people to **act on those preferences**, and, in some cases, provides content after assuming those preferences.

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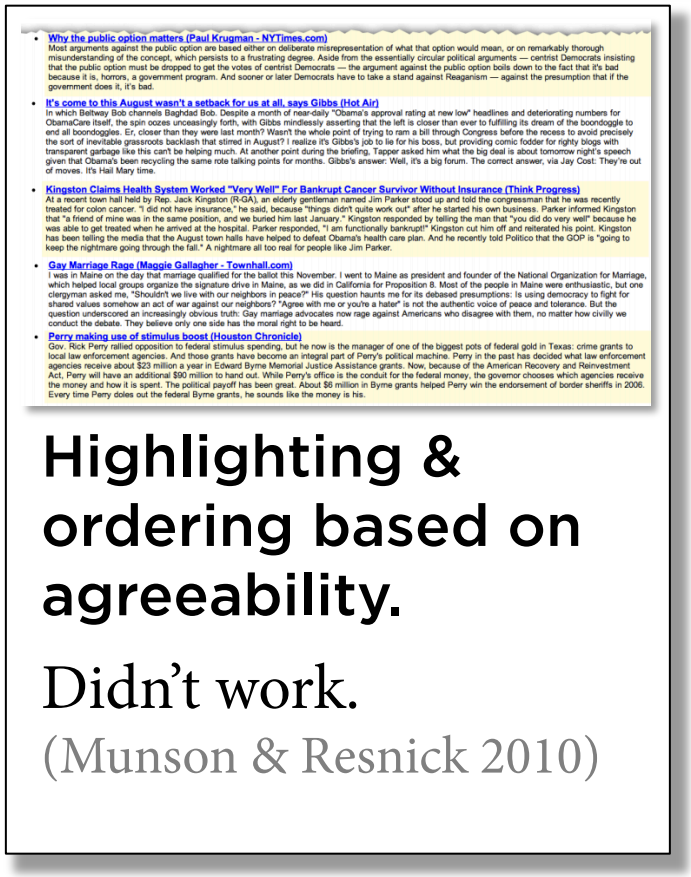
- When people predominantly access agreeable opinions:
  - ⬇ consensus.
  - ⬇ understanding & empathy.
  - ⬇ learning.

Mixed evidence, lots of hand-wringing

- People *say* they seek diversity (Stromer-Galley 2003)
- People seem to agree with the norm of diverse news exposure (Garrett & Resnick 2012)
- Ideological segregation segregation online is not as bad as some fear. (Gentzkow & Shapiro 2010)
- People seek agreeable information but are indifferent to challenging information (Garrett 2009)
- Some people are challenge averse and some are diversity seeking (Munson & Resnick 2010)
- … but is worse online than other media (Gentzkow & Shapiro 2010)

Efforts to nudge



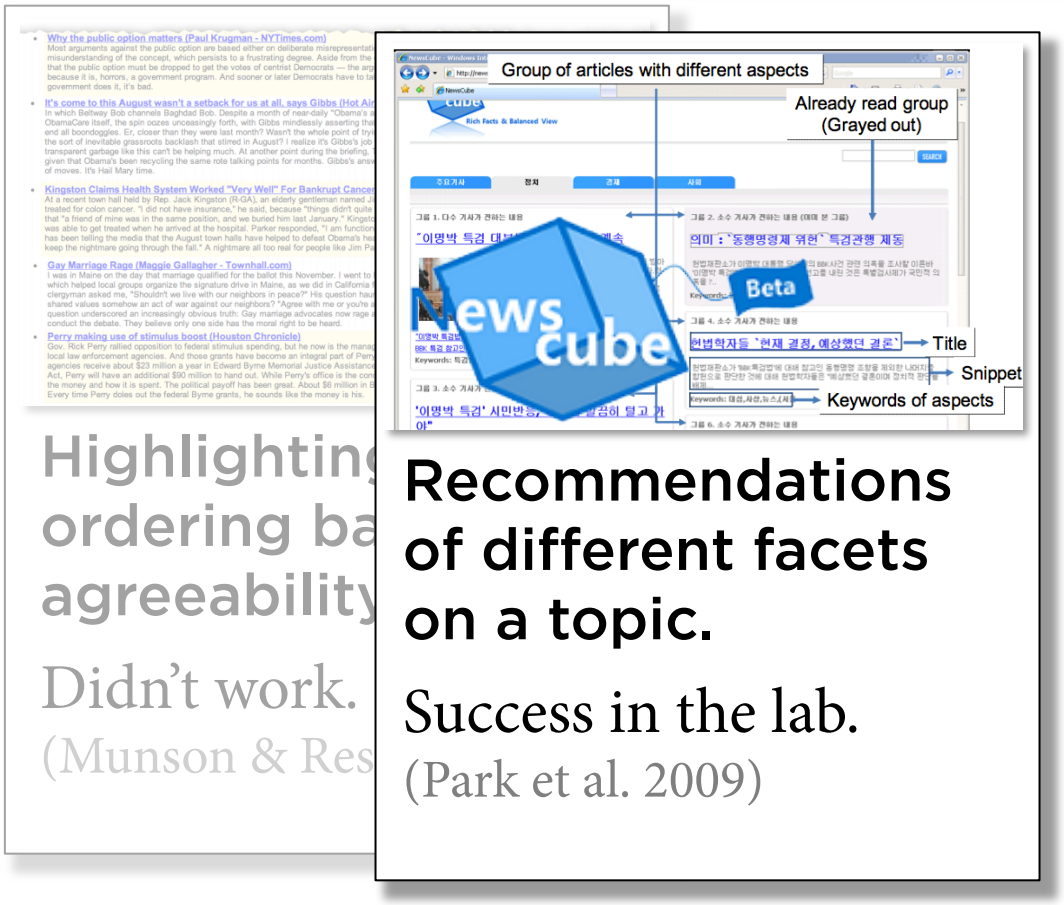
- **Why the public option matters (Paul Krugman - NYTimes.com)**
  Most arguments against the public option are based either on deliberate misrepresentation of what that option would mean, or on remarkably thorough misunderstanding of the concept, which persists to a frustrating degree. Aside from the essentially circular political arguments — centrist Democrats insisting that the public option must be dropped to get the votes of centrist Democrats — the argument against the public option boils down to the fact that it's bad because it is, horrors, a government program. And sooner or later Democrats have to take a stand against Reaganism — against the presumption that if the government does it, it's bad.
- **It's come to this August wasn't a setback for us at all, says Gibbs (Hot Air)**
  In which Beltway Bob channels Baghdad Bob. Despite a month of near-daily "Obama's approval rating at new low" headlines and deteriorating numbers for ObamaCare itself, the spin oozes unceasingly forth, with Gibbs mindlessly asserting that the left is closer than ever to fulfilling its dream of the boondoggle to end all boondoggles. Er, closer than they were last month? Wasn't the whole point of trying to ram a bill through Congress before the recess to avoid precisely the sort of inevitable grassroots backlash that stirred in August? I realize it's Gibbs's job to lie for his boss, but providing comic fodder for righty blogs with transparent garbage like this can't be helping much. At another point during the briefing, Tapper asked him what the big deal is about tomorrow night's speech given that Obama's been recycling the same rote talking points for months. Gibbs's answer: Well, it's a big forum. The correct answer, via Jay Cost: They're out of moves. It's Hail Mary time.
- **Kingston Claims Health System Worked "Very Well" For Bankrupt Cancer Survivor Without Insurance (Think Progress)**
  At a recent town hall held by Rep. Jack Kingston (R-GA), an elderly gentleman named Jim Parker stood up and told the congressman that he was recently treated for colon cancer. "I did not have insurance," he said, because "things didn't quite work out" after he started his own business. Parker informed Kingston that "a friend of mine was in the same position, and we buried him last January." Kingston responded by telling the man that "you did do very well" because he was able to get treated when he arrived at the hospital. Parker responded, "I am functionally bankrupt!" Kingston cut him off and reiterated his point. Kingston has been telling the media that the August town halls have helped to defeat Obama's health care plan. And he recently told Politico that the GOP is "going to keep the nightmare going through the fall." A nightmare all too real for people like Jim Parker.
- **Gay Marriage Rage (Maggie Gallagher - Townhall.com)**
  I was in Maine on the day that marriage qualified for the ballot this November. I went to Maine as president and founder of the National Organization for Marriage, which helped local groups organize the signature drive in Maine, as we did in California for Proposition 8. Most of the people in Maine were enthusiastic, but one clergyman asked me, "Shouldn't we live with our neighbors in peace?" His question haunts me for its debased presumptions: Is using democracy to fight for shared values somehow an act of war against our neighbors? "Agree with me or you're a hater" is not the authentic voice of peace and tolerance. But the question underscored an increasingly obvious truth: Gay marriage advocates now rage against Americans who disagree with them, no matter how civilly we conduct the debate. They believe only one side has the moral right to be heard.
- **Perry making use of stimulus boost (Houston Chronicle)**
  Gov. Rick Perry rallied opposition to federal stimulus spending, but he now is the manager of one of the biggest pots of federal gold in Texas: crime grants to local law enforcement agencies. And those grants have become an integral part of Perry's political machine. Perry in the past has decided what law enforcement agencies receive about $23 million a year in Edward Byrne Memorial Justice Assistance grants. Now, because of the American Recovery and Reinvestment Act, Perry will have an additional $90 million to hand out. While Perry's office is the conduit for the federal money, the governor chooses which agencies receive the money and how it is spent. The political payoff has been great. About $8 million in Byrne grants helped Perry win the endorsement of border sheriffs in 2006. Every time Perry doles out the federal Byrne grants, he sounds like the money is his.

Highlighting & ordering based on agreeability.

Didn't work.

(Munson & Resnick 2010)

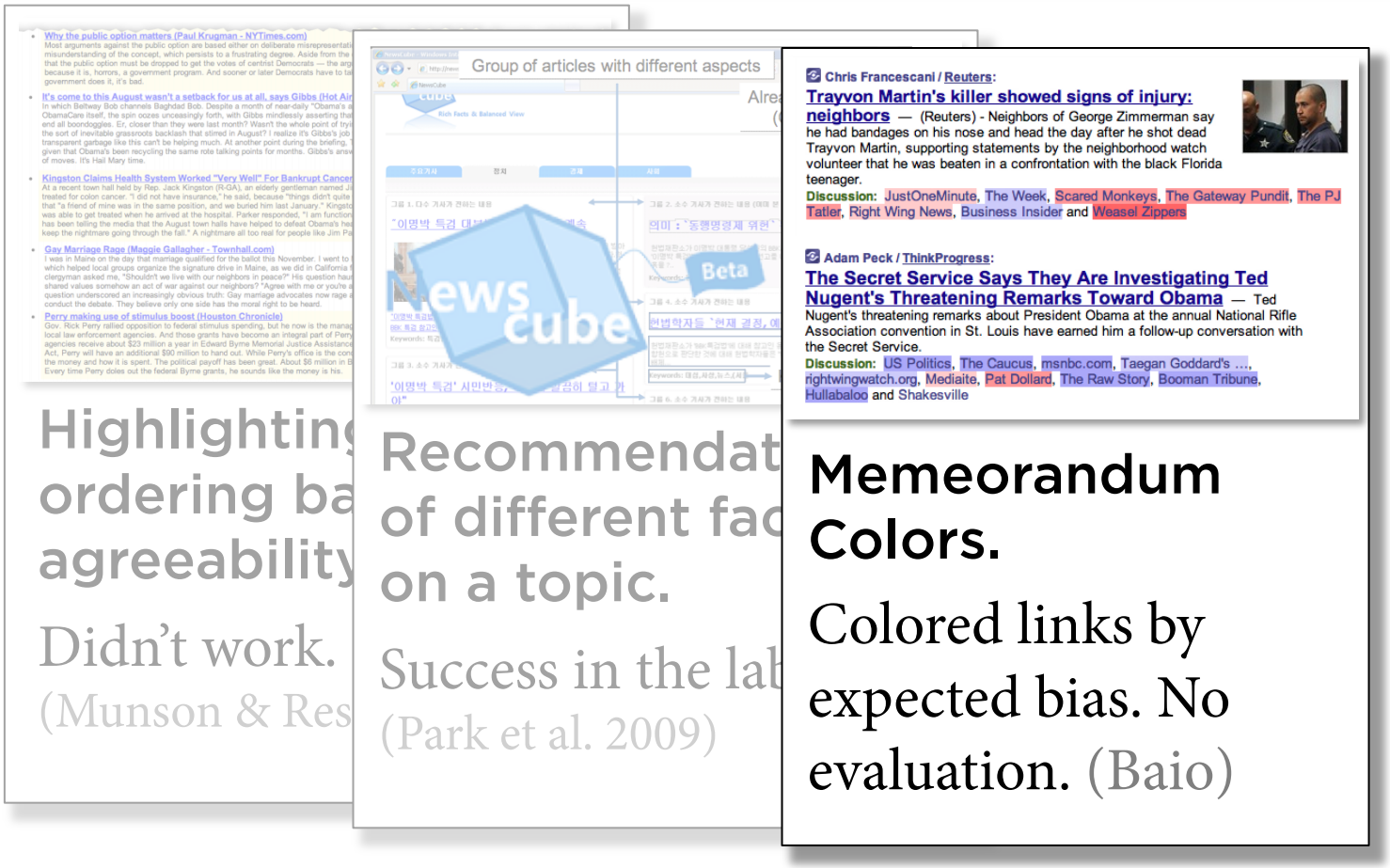
Efforts to nudge



Recommendations of different facets on a topic.

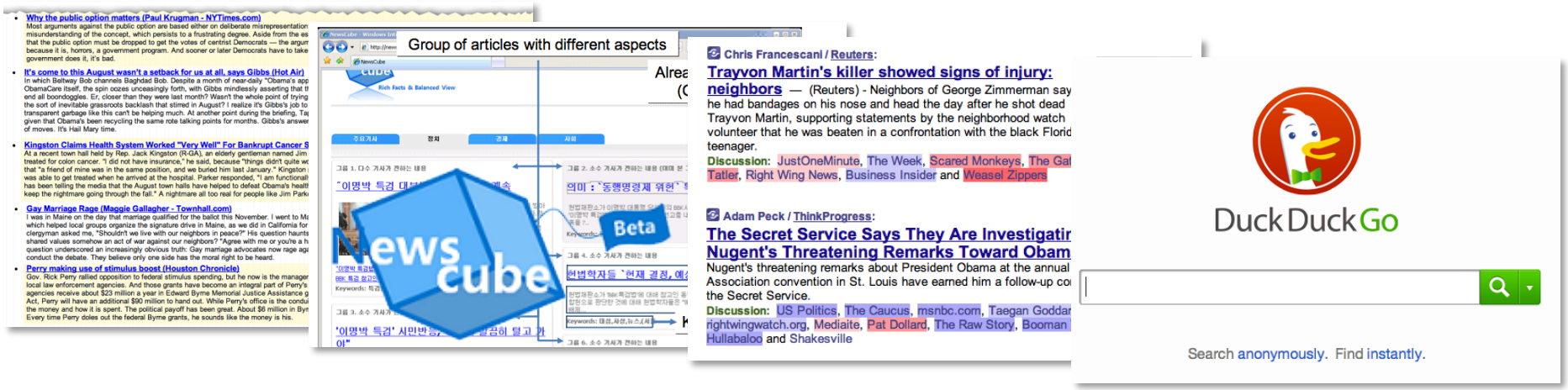
Success in the lab.
(Park et al. 2009)

Efforts to nudge



Efforts to nudge

Research objectives



Can we design interfaces that help people read more balanced news in an environment of choice?

Research objectives

Existing behavior

- To what extent do people read ideologically agreeable or disagreeable news?
- Can we predict this based on personality or demographic traits?

Changing behavior

- **Can we design interfaces that help people read more balanced news in an environment of choice?**
- Are there personality or demographic traits that predict persuadability?

Study Design

Measuring Behavior • Changing Behavior

Study Design

Measuring Behavior • Changing Behavior

Apparatus

- Chrome extension recording visits to all sites matching a whitelist of news sites (*n*=10,570), including up to 30 days of pre-installation history.
- Subset (*n*=7,618) of sites classified according to political lean.

Available at balancestudy.org

Classifying visits

Classified at top-level domain by:

- Averaging lean from several sources, including:
  - Memeorandum Colors (link-similarity based; Baio)
  - Left and right audience share (Gentzkow & Shapiro 2010)
  - Votes from classified Digg users and links from blogs (Munson et al. 2009)
- Classifying some columnists separately (e.g., David Brooks on New York Times)
- Manual corrections during testing (the Ann Coulter effect)

Sites & classification at balancestudy.org/whitelist-classifiable.html

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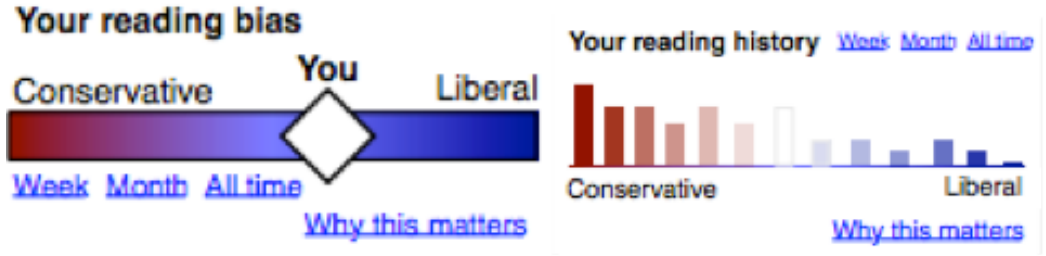
Study Design

Measuring Behavior • **Changing Behavior**

Our widget

Personal informatics approach: designed to reveal users' actual lean in reading behavior



Our widget

Personal informatic

users' actual lean in

When do people consider diverse views?

- When their **curiosity** has been piqued. (e.g., Newscube)
- When they have been reminded of **norms of fairness and balance.**
- When they are **less confident** in their own knowledge.

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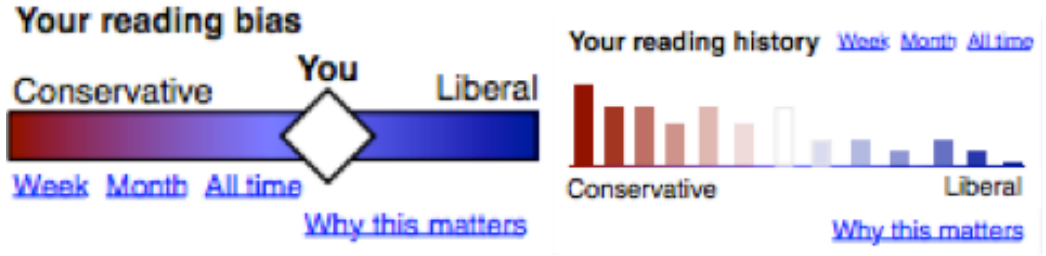
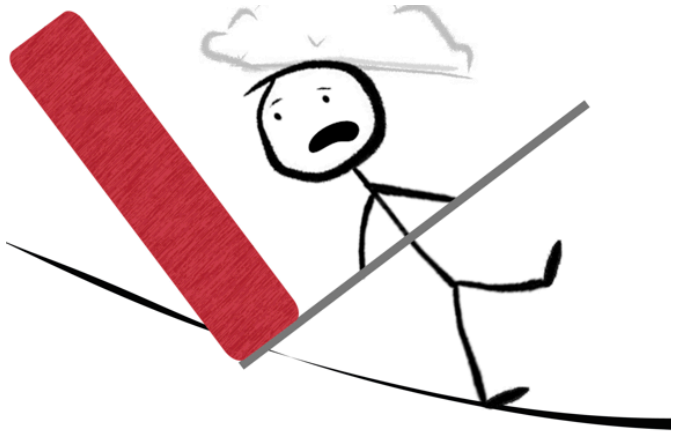
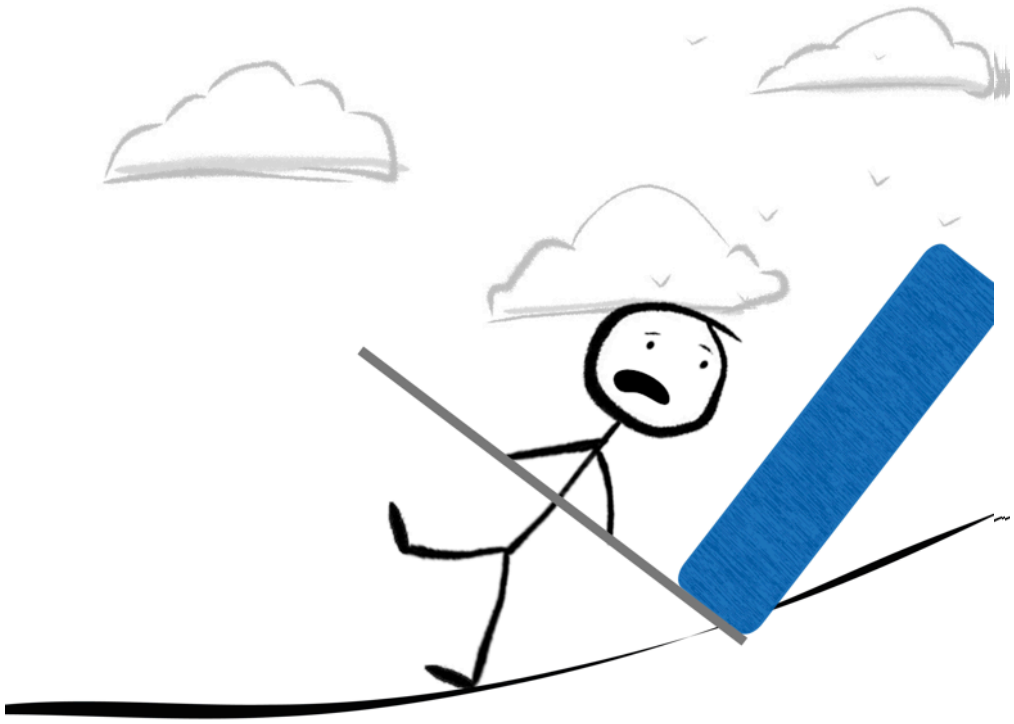


Normative message, added to encourage a user to be balanced.



Balancer balancestudy.org/balancer



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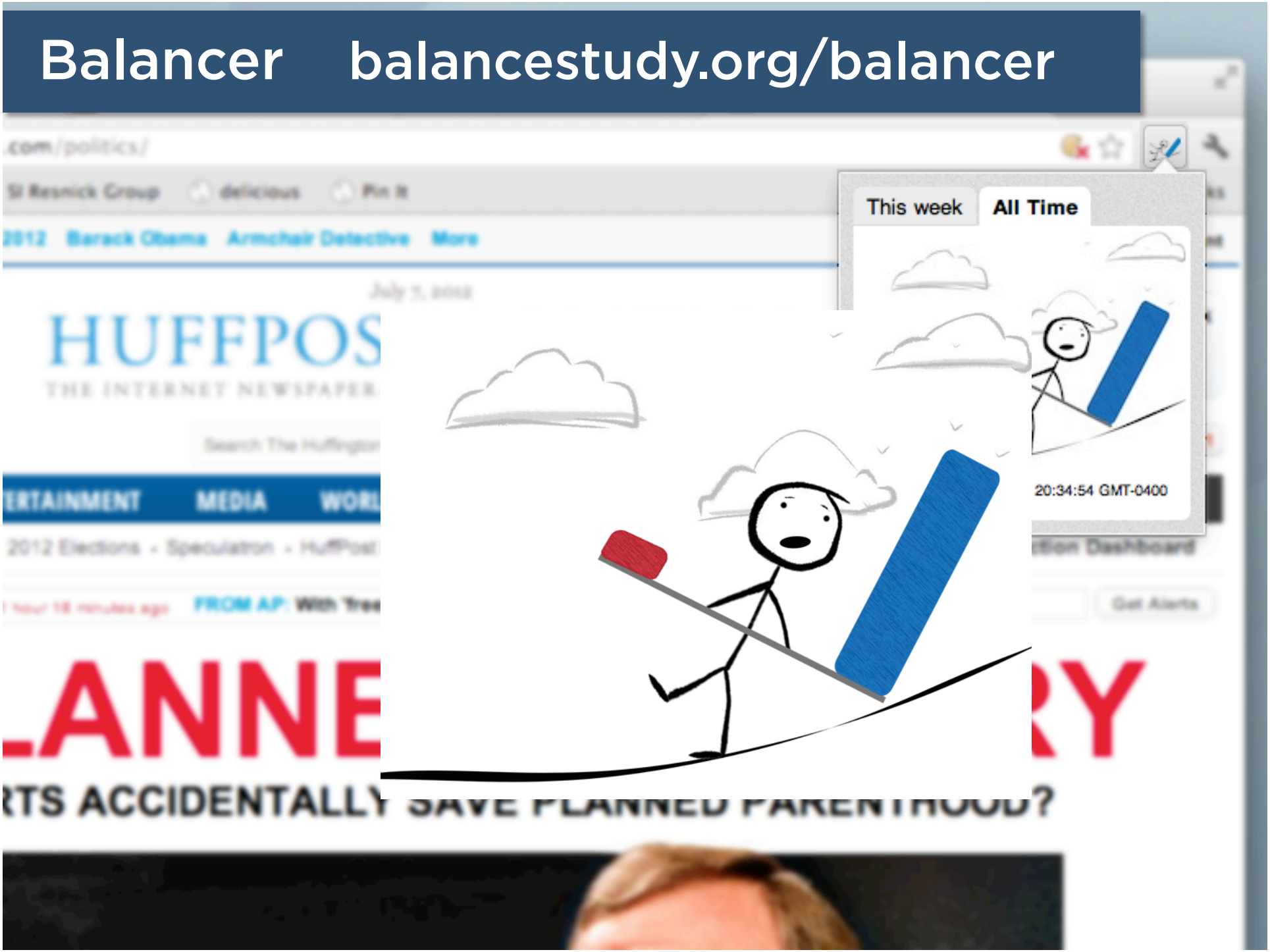

Field Deployment: Procedure

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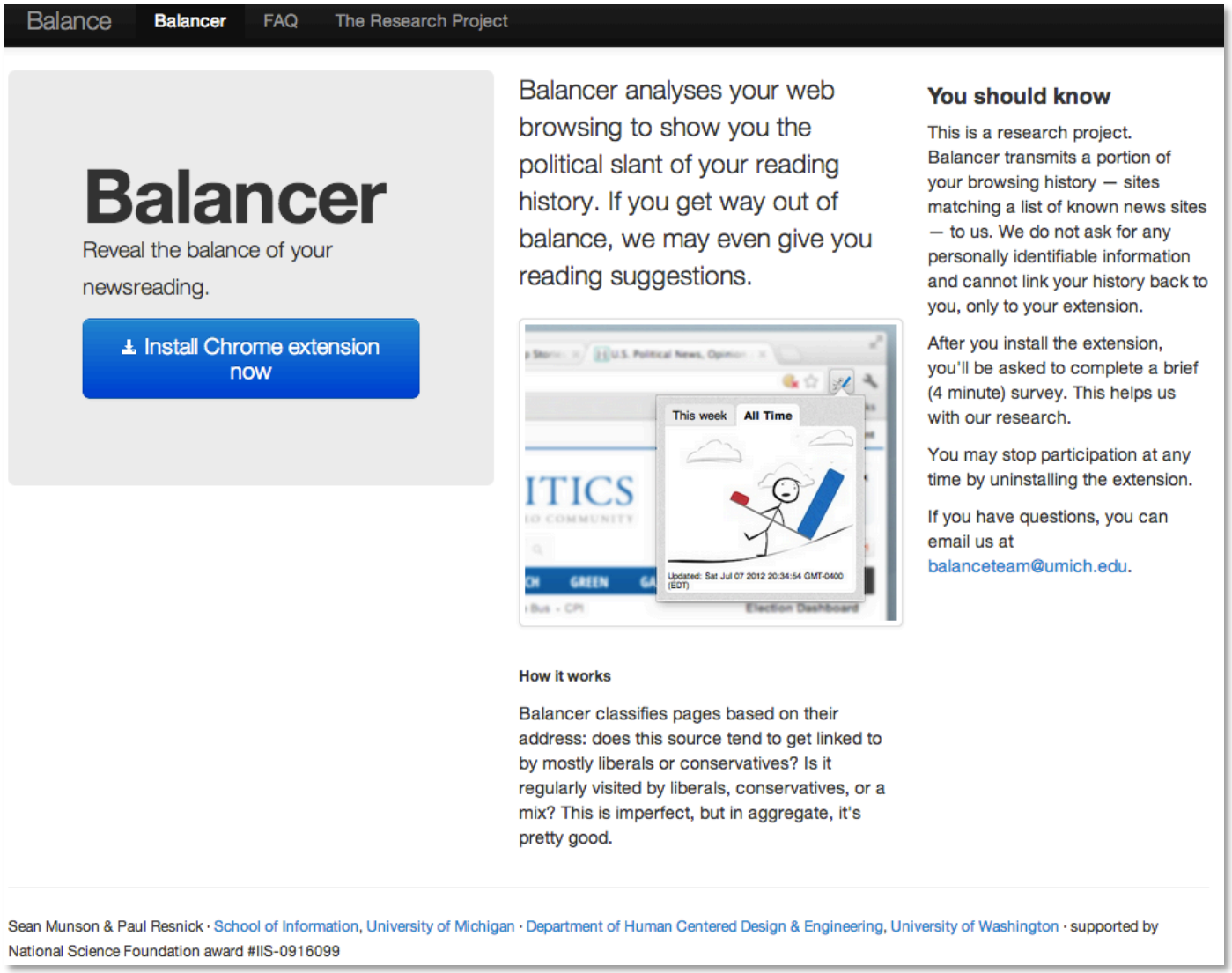
1. Subject accesses website & reviews materials



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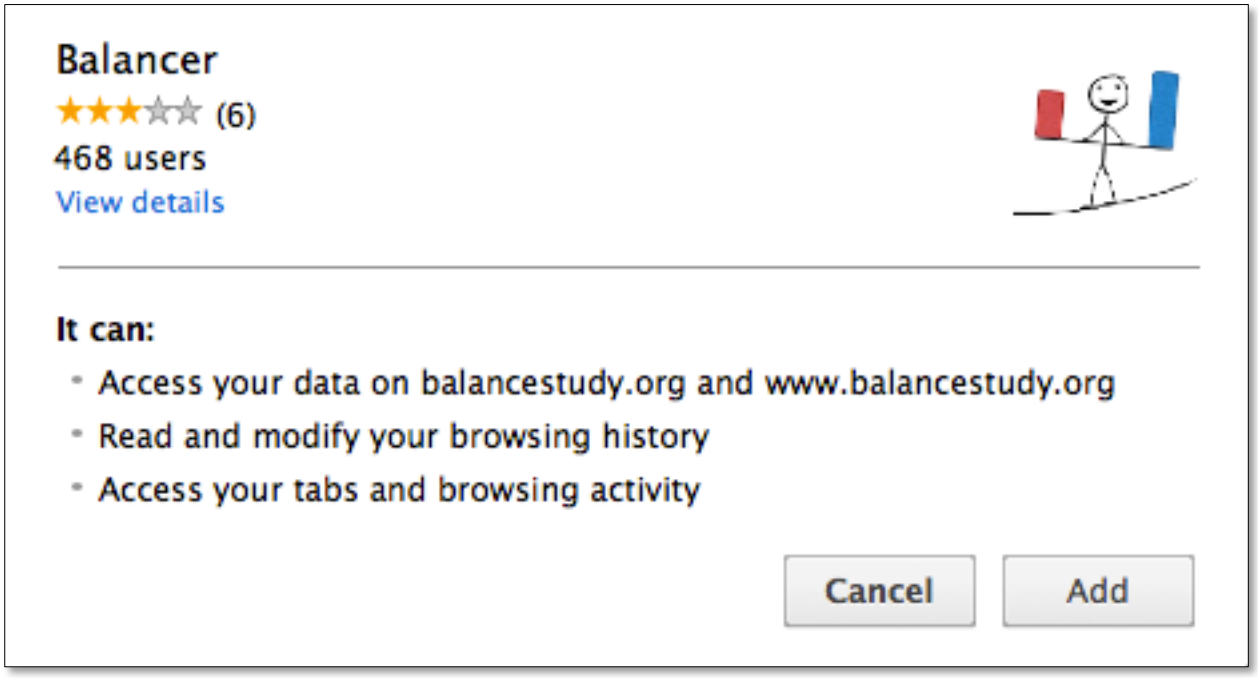
2. Subject installs browser extension



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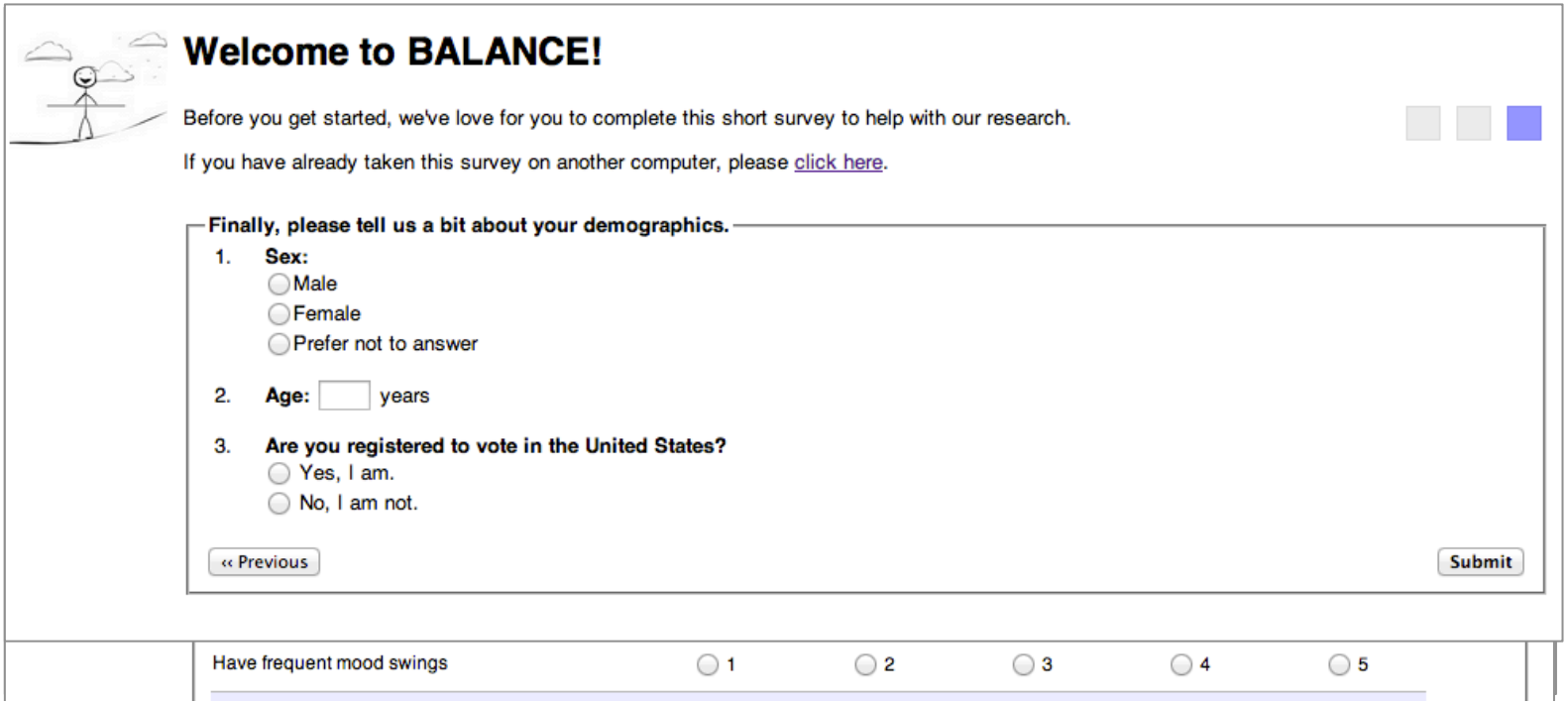
3. Subject prompted to complete survey
   (political lean, Big 5 personality, demographics)



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5. Control:
   28-day waiting period

   Treatment:
   Immediate & ongoing feedback

Field Deployment: Subjects

- Recruited by word of mouth (email, social network sites), Google extension directory, & the media
- 15 September – 18 November 2012
- 1,145 installs with transmitted data
- 990 subjects completed the survey

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736 men, 181 women (80% male)

mean age: 36.7 years (stdev: 13.8)

political lean: 2.89 (stdev: 1.37)

(1 = strongly liberal; 7 = strongly conservative)

partisanship: 2.93 (stdev: 1.48)

(1 = strongly Democrat; 7 = strongly Republican)

Results

Measuring Behavior • Changing Behavior

Results

Measuring Behavior • Changing Behavior

S: A user's Balance score

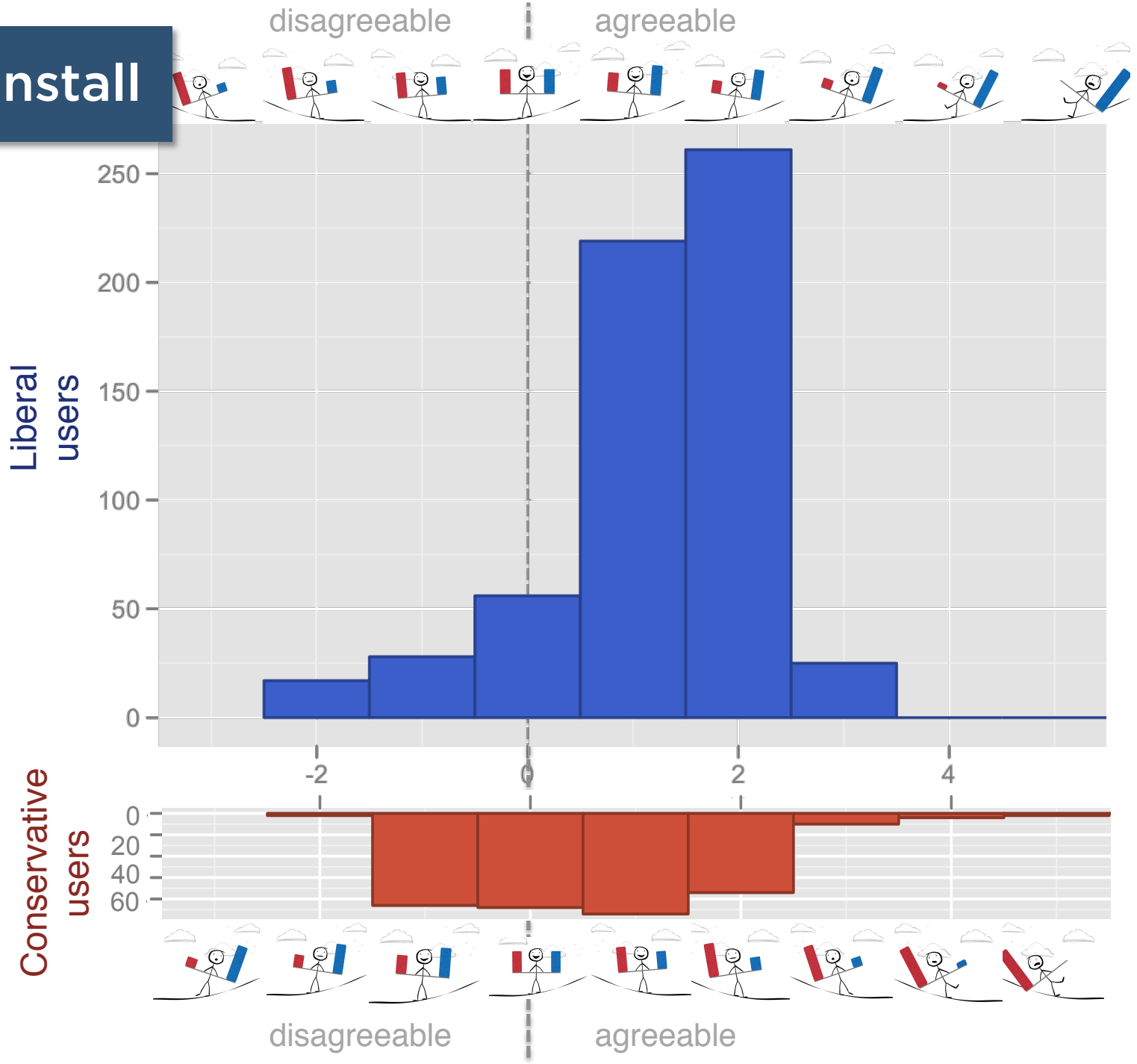
S = Average left-right score of all news page visits.

Normalized to [1,11] (because we had 11 pictures)

R_A: Agreeable news-reading measure

$$R_A = \begin{cases} S - 6 & \text{if } u \text{ is liberal} \\ 6 - S & \text{if } u \text{ is conservative} \end{cases}$$

R_A: pre-install



Individual differences as predictors of R_A?

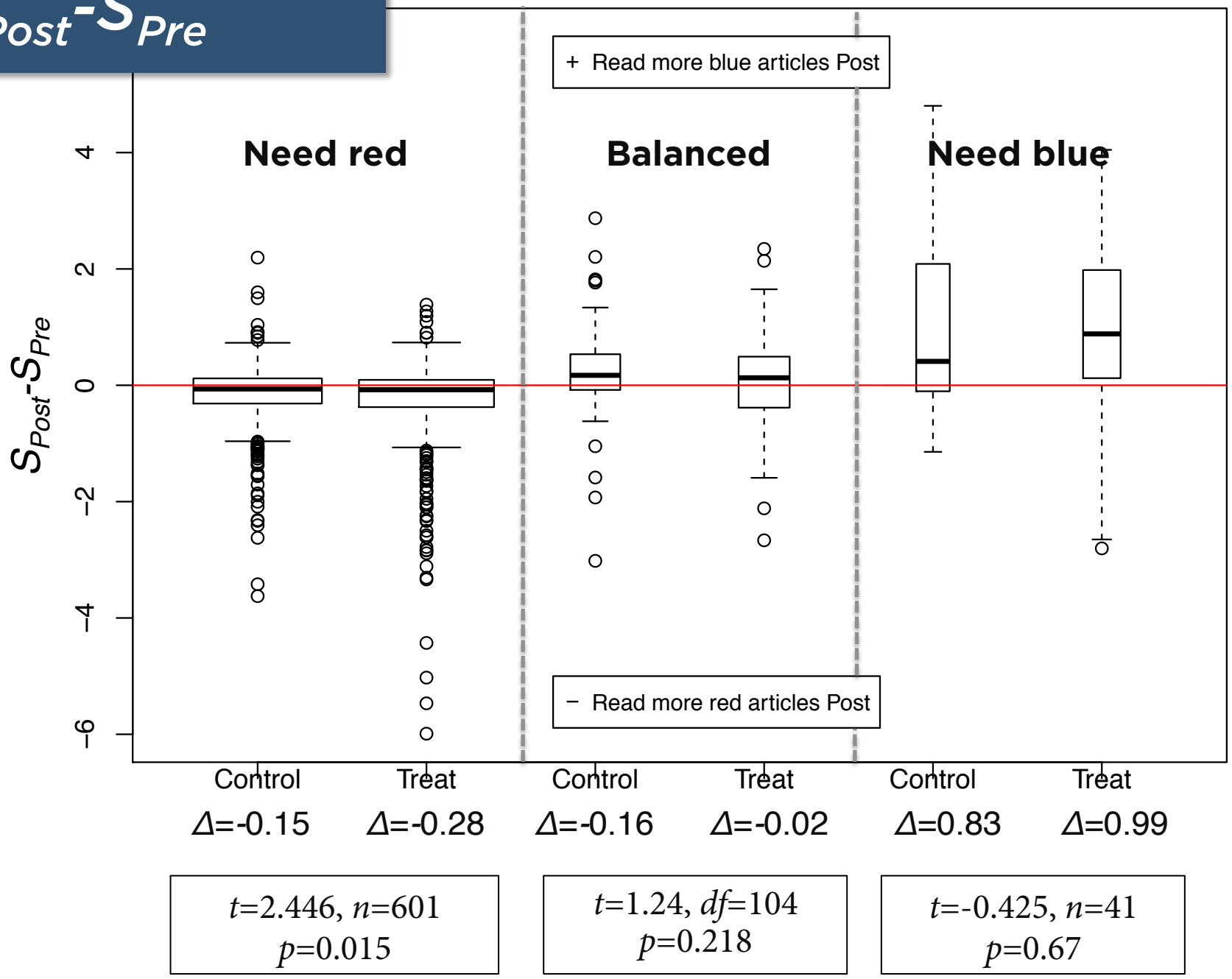
Predictor	Coefficient	Std Err	*p*
Intercept	1.567	0.335	< 0.0001
Ideology (1-7)	-0.335	0.025	< 0.0001
Age (years)	0.002	0.002	ns
Female	0.040	0.085	ns
Extraversion	-0.058	0.036	ns
Agreeableness	0.009	0.047	ns
Conscientiousness	-0.035	0.042	ns
Intellect	0.032	0.064	ns
Neuroticism	0.077	0.049	0.0597

OLS model for R_A, prior to installation, F=26.09 on 8 and 74 degrees of freedom, p<0.0001, adjusted R^2=0.21.

Results

Measuring Behavior • **Changing Behavior**

S_{Post}-S_{Pre}



t=2.446, n=601 p=0.015	t=1.24, df=104 p=0.218	t=-0.425, n=41 p=0.67

S_{Post}-S_{Pre}

For median liberal-reading user (187 visits per 28 days), the difference in change between control and treatment is equivalent to:

- 4 new monthly visits to a right-leaning site *or*
- 20 new monthly visits to a neutral site

Individual differences as predictors of S_{Post}-S_{Pre}?

No.

Age, gender, ideological extremity, and Big 5 not predictors.

Not enough power and likely selection limit ability to evaluate effects of left-right ideology.

Encouraging Reading of Diverse Political Viewpoints with a Browser Widget

First study to use personal informatics to increase the diversity of news reading in the wild.

Persistent reminder of norm.

Persistent feedback.

Recommendations.

Goal setting.

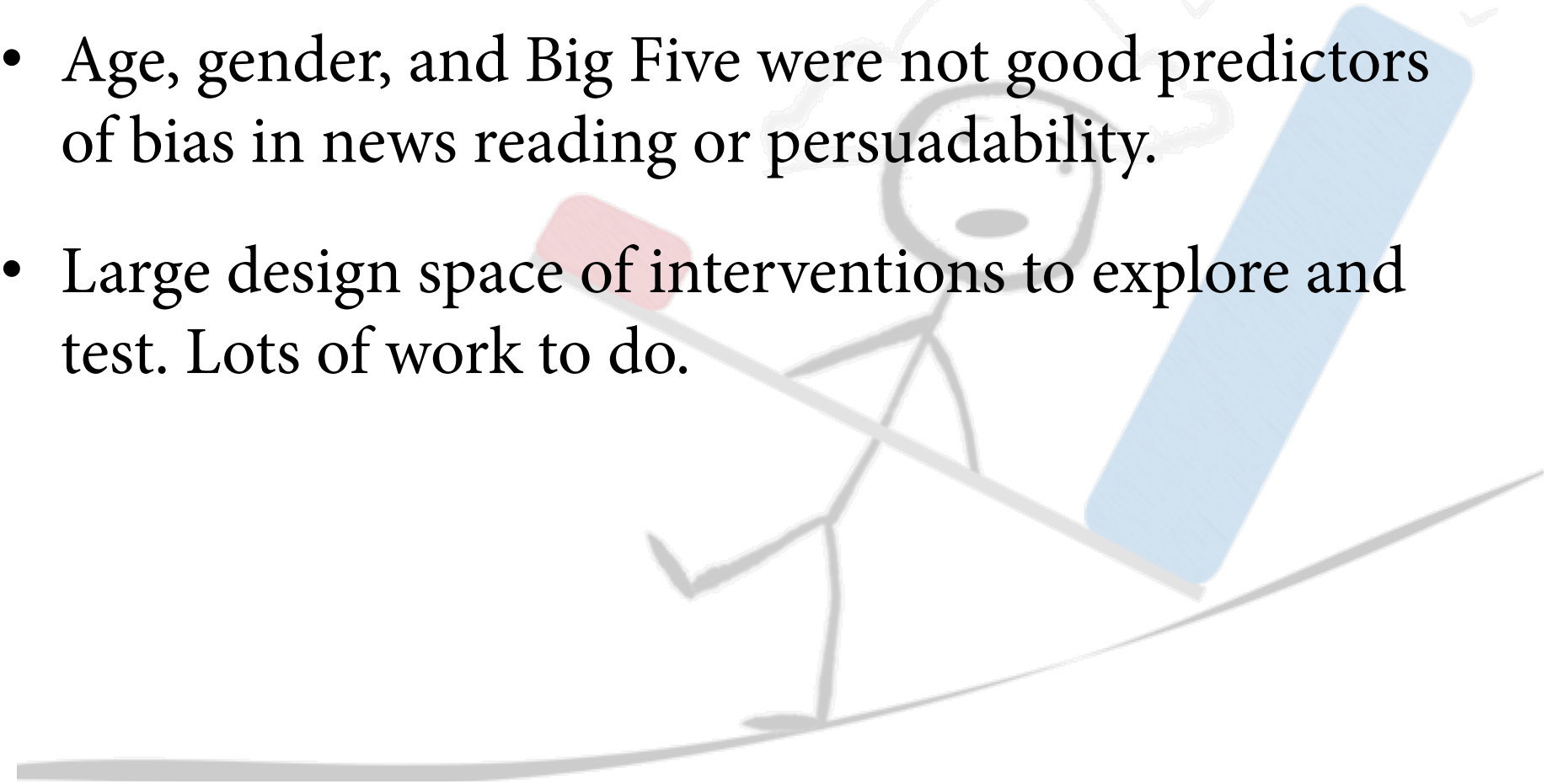
Personalized recommendations.

Sharing or reputation elements.

....

Encouraging Reading of Diverse Political Viewpoints with a Browser Widget

- **First study to use personal informatics to increase the diversity of news reading in the wild.**
- Age, gender, and Big Five were not good predictors of bias in news reading or persuadability.
- Large design space of interventions to explore and test. Lots of work to do.



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Funders

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Intel PhD Fellowship
Yahoo! Key Technical Challenge Grant

dub design: use: build: university of washington

UNIVERSITY of WASHINGTON

balance

MISC Michigan Interactive & Social Computing

UNIVERSITY OF MICHIGAN