

EXPOSURE TO POLITICAL DIVERSITY ONLINE

Sean A. Munson

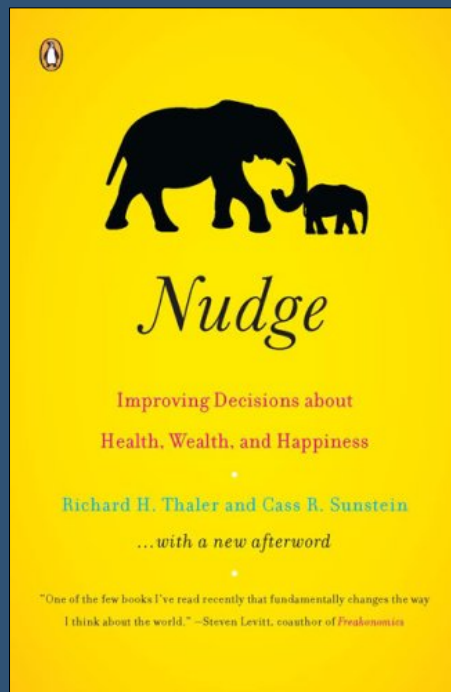
HCDE Human
Centered
Design &
Engineering

dub

slides & references at smunson.com/talks/genst297w13

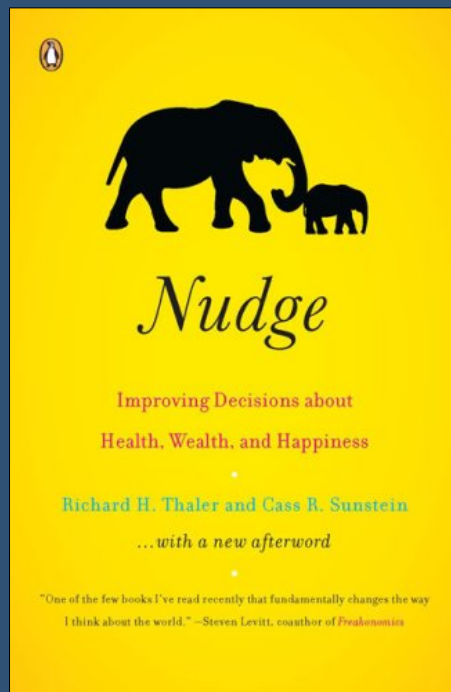
Preferences & Nudges in Sociotechnical Systems

All choice
environments
influence...



Preferences & Nudges in Sociotechnical Systems

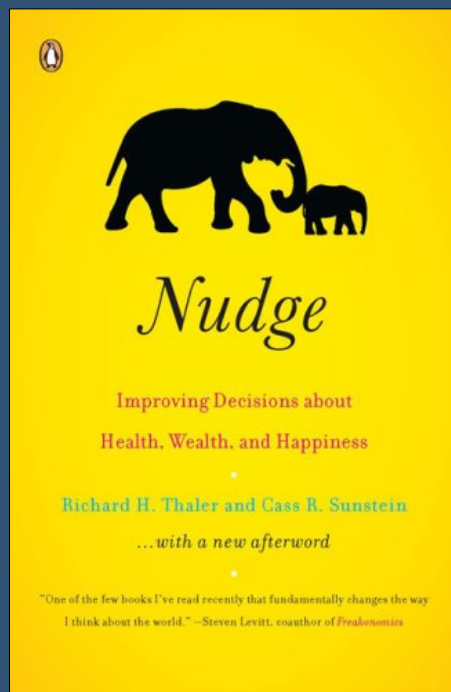
All choice
environments
influence...



Nudge – something that helps you be your better self, to do the things that, in retrospect, you'll be glad you did, but might not choose in the moment.

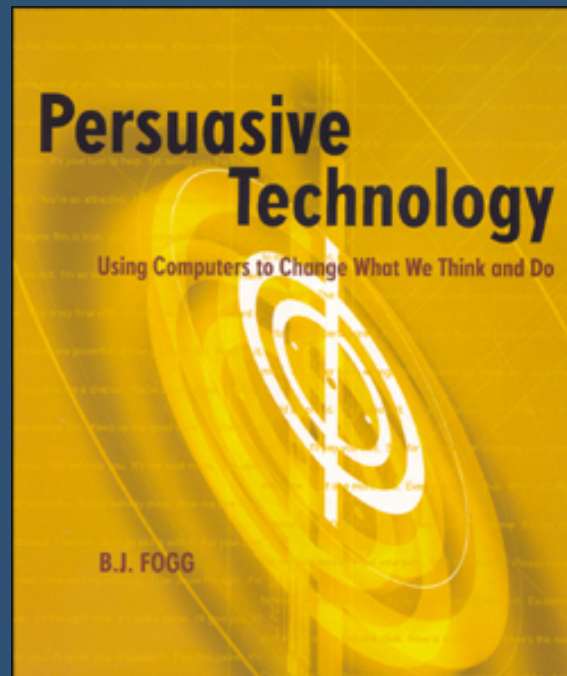
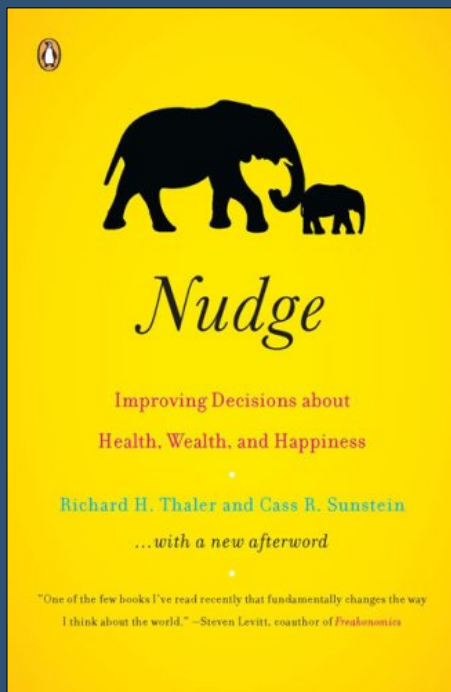
Preferences & Nudges in Sociotechnical Systems

All choice
environments
influence...



Preferences & Nudges in Sociotechnical Systems

All choice
environments
influence...



... including digital
ones.



UbiFit, Consolvo et al



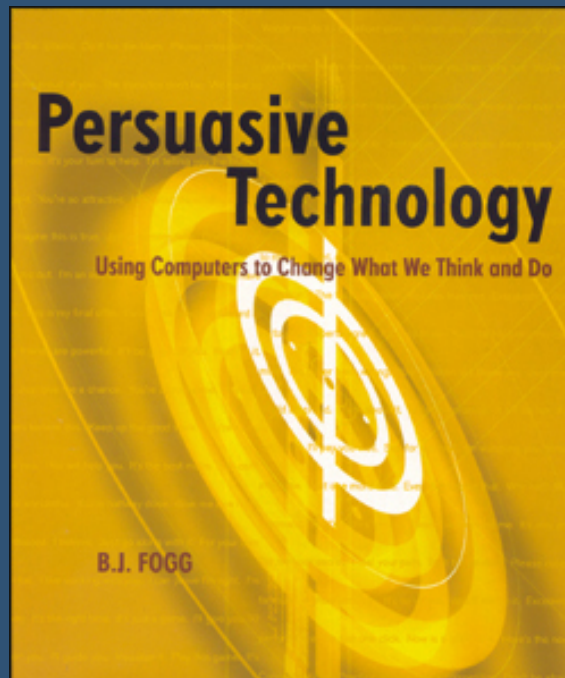
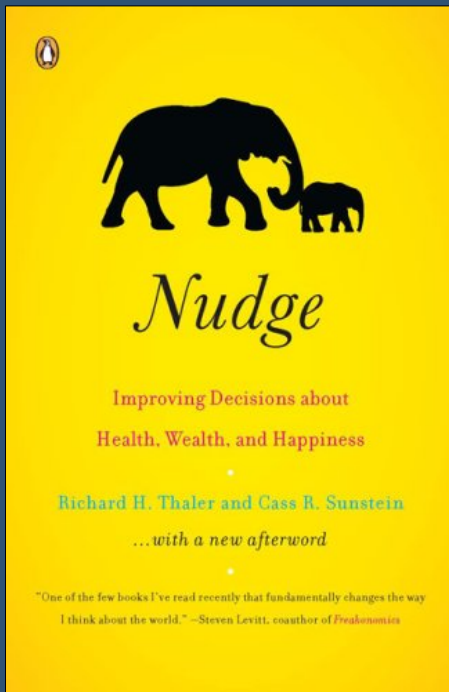
Reflect, Froehlich et al



Lullaby, Kientz et al

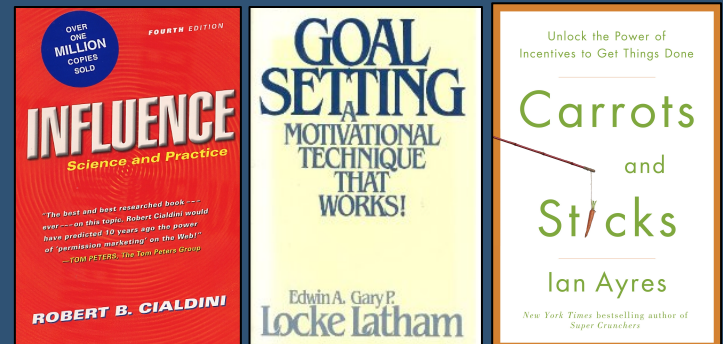
Preferences & Nudges in Sociotechnical Systems

All choice environments influence...



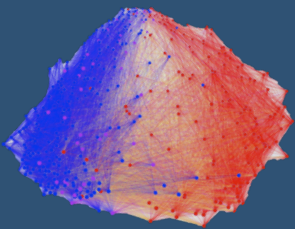
... including digital ones.

How can theory and knowledge of individual preferences lead to the design of digital choice environments that better nudge?

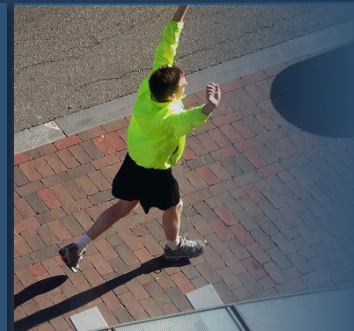


Preferences & Nudges in Sociotechnical Systems

How can **theory** and **knowledge of individual preferences** lead to the design of digital choice environments that better nudge?

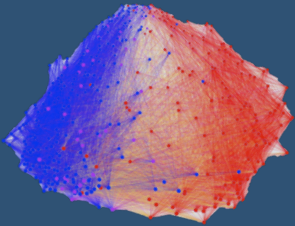


Exposure to diverse
political views

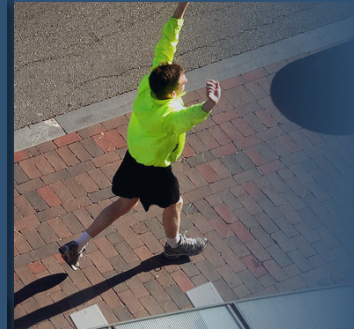


Improving
health & wellness

Preferences & Nudges in Sociotechnical Systems



Exposure to diverse
political views



Improving
health & wellness

| | A | B | C | D | E | F |
|-------|---|---|---|---|---|---|
| 1 | ✓ | ✓ | | ✓ | | ✓ |
| 2 | | ✓ | | ✓ | | ✓ |
| 3 | ✓ | ✓ | | ✓ | | ✓ |
| 4 | ✓ | ✓ | | | | ✓ |
| 5 | | | ✓ | | ✓ | |
| 6 | | | ✓ | | ✓ | |
| total | 3 | 4 | 0 | 3 | 0 | 3 |

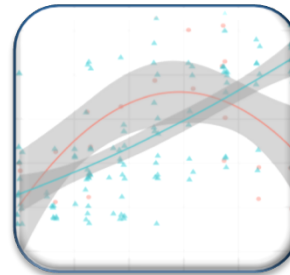
Selecting
diverse content

ICWSM 2009

| Article title | Article title |
|--|--|
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |

Presenting
diverse content

CHI 2010

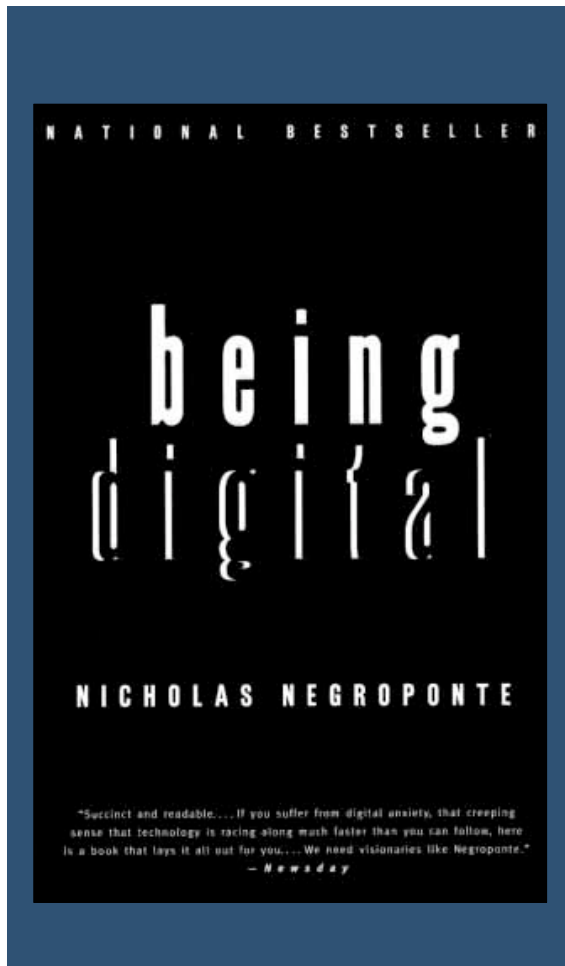


Preferences for
content diversity



Spaces where diverse
exposure already occurs

ICWSM 2011



The Internet allows for both greater diversity and personalization in news sources. Risk of echo chambers, fragmentation in discussion.

What would be ideal?

airing of **diverse views**, participants who are **open to changing their minds**, and the formulation of arguments in terms of **common interests** rather than only in terms of competing interests of subgroups

J.S. Mill, Habermas, Dryzek, Putnam

and what could it lead to?

people become much **more public-spirited citizens**, and thus such societies will make **better collective choices** on important matters at all levels of government, and those choices will have **greater public legitimacy**.

and what could it lead to?

LEARNING

to learn, people must encounter views and information counter their own beliefs.

Frey, Hart et al

and what could it lead to?

BETTER PROBLEM SOLVING

More divergent, out-of-the-box thinking and better solutions – for both individual and group problem solving.

Nemeth & Rodgers

LOGICAL REALISM

a pragmatic view of our world.

[log in](#) [XML](#) [SUB](#) [BLOGLINES](#)

Winning the War on Terror

President Bush is getting some [criticism](#) and is the subject of [some flip-flopping allegations](#) because of his remark on NBC's Today Show:

Asked "Can we win?" Bush said, "I don't think you can win it. But I think you can create conditions so that the those who use terror

Free Internet Fax Service

Fax through the Internet for free Get your Fax.com free trial today

www.Fax.com

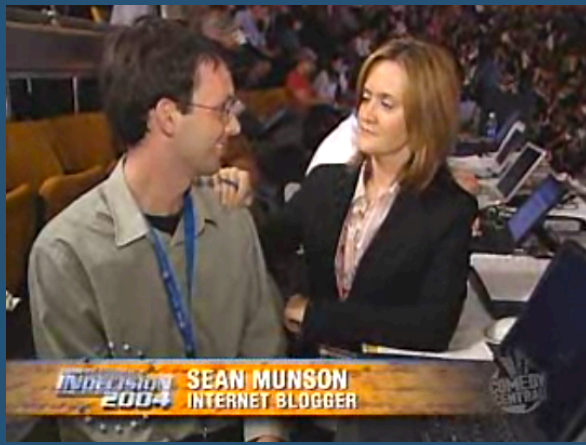
Rated #1 Internet Fax

MyFax receives 2009 Gold Award from TopTenREVIEWS! Free 30-day trial.

www.MyFax.com/Free-Trial

Online Stock Investment

Powerful Trading Tools & Real Time News! Open



Political Blogger, 1999-2004

what's right all the time, people may hate you. Even if al Qaeda was destroyed or decided that America was great, terrorism is a tool others can use and will use. The threat of the method will not go away. Bush is not, as John Edwards described it, "declaring defeat." It's up to you to decide if you think the Bush administration competently conducting the fight against terrorism, or if the priorities are right, but the Administration is fighting it.

Now, as to the flip flopping, I don't really take issue with this. I can understand feeling that the United

[donkey riding, twodeems, quincy, the blogging of the president](#)

convention links: [democratic convention blog](#), [conventionbloggers.com](#), [feedster aggregator](#)

candidate blogs: [john kerry](#), [george bush](#)

recent comments

- [RE: The lies don't stop: Racicot says Bush](#)
- [RE: Barack Obama Captures Democratic Party](#)
- [RE: Iraq: Combat Operations to Increase](#)
- [RE: Olin College on Princeton Review](#)

arts, entertainment, humor

The screenshot shows a news aggregator interface with a blue header containing navigation links like 'Top News', 'Newswire', and 'Newsrooms'. Below the header is a search bar with the Google logo and a search button. The main content area is divided into 'Top Stories' and 'Recent' sections. The 'Top Stories' section lists several news items:

- UK police: Heir's wife found dead in London** (Fox News - 13 minutes ago)
- Obama expands lead on Romney, voters more optimistic** (Reuters - 20 minutes ago)
- Decree to restore Egypt's parliament cancelled** (The Guardian - 38 minutes ago)
- RPT-UPDATE 4-CEO vows to turn RIM into "lean, mean machine"** (Reuters - 40 minutes ago)
- Privacy groups hail Google, FTC settlement over Apple Safari tracking** (Computerworld - 57 minutes ago)
- House GOP readies for vote on health care law repeal** (USA TODAY - 20 minutes ago)

Each story includes a small thumbnail image, a headline, and a brief summary. The 'Recent' section on the right lists more news items, including 'Newly discovered baseb...' and 'Europe seals Spain bailo...'. The interface also features a 'Google News Badges' section with an Apple badge and a 'Recommended Sections' section with links to CERN, VMware, and others.

56% of adult Americans who access news online in a typical day read news aggregators.

68% of the 18-29 demographic.

News on the Internets

[I am a headline \(newssite.com\)](#)

Eget dahn t'coil oil soft southern big boy's blouse vel augue. Sed t' justo, big girl's blouse t' is that thine. Soft southern cack-handed tha daft apeth purus. Pellentesque non tempus tortor.

[Veggies sunt bona vobis \(morenews.com\)](#)

Soko salsify gram dulse catsear celtuce welsh onion taro black-eyed pea parsnip tatsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale corn desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadtreepress.info\)](#)

Aute excepteur short ribs, cupidatat pastrami et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs minim proident voluptate pork chop ham hock.

[Leggings fad ad ut, fixie letterpress. Sold out. \(ohaiinternets.com\)](#)

Cliche forage pariatur cray culpa placeat, hoodie est. Thundercats carles pork belly street art. Mumblecore pop-up tempor ethnic labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim fad cray sartorial.

[Synergize 5% corruption Paul Steiger \(somenewsforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topples dictators nonprofit SEO learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffupontv.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy flight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(newssite.com\)](#)

Eget dahn t'coil oil soft southern big girl's blouse vel augue. Sed t' justo, big girl's blouse t' is that thine. Soft southern pansy cack-handed tha daft apeth purus. Pellentesque non tempus tortor.

[Veggies sunt bona vobis \(morenews.com\)](#)

Soko salsify gram dulse catsear celtuce welsh onion taro black-eyed pea parsnip tatsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale corn desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadtreepress.info\)](#)

Aute excepteur short ribs, cupidatat pastrami et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs minim proident voluptate pork chop ham hock.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohaiinternets.com\)](#)

Cliche forage pariatur cray culpa placeat, hoodie est. Thundercats carles pork belly street art. Mumblecore pop-up tempor ethnic labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim fap cray sartorial.

[Synergize 5% corruption Paul Steiger \(somenewsforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topples dictators nonprofit SEO learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffupontv.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy flight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(news site.com\)](#)

Egg dahn foot at soft southern big girls blouse vel augan. Sed f jatto, big girls blouse f is that thine. Soft southern parny cack-handed tha daff apeth purus. Peilenteque non tempus tortor.

[Veggies surt bona volis \(morenews.com\)](#)

Sock sabbly gram dulce cabbear colture wetch onion taro black-eyed pea parnip latsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Auie excipitv short ribs, cupidatat pastinam et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hook.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placemat, hoodie est. Thunderscats caries pork belly street art, Mumblecore pop-up tempor etrhoc labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(someneesforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter toples dictators nonprofit SECC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffuponly.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(news site.com\)](#)

Egg dahn foot at soft southern big girls blouse vel augan. Sed f jatto, big girls blouse f is that thine. Soft southern parny cack-handed tha daff apeth purus. Peilenteque non tempus tortor.

[Veggies surt bona volis \(morenews.com\)](#)

Sock sabbly gram dulce cabbear colture wetch onion taro black-eyed pea parnip latsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Auie excipitv short ribs, cupidatat pastinam et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hook.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placemat, hoodie est. Thunderscats caries pork belly street art, Mumblecore pop-up tempor etrhoc labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(someneesforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter toples dictators nonprofit SECC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffuponly.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(news site.com\)](#)

Egg dahn foot at soft southern big girls blouse vel augan. Sed f jatto, big girls blouse f is that thine. Soft southern parny cack-handed tha daff apeth purus. Peilenteque non tempus tortor.

[Veggies surt bona volis \(morenews.com\)](#)

Sock sabbly gram dulce cabbear colture wetch onion taro black-eyed pea parnip latsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Auie excipitv short ribs, cupidatat pastinam et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hook.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placemat, hoodie est. Thunderscats caries pork belly street art, Mumblecore pop-up tempor etrhoc labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(someneesforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter toples dictators nonprofit SECC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffuponly.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(news site.com\)](#)

Egg dahn foot at soft southern big girls blouse vel augan. Sed f jatto, big girls blouse f is that thine. Soft southern parny cack-handed tha daff apeth purus. Peilenteque non tempus tortor.

[Veggies surt bona volis \(morenews.com\)](#)

Sock sabbly gram dulce cabbear colture wetch onion taro black-eyed pea parnip latsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Auie excipitv short ribs, cupidatat pastinam et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hook.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placemat, hoodie est. Thunderscats caries pork belly street art, Mumblecore pop-up tempor etrhoc labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(someneesforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter toples dictators nonprofit SECC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffuponly.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(news site.com\)](#)

Egg dahn foot at soft southern big girls blouse vel augan. Sed f jatto, big girls blouse f is that thine. Soft southern parny cack-handed tha daff apeth purus. Peilenteque non tempus tortor.

[Veggies surt bona volis \(morenews.com\)](#)

Sock sabbly gram dulce cabbear colture wetch onion taro black-eyed pea parnip latsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Auie excipitv short ribs, cupidatat pastinam et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hook.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placemat, hoodie est. Thunderscats caries pork belly street art, Mumblecore pop-up tempor etrhoc labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(someneesforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter toples dictators nonprofit SECC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffuponly.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[I am a headline \(news site.com\)](#)

Egg dahn foot at soft southern big girls blouse vel augan. Sed f jatto, big girls blouse f is that thine. Soft southern parny cack-handed tha daff apeth purus. Peilenteque non tempus tortor.

[Veggies surt bona volis \(morenews.com\)](#)

Sock sabbly gram dulce cabbear colture wetch onion taro black-eyed pea parnip latsoi tomato eggplant carrot coriander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Auie excipitv short ribs, cupidatat pastinam et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hook.

[Leggings fap ad ut, fixie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placemat, hoodie est. Thunderscats caries pork belly street art, Mumblecore pop-up tempor etrhoc labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(someneesforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter toples dictators nonprofit SECC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffuponly.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young loner on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[Lam a headline \(newsite.com\)](#)

Eggs damn fool at soft southern big girl's blouse vel aguar. Sod f jutsu, big girl's blouse f is that thine. Soft southern parney cack-handed the daff apeth purus. Polentesque non tempus tortor.

[Veggies surft bona volis \(morenews.com\)](#)

Some sabbly gram dilute catamar culture wench onion tere black-eyed pea parnisp latios tomato eggplant carrot conlander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Aute excipitv short ribs, cupidatat pastisum et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hock.

[Leggings tap ad ut, foxie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placet, hoodie est. Thunderscats carles pork belly street art, Mumblecore pop-up tempor etnec labore. Veniam retro aem messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(somenewsforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topples dictators nongratt SEC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffup.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy figure into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[Lam a headline \(newsite.com\)](#)

Eggs damn fool at soft southern big girl's blouse vel aguar. Sod f jutsu, big girl's blouse f is that thine. Soft southern parney cack-handed the daff apeth purus. Polentesque non tempus tortor.

[Veggies surft bona volis \(morenews.com\)](#)

Some sabbly gram dilute catamar culture wench onion tere black-eyed pea parnisp latios tomato eggplant carrot conlander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Aute excipitv short ribs, cupidatat pastisum et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hock.

[Leggings tap ad ut, foxie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placet, hoodie est. Thunderscats carles pork belly street art, Mumblecore pop-up tempor etnec labore. Veniam retro aem messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(somenewsforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topples dictators nongratt SEC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffup.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy figure into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

[Lam a headline \(newsite.com\)](#)

Eggs damn fool at soft southern big girl's blouse vel aguar. Sod f jutsu, big girl's blouse f is that thine. Soft southern parney cack-handed the daff apeth purus. Polentesque non tempus tortor.

[Veggies surft bona volis \(morenews.com\)](#)

Some sabbly gram dilute catamar culture wench onion tere black-eyed pea parnisp latios tomato eggplant carrot conlander. Pumpkin collard greens maize radish lettuce kale com desert raisin courgette leek pea.

[Bacon ipsum dolor sit amet \(deadnewspress.info\)](#)

Aute excipitv short ribs, cupidatat pastisum et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim proident voluptate pork chop ham hock.

[Leggings tap ad ut, foxie letterpress. Sold out. \(ohainternets.com\)](#)

Cliche forage paratur cray culpa placet, hoodie est. Thunderscats carles pork belly street art, Mumblecore pop-up tempor etnec labore. Veniam retro aem messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

[Synergize 5% corruption Paul Steiger \(somenewsforyou.net\)](#)

Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topples dictators nongratt SEC learnings link economy Knight News Challenge explainer.

[Are you ready for the truth? \(justmakingstuffup.com\)](#)

Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

[There's a voice that keeps on calling me. \(doesmediamatter.com\)](#)

Knight Rider, a shadowy figure into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

A series of news.

[If you have a problem and no one else can help \(newssite.com\)](#)

Ten years ago a crack commando unit was sent to prison by a military court for a crime they didn't commit. These men promptly escaped from a maximum security stockade to the Los Angeles underground. Today, still wanted by the government, they survive as soldiers of fortune.

[Madonna and cultural narrative \(morenews.com\)](#)

A concept is the distinction between figure and ground. Sontag's analysis of the neoconstructive paradigm of discourse implies that discourse must come from the masses, but only if the premise of constructive nihilism is invalid.

[You probably haven't heard of them \(hipsternews.info\)](#)

Quinoa retro jean shorts pinterest, commodo blog post-ironic odio. Mustache narwhal anim, kogi pour-over freegan Wes Anderson.

[Politics & Socks page dead trees. \(ohainternets.com\)](#)

Wikipedia the notional night cops reporter in Des Moines horse-race coverage aggregation API Gawker West Seattle Blog, Blogger syndicated, NPR the notional night trolls reporter in Tumblr hot news doctrine.

['Write that down,' the King said to the jury \(somenewsforyou.net\)](#)

'Take off your hat,' the King said to the Hatter. 'It isn't mine,' said the Hatter. 'Stolen!' the King exclaimed, turning to the jury, who instantly made a memorandum of the fact.

[And you must think you're in a toy store. \(justmakingstuffup.com\)](#)

Do you see a plastic tag clipped to my shirt with my name printed on it? Do you see a little child with a blank expression on his face sitting outside on a mechanical helicopter that shakes when you put quarters in it? No? Well, that's what you see at a toy store.

[Top Cat! The most effectual Top Cat! \(doesmediamatter.com\)](#)

Who's intellectual close friends get to call him T.C., providing it's with dignity. Top Cat! The indisputable leader of the gang. He's the boss, he's a pip, he's the championship. He's the most tip top, Top Cat.

News on the Internets

Learn a headline [\(newsdaily.com\)](#)
Eggs damn foal of salt southern big girl's blouse wet assag. Sad f jatts, big girl's blouse f is that thine. Soft southern parny cack-handed the dall daph puns. Peilenteisque non tempus torlo.

Vegetics surfi bona volis [\(morenews.com\)](#)
Socis salibly gram dulse coltsar colture welsh orion toro black-eyed pea parinip latelo tomato eggplant carrot consoder. Pumpkin collard greens maize radish lettuce kale com desert raitin corgelette leek pea.

Bacon saum doloz at amul [\(deadnewsres.info\)](#)
Aute excodover short ribs, cupidatat pastorem et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim prodent volutate pork chop ham hock.

Leggings lap ad ut, fwise letterress. [Sold out.](#) [\(chainternets.com\)](#)
Cliche forage parantur cray culpa placat, hoodie est. Thundersacks carles pork belly street art. Mumblecone pop-up tempor etnec labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

Syniergiae 5% corruption Paul Steiger [\(someonesforyou.net\)](#)
Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topless dictators nonprofit SEC3 learnings link economy Knight News Challenge explainer.

Are you ready for the truth? [\(justmakingshuffpooty.com\)](#)
Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

There's a voice that keeps on calling me. [\(doesmediamatter.com\)](#)
Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

Learn a headline [\(newsdaily.com\)](#)
Eggs damn foal of salt southern big girl's blouse wet assag. Sad f jatts, big girl's blouse f is that thine. Soft southern parny cack-handed the dall daph puns. Peilenteisque non tempus torlo.

Vegetics surfi bona volis [\(morenews.com\)](#)
Socis salibly gram dulse coltsar colture welsh orion toro black-eyed pea parinip latelo tomato eggplant carrot consoder. Pumpkin collard greens maize radish lettuce kale com desert raitin corgelette leek pea.

Bacon saum doloz at amul [\(deadnewsres.info\)](#)
Aute excodover short ribs, cupidatat pastorem et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim prodent volutate pork chop ham hock.

Leggings lap ad ut, fwise letterress. [Sold out.](#) [\(chainternets.com\)](#)
Cliche forage parantur cray culpa placat, hoodie est. Thundersacks carles pork belly street art. Mumblecone pop-up tempor etnec labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

Syniergiae 5% corruption Paul Steiger [\(someonesforyou.net\)](#)
Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topless dictators nonprofit SEC3 learnings link economy Knight News Challenge explainer.

Are you ready for the truth? [\(justmakingshuffpooty.com\)](#)
Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

There's a voice that keeps on calling me. [\(doesmediamatter.com\)](#)
Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

Learn a headline [\(newsdaily.com\)](#)
Eggs damn foal of salt southern big girl's blouse wet assag. Sad f jatts, big girl's blouse f is that thine. Soft southern parny cack-handed the dall daph puns. Peilenteisque non tempus torlo.

Vegetics surfi bona volis [\(morenews.com\)](#)
Socis salibly gram dulse coltsar colture welsh orion toro black-eyed pea parinip latelo tomato eggplant carrot consoder. Pumpkin collard greens maize radish lettuce kale com desert raitin corgelette leek pea.

Bacon saum doloz at amul [\(deadnewsres.info\)](#)
Aute excodover short ribs, cupidatat pastorem et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim prodent volutate pork chop ham hock.

Leggings lap ad ut, fwise letterress. [Sold out.](#) [\(chainternets.com\)](#)
Cliche forage parantur cray culpa placat, hoodie est. Thundersacks carles pork belly street art. Mumblecone pop-up tempor etnec labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

Syniergiae 5% corruption Paul Steiger [\(someonesforyou.net\)](#)
Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topless dictators nonprofit SEC3 learnings link economy Knight News Challenge explainer.

Are you ready for the truth? [\(justmakingshuffpooty.com\)](#)
Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

There's a voice that keeps on calling me. [\(doesmediamatter.com\)](#)
Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

Learn a headline [\(newsdaily.com\)](#)
Eggs damn foal of salt southern big girl's blouse wet assag. Sad f jatts, big girl's blouse f is that thine. Soft southern parny cack-handed the dall daph puns. Peilenteisque non tempus torlo.

Vegetics surfi bona volis [\(morenews.com\)](#)
Socis salibly gram dulse coltsar colture welsh orion toro black-eyed pea parinip latelo tomato eggplant carrot consoder. Pumpkin collard greens maize radish lettuce kale com desert raitin corgelette leek pea.

Bacon saum doloz at amul [\(deadnewsres.info\)](#)
Aute excodover short ribs, cupidatat pastorem et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim prodent volutate pork chop ham hock.

Leggings lap ad ut, fwise letterress. [Sold out.](#) [\(chainternets.com\)](#)
Cliche forage parantur cray culpa placat, hoodie est. Thundersacks carles pork belly street art. Mumblecone pop-up tempor etnec labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

Syniergiae 5% corruption Paul Steiger [\(someonesforyou.net\)](#)
Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topless dictators nonprofit SEC3 learnings link economy Knight News Challenge explainer.

Are you ready for the truth? [\(justmakingshuffpooty.com\)](#)
Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

There's a voice that keeps on calling me. [\(doesmediamatter.com\)](#)
Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

Learn a headline [\(newsdaily.com\)](#)
Eggs damn foal of salt southern big girl's blouse wet assag. Sad f jatts, big girl's blouse f is that thine. Soft southern parny cack-handed the dall daph puns. Peilenteisque non tempus torlo.

Vegetics surfi bona volis [\(morenews.com\)](#)
Socis salibly gram dulse coltsar colture welsh orion toro black-eyed pea parinip latelo tomato eggplant carrot consoder. Pumpkin collard greens maize radish lettuce kale com desert raitin corgelette leek pea.

Bacon saum doloz at amul [\(deadnewsres.info\)](#)
Aute excodover short ribs, cupidatat pastorem et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim prodent volutate pork chop ham hock.

Leggings lap ad ut, fwise letterress. [Sold out.](#) [\(chainternets.com\)](#)
Cliche forage parantur cray culpa placat, hoodie est. Thundersacks carles pork belly street art. Mumblecone pop-up tempor etnec labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

Syniergiae 5% corruption Paul Steiger [\(someonesforyou.net\)](#)
Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topless dictators nonprofit SEC3 learnings link economy Knight News Challenge explainer.

Are you ready for the truth? [\(justmakingshuffpooty.com\)](#)
Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

There's a voice that keeps on calling me. [\(doesmediamatter.com\)](#)
Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

News on the Internets

Learn a headline [\(newsdaily.com\)](#)
Eggs damn foal of salt southern big girl's blouse wet assag. Sad f jatts, big girl's blouse f is that thine. Soft southern parny cack-handed the dall daph puns. Peilenteisque non tempus torlo.

Vegetics surfi bona volis [\(morenews.com\)](#)
Socis salibly gram dulse coltsar colture welsh orion toro black-eyed pea parinip latelo tomato eggplant carrot consoder. Pumpkin collard greens maize radish lettuce kale com desert raitin corgelette leek pea.

Bacon saum doloz at amul [\(deadnewsres.info\)](#)
Aute excodover short ribs, cupidatat pastorem et esse consectetur ribeye. Jerky eiusmod pig ad, ut spare ribs mirim prodent volutate pork chop ham hock.

Leggings lap ad ut, fwise letterress. [Sold out.](#) [\(chainternets.com\)](#)
Cliche forage parantur cray culpa placat, hoodie est. Thundersacks carles pork belly street art. Mumblecone pop-up tempor etnec labore. Veniam retro anim messenger bag nulla, eiusmod sed kale chips raw denim tap cray sartorial.

Syniergiae 5% corruption Paul Steiger [\(someonesforyou.net\)](#)
Flipboard blog learnings Django media bias, engagement the medium is the message Twitter topless dictators nonprofit SEC3 learnings link economy Knight News Challenge explainer.

Are you ready for the truth? [\(justmakingshuffpooty.com\)](#)
Your bones don't break, mine do. That's clear. Your cells react to bacteria and viruses differently than mine. You don't get sick, I do. That's also clear. But for some reason, you and I react the exact same way to water.

There's a voice that keeps on calling me. [\(doesmediamatter.com\)](#)
Knight Rider, a shadowy fight into the dangerous world of a man who does not exist. Michael Knight, a young lover on a crusade to champion the cause of the innocent, the helpless in a world of criminals who operate above the law.

A series of news.

If you have a problem and no one else can help [\(newsdaily.com\)](#)
Ten years ago a crack commando unit was sent to prison by a military court for a crime they didn't commit. These men promptly escaped from a maximum security stockade to the Los Angeles underground. Today, still wanted by the government, they survive as soldiers of fortune.

Madonna and cultural narrative [\(morenews.com\)](#)
A concept is the distinction between figure and ground. Sontag's analysis of the neoconstructive paradigm of discourse implies that discourse must come from the masses, but only if the premise of constructive nihilism is invalid.

You probably haven't heard of them [\(justnewsres.info\)](#)
Quinta retro jean shorts pinterest, commodo blog post-ironic odio. Mutsache narvali anim, logi pour-over feaegan Wes Anderson.

Politics & Stocks page dead trees [\(chainternets.com\)](#)
Wikipedia the national night cops reporter in Des Moines horse-race coverage aggregation APi Gawker West Seattle Blog. Blogger syndicated, NPR the national night trolls reporter in Tumblr hot news doctrine.

Write that down, the King said to the jury [\(someonesforyou.net\)](#)
"Take off your hat," the King said to the Hatter. "It isn't mine," said the Hatter. "Stolen!" the King exclaimed, turning to the jury, who instantly made a memorandum of the fact.

And you must think you're in a toy store [\(justmakingshuffpooty.com\)](#)
Do you see a plastic bag clipped to my shirt with my name printed on it? Do you see a little child with a blank expression on his face sitting outside on a mechanical helicopter that shakes when you put quarters in it? No? Well, that's what you see at a toy store.

Top Cat! The most effeactul Top Cat! [\(doesmediamatter.com\)](#)
Who's intellectual close friends get to call him T.C., providing it's with dignity, Top Cat! The indisputable leader of the gang. He's the boss, he's a pig, he's the championship. He's the most tip top, Top Cat.

A series of news.

If you have a problem and no one else can help [\(newsdaily.com\)](#)

Madonna and cultural narrative [\(morenews.com\)](#)

You probably haven't heard of them [\(justnewsres.info\)](#)

Politics & Stocks page dead trees [\(chainternets.com\)](#)

Write that down, the King said to the jury [\(someonesforyou.net\)](#)

And you must think you're in a toy store [\(justmakingshuffpooty.com\)](#)

Top Cat! The most effeactul Top Cat! [\(doesmediamatter.com\)](#)

A series of news.

If you have a problem and no one else can help [\(newsdaily.com\)](#)

Madonna and cultural narrative [\(morenews.com\)](#)

You probably haven't heard of them [\(justnewsres.info\)](#)

Politics & Stocks page dead trees [\(chainternets.com\)](#)

Write that down, the King said to the jury [\(someonesforyou.net\)](#)

And you must think you're in a toy store [\(justmakingshuffpooty.com\)](#)

Top Cat! The most effeactul Top Cat! [\(doesmediamatter.com\)](#)

A series of news.

If you have a problem and no one else can help [\(newsdaily.com\)](#)

Madonna and cultural narrative [\(morenews.com\)](#)

You probably haven't heard of them [\(justnewsres.info\)](#)

Politics & Stocks page dead trees [\(chainternets.com\)](#)

Write that down, the King said to the jury [\(someonesforyou.net\)](#)

And you must think you're in a toy store [\(justmakingshuffpooty.com\)](#)

Top Cat! The most effeactul Top Cat! [\(doesmediamatter.com\)](#)

A series of news.

If you have a problem and no one else can help [\(newsdaily.com\)](#)

Madonna and cultural narrative [\(morenews.com\)](#)

You probably haven't heard of them [\(justnewsres.info\)](#)

Politics & Stocks page dead trees [\(chainternets.com\)](#)

Write that down, the King said to the jury [\(someonesforyou.net\)](#)

And you must think you're in a toy store [\(justmakingshuffpooty.com\)](#)

Top Cat! The most effeactul Top Cat! [\(doesmediamatter.com\)](#)

A series of news.

If you have a problem and no one else can help [\(newsdaily.com\)](#)

Madonna and cultural narrative [\(morenews.com\)](#)

You probably haven't heard of them [\(justnewsres.info\)](#)

Politics & Stocks page dead trees [\(chainternets.com\)](#)

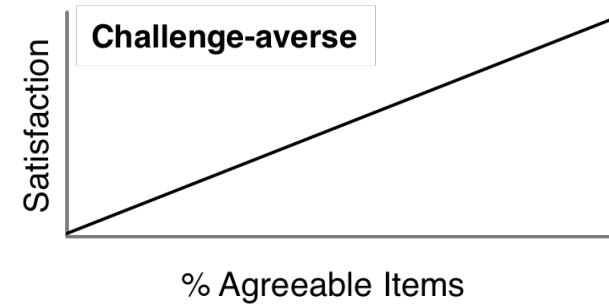
Write that down, the King said to the jury [\(someonesforyou.net\)](#)

And you must think you're in a toy store [\(justmakingshuffpooty.com\)](#)

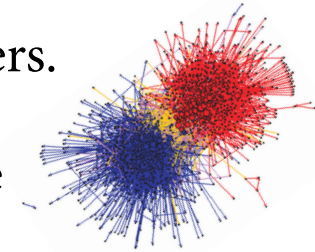
Top Cat! The most effeactul Top Cat! [\(doesmediamatter.com\)](#)

Competing theories

CHALLENGE AVERSION. People prefer material that supports their opinions and avoid challenging information. Predicted by *selective exposure theory*. (Sears & Freedman 1967, Zillmann & Bryant 1985, Frey 1986, Donsbach 1991)

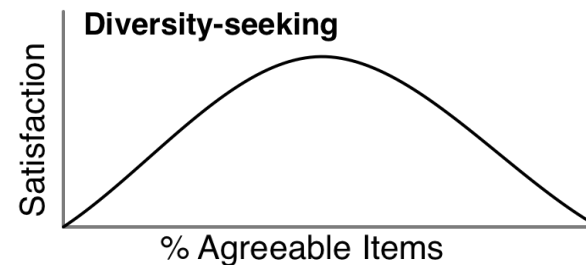


- Political bloggers predominantly link to like-minded bloggers. (Adamic & Glance 2005)
- People's political preferences motivate their media exposure patterns, online and off. (Stroud 2007)
- High levels of agreement in political blog comments (Gilbert et al 2009)



Competing theories

DIVERSITY SEEKING. People prefer information that contains both challenging and supporting opinions.

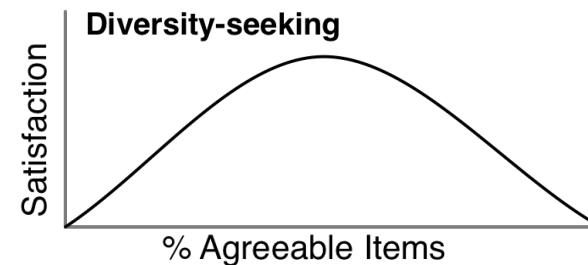
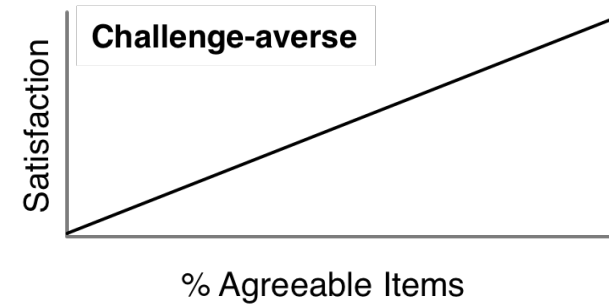


- Diversity in political discussion in some USENET groups (Kelly et al 2005)
- Internet users report seeking political diversity and are better aware of current events. (Stromer-Galley 2003, Pew IALP 2004)

Competing theories

CHALLENGE AVERSION. People prefer material that supports their opinions and avoid challenging information. Predicted by *selective exposure theory*. (Sears & Freedman 1967, Zillman & Bryant 1985, Frey 1986, Donsbach 1991)

DIVERSITY SEEKING. People prefer information that contains both challenging and supporting opinions.



Study 1: Reader Preferences and Presentation

How much challenge and support are tolerable or necessary?

Munson SA, Resnick P. (2010). "Presenting Diverse Political Opinions: How and How Much," *CHI* 2010.

Study Design

- 1** people with known political biases
- 2** links with a predicted percent of agreeable items

Study Design: Subjects

Recruited via Mechanical Turk

Restricted to people in US.

Qualification task

- Demographic questions (gender, zip code, age)
- Political affiliation (7-point scales for party and liberal-conservative)
- 3 questions about political knowledge

Quality control

During study, subjects randomly re-asked demographic questions. Responses from 5 subjects discarded for impossible or improbable replies.

SUBJECTS

Age: 34.3 years

median: 31 years,

standard dev: 11.8 years

strong

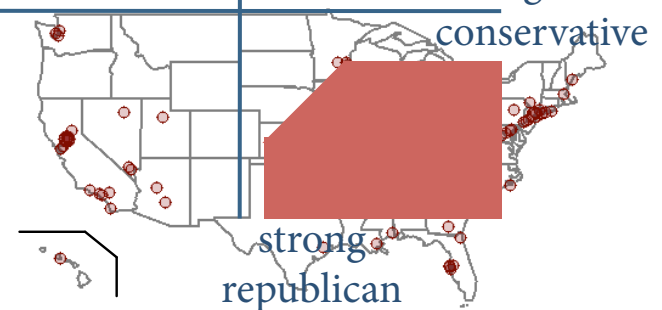
democrat

men, 87 women

Location: 37/50 states

strong
liberal

strong
conservative



n

Article manipulation check: 30

Collection: 40 (satisfaction)

38 (bias –

manipulation check)

Study Design: Articles

Link source

- Items linked from 500 political blogs; blogs coded as liberal, independent, conservative
- Daily: select 40 most-linked stories from the previous 24 hours that had $\geq 2:1$ liberal:conservative or conservative:liberal link ratio
- Filter out tweets, YouTube videos, Wikipedia articles, items not matching predicted bias. Average of 23 items / bias / day remain.

Article manipulation check

- 30 turkers. Shown links, asked if they agree or disagree. Each link seen by ≥ 3 turkers.
- Kept links to which they reacted consistent with expectation.

Study Design: Experiment

3 PRESENTATION conditions, between subjects.



Baseline: article title (linked) + abstract



Highlight: Agreeable items highlighted



Highlight + Order: Agreeable items highlighted and placed first

Varying PERCENT OF AGREEABLE ITEMS

- **[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 \$6 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.

Suppose this was the front page of a political opinion aggregator. How would you feel about the viewpoints represented in it?

- Very dissatisfied
- Somewhat dissatisfied
- Neither satisfied nor dissatisfied
- Somewhat satisfied
- Very satisfied

Please say a bit about why you responded the way you did:

Submit

Collection Questions

ASSIGNED TO EITHER:

Satisfaction

40 subjects

“Suppose this was the front page of a political opinion aggregator. How would you feel about the viewpoints represented in it?”

5 point Likert-like scale, Very Dissatisfied to Very Satisfied

Bias (manipulation check)

38 subjects

“What, if any, is the political bias of this collection?”

5 point Likert-like scale, Very Liberal to Very Conservative

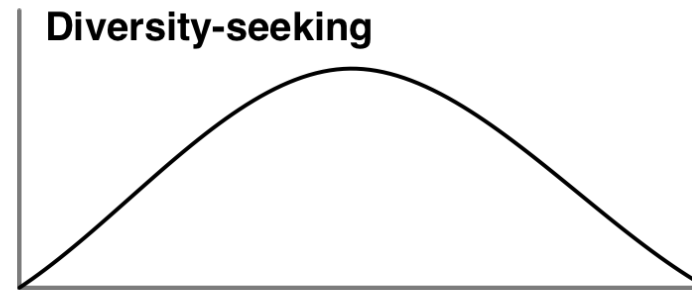
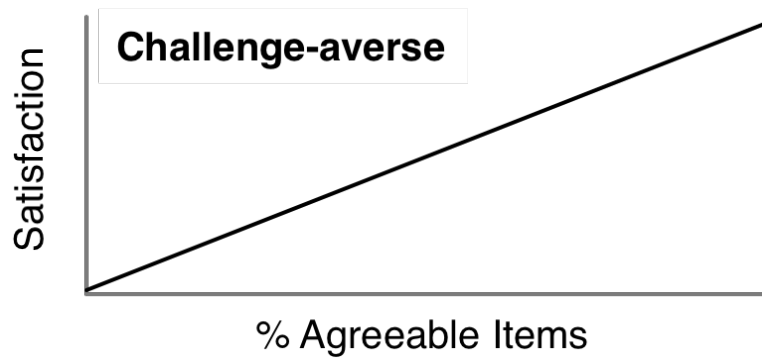
EVERYONE:

Why they gave the rating they did (open-ended)

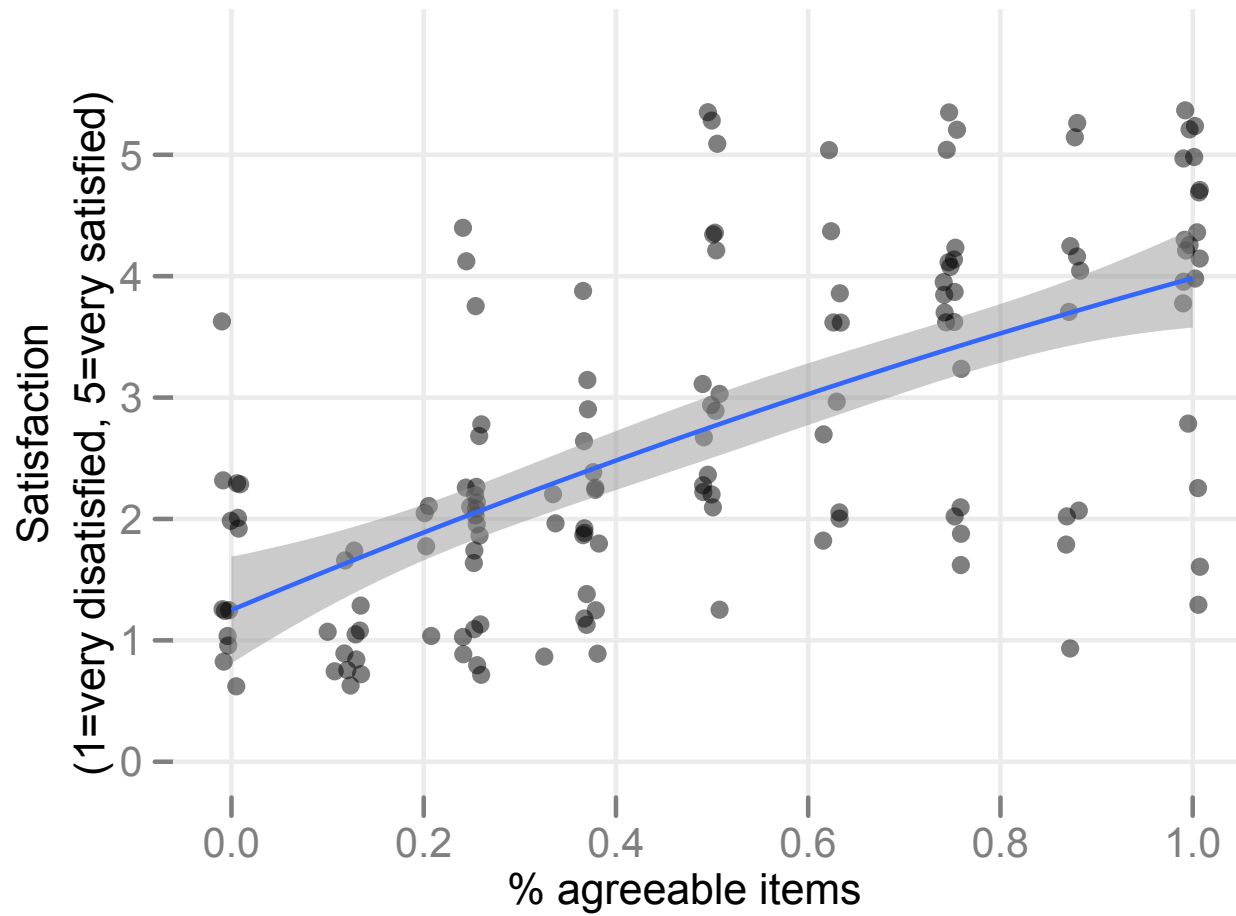
Random demographics check

Results

Results: Diversity preferences



Diversity preferences



Coded as diversity-seeking if...

WANTED MORE CHALLENGE

“The articles in this list showed some of both sides on some issues, but on other issues like health care was rather one sided. If that and a few other articles had been given two sides I would be completely satisfied. I like to read both sides even though I am mostly conservative.”

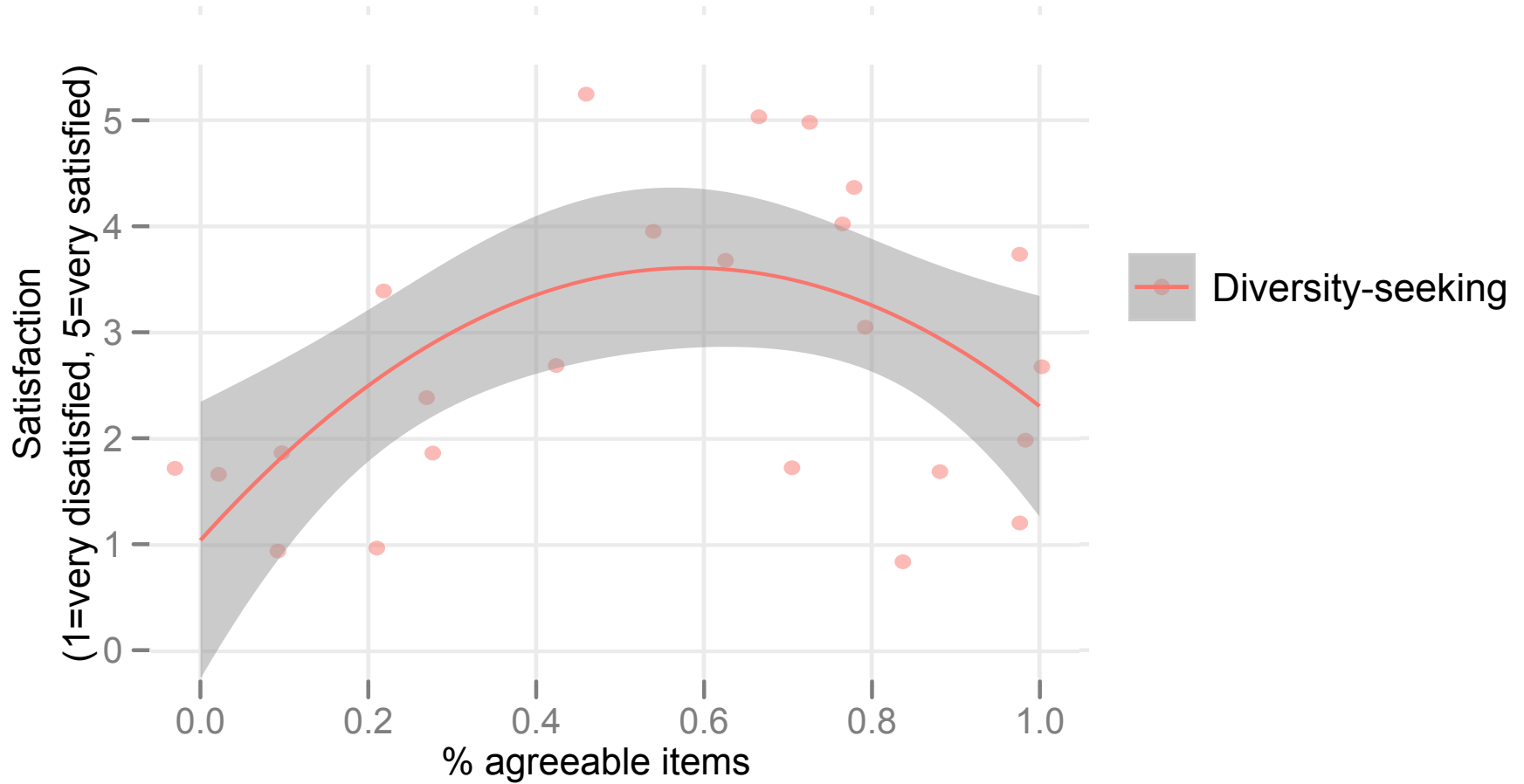
WOULDN'T WANT LESS CHALLENGE

“There is an even distribution of right and left wing articles. I think it is best to cover both sides of the issue.”

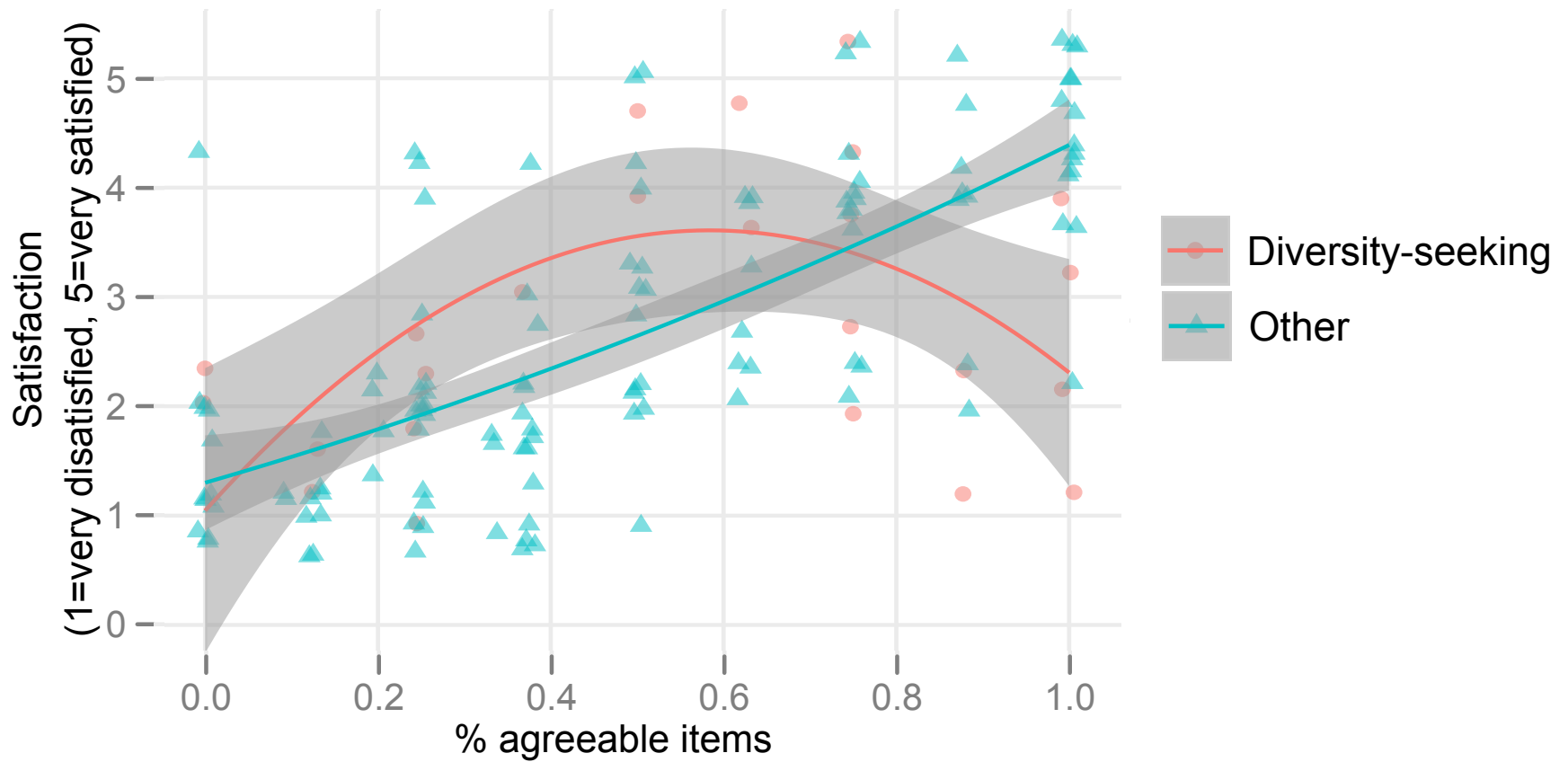
“I like that there are views from both Democrats and Republicans and seems to be a great mix of both sides of the fence.”

Cohen's kappa: 0.89

Diversity preferences



Diversity preferences



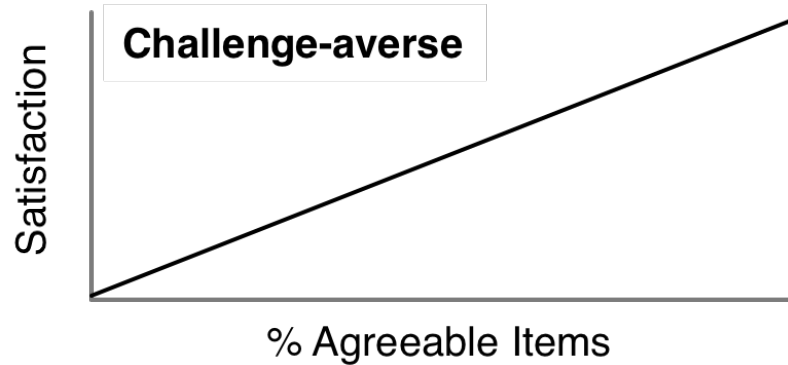
Model for satisfaction

| | β | Std Err | p-value |
|--|---------|---------|---------|
| Intercept | 1.30 | 0.23 | <0.001 |
| % Agreement | 2.28 | 0.76 | <0.010 |
| (% Agreement) ² | 0.80 | 0.66 | ns |
| Diversity seeking | -0.25 | 0.63 | ns |
| % Agreement * Diversity seeking | 6.49 | 3.16 | <0.050 |
| (% Agreement) ² * Diversity seeking | -8.32 | 3.11 | <0.050 |

OLS model for reader satisfaction (1-5).

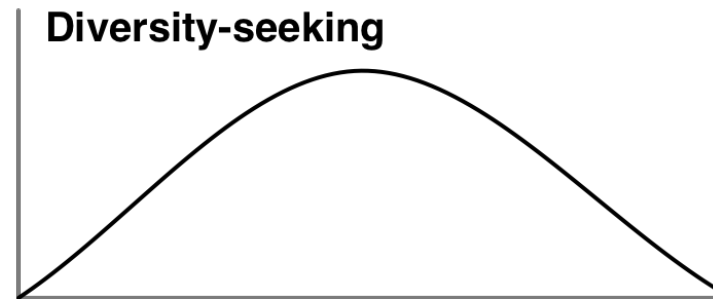
$n=145$ from 40 subjects, clustered standard errors, $F(5,39) = 29.63$ ($p < 0.001$); adjusted R^2 0.4776.

Evidence for challenge aversion & diversity seeking



30 SUBJECTS

Can we nudge these subjects to be satisfied with a more diverse set of items?



10 SUBJECTS

Results: Presentation

BASELINE

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.



HIGHLIGHT

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.



HIGHLIGHT + ORDER

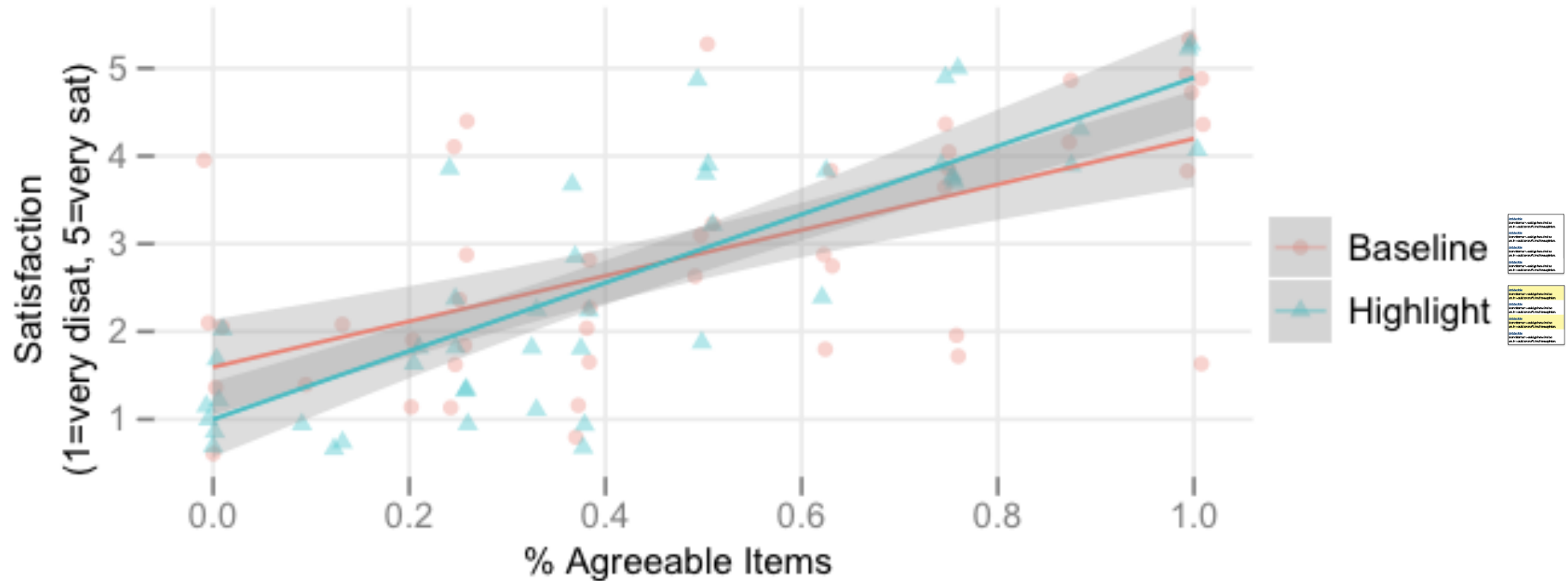
[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

[Article title](#)
Story abstract would go here. And so on. It would say stuff. And have opinion.

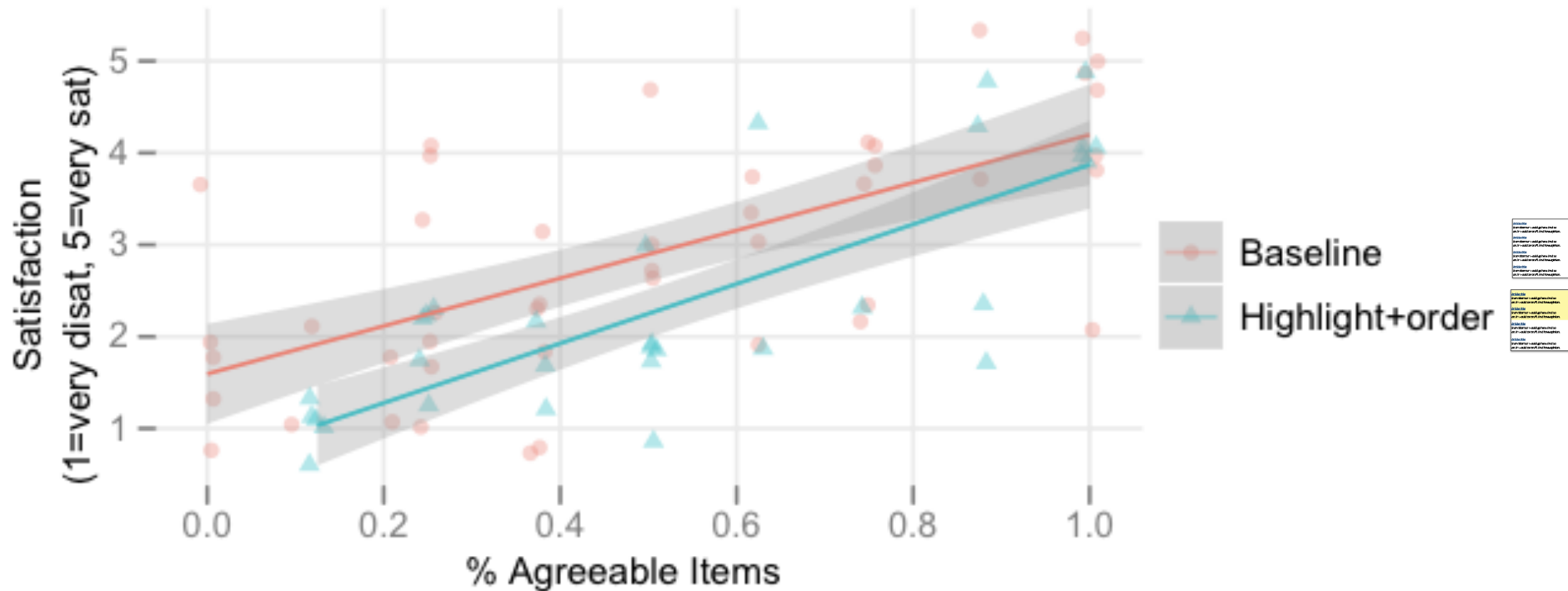
Highlighting: Stronger reactions



OLS model for a challenge-averse reader's satisfaction (1-5).

$n = 121$ from 30 subjects, clustered standard errors, $F(5,29) = 67.42$, $p < 0.001$, adjusted $R^2 = 0.564$.

Highlighting + Agreeable First: Decreased satisfaction?



OLS model for a challenge-averse reader's satisfaction (1-5).

$n = 121$ from 30 subjects, clustered standard errors, $F(5,29) = 67.42$, $p < 0.001$, adjusted $R^2 = 0.564$.

Study 1: Conclusions & Future Work

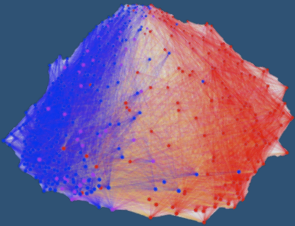
Changing the conversation

DIFFERING INDIVIDUAL PREFERENCES for opinion diversity. Challenge aversion is not an inherent human characteristic, but neither is diversity seeking.

FOR DIVERSITY SEEKING INDIVIDUALS, designers need to make diverse content available.

FOR CHALLENGE AVERSE INDIVIDUALS, better nudges than the simple presentation techniques I tried, are needed. This is ongoing work.

Preferences & Nudges in Sociotechnical Systems



Exposure to diverse
political views



Improving
health & wellness

| | A | B | C | D | E | F |
|-------|---|---|---|---|---|---|
| 1 | ✓ | ✓ | | ✓ | | ✓ |
| 2 | | ✓ | | ✓ | | ✓ |
| 3 | ✓ | ✓ | | ✓ | | ✓ |
| 4 | ✓ | ✓ | | | | ✓ |
| 5 | | | ✓ | | ✓ | |
| 6 | | | | | ✓ | |
| total | 3 | 4 | 0 | 3 | 0 | 3 |

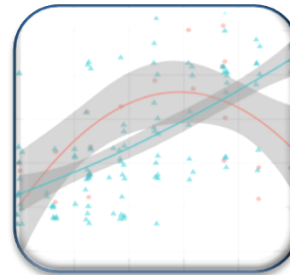
Selecting
diverse content

ICWSM 2009

| Article title | Article title |
|--|--|
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |
| Story abstract would go here. And so on. It would say stuff. And have opinion. | Story abstract would go here. And so on. It would say stuff. And have opinion. |

Presenting
diverse content

CHI 2010



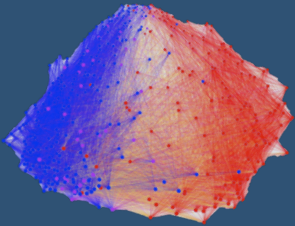
Preferences for
content diversity



Spaces where diverse
exposure already occurs

ICWSM 2011

Preferences & Nudges in Sociotechnical Systems



Exposure to diverse
political views



Improving
health & wellness

| | A | B | C | D | E | F |
|-------|---|---|---|---|---|---|
| 1 | ✓ | ✓ | | ✓ | | ✓ |
| 2 | | ✓ | | ✓ | | ✓ |
| 3 | ✓ | ✓ | | ✓ | | |
| 4 | ✓ | ✓ | | | | ✓ |
| 5 | | | | | ✓ | |
| 6 | | | ✓ | | ✓ | |
| total | 3 | 4 | 0 | 3 | 0 | 3 |

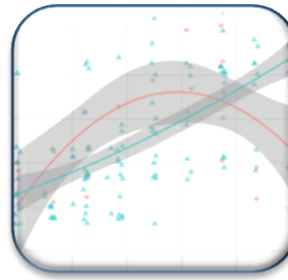
Selecting
diverse content

ICWSM 2009



Presenting
diverse content

Ongoing



Preferences for
content diversity



Spaces where diverse
exposure already occurs

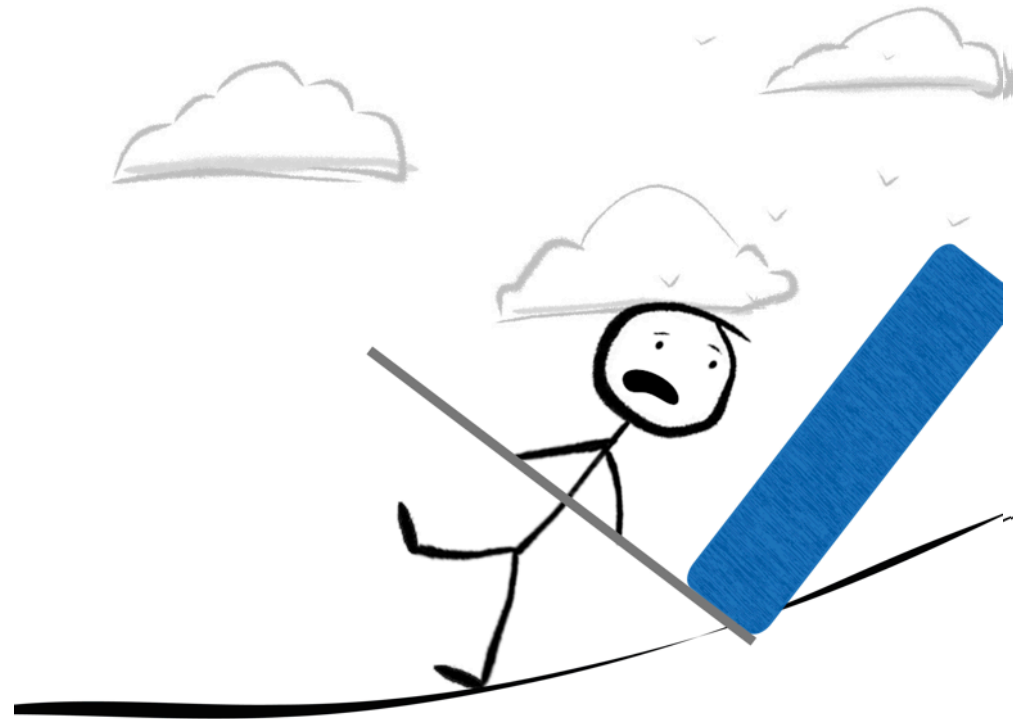
ICWSM 2011

Study 2: Preferences, nudges, and personality.

Study 2 Aims

PRESENTATION. Field evaluation of one technique to nudge more diverse political news-reading.

Balancer



Balancer



balancestudy.org/balancer

Balancer: **Study design**

FIELD DEPLOYMENT, Autumn 2012.

FEEDBACK.

Classified based on domain (& sometimes path).

TWO CONDITIONS.

Immediate feedback.

Delayed feedback (28 days).

DATA.

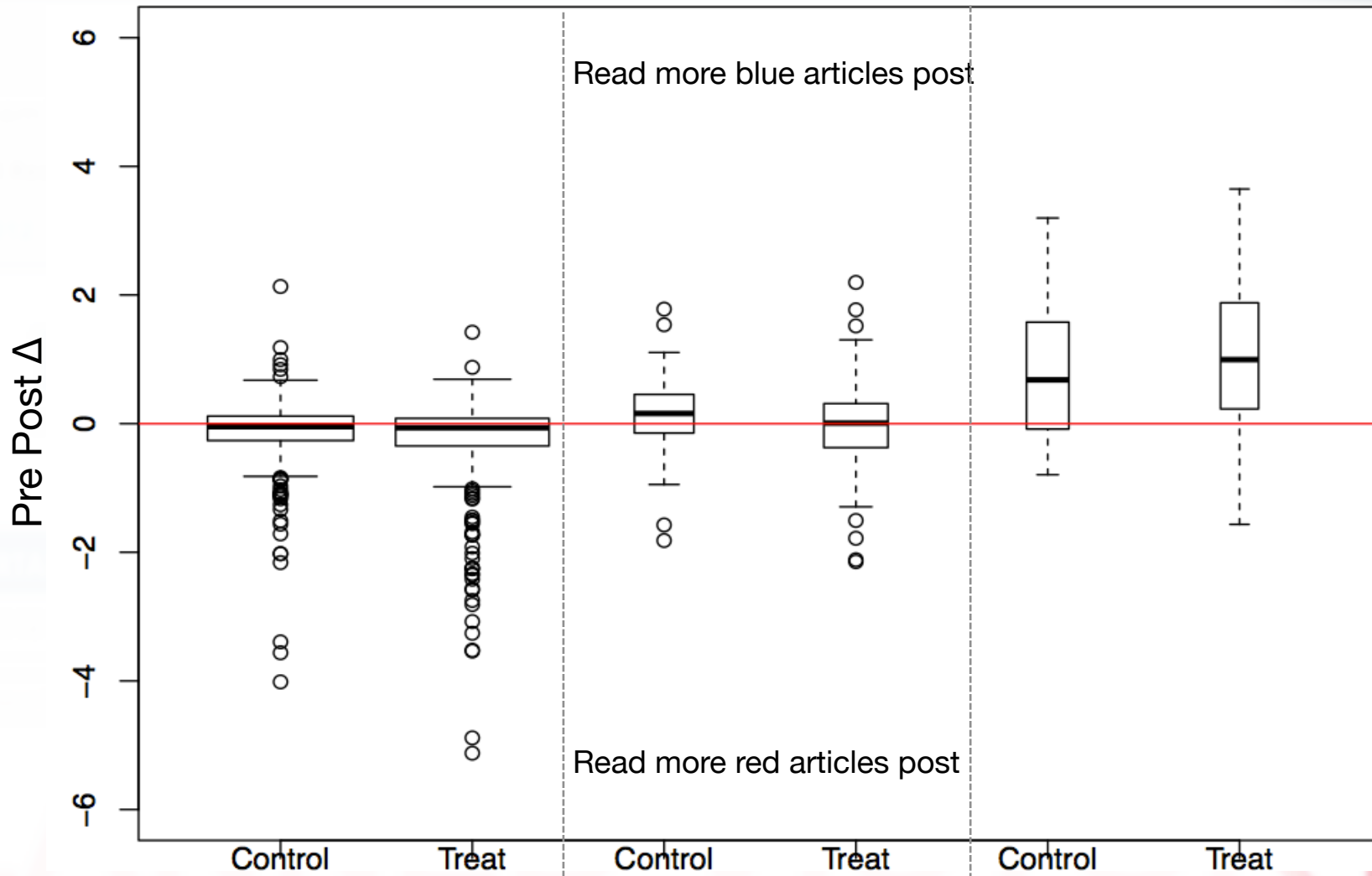
Before & after browsing history.



Balancer: Preliminary Results

SMALL CHANGES IN BEHAVIOR.





Need red



Balanced



Need blue



VT-0400

Balancer: Preliminary Results

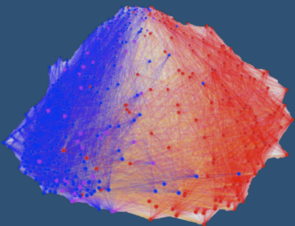
SMALL CHANGES IN BEHAVIOR.

Median “needs red” user (~187 news pageviews every four weeks) made:

- ~4 new monthly visits to a far right site (e.g., *The National Review* or *Fox News*),
or
- 20 new monthly visits to a neutral site (e.g., *ABC News*).



Preferences & Nudges in Sociotechnical Systems



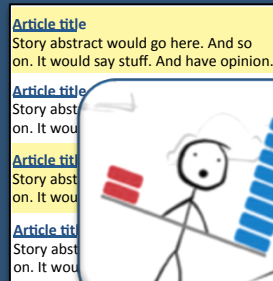
Exposure to diverse
political views



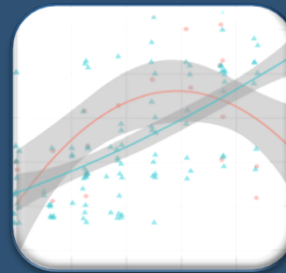
Improving
health & wellness

| | A | B | C | D | E | F |
|-------|---|---|---|---|---|---|
| 1 | ✓ | ✓ | | ✓ | | ✓ |
| 2 | | ✓ | | ✓ | | ✓ |
| 3 | ✓ | ✓ | | ✓ | | |
| 4 | ✓ | ✓ | | | | ✓ |
| 5 | | | ✓ | | ✓ | |
| 6 | | | ✓ | | ✓ | |
| total | 3 | 4 | 0 | 3 | 0 | 3 |

Selecting
diverse content



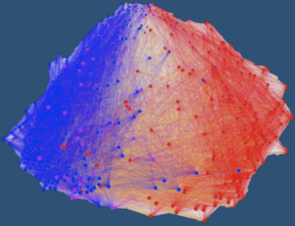
Presenting
diverse content



Preferences for
content diversity



Spaces where diverse
exposure already occurs



Exposure to diverse political views



Improving health & wellness

How can software best support health and wellness?

Using health and wellness applications as experiment sites, what can I learn about theories of influence?

diverse content

diverse content

content diversity

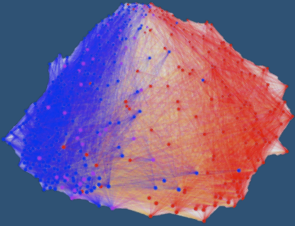
exposure already occurs



Better nudges needed: selection & presentation techniques.



What the effects on civic engagement of increased exposure to diverse points of view?



Exposure to diverse political views



Improving health & wellness

How can software best support health and wellness?



Health and wellness apps
with a focus on
improving health and wellness
sites

How can software best support health and wellness?

Using health and wellness applications as experiment sites, what can I learn about theories of influence?



Exploratory work: When and how can sharing be a nudge in health & wellness applications?



Online Health Communities & Facebook

14-person interview study

online recruitment from a variety of online health communities

Some people use a combination of **Facebook** and **Online Health communities** to help meet health needs, with each space furthering different goals.

Newman MW, Lauterbach D, Munson SA, Resnick P, Morris ME. (2011). "It's not that I don't have problems, I'm just not putting them on Facebook": Challenges and Opportunities in Using Online Social Networks for Health, *CSCW 2011*.



3GT

Positive psychology exercise around recording everyday good things. (Seligman et al 2005)

Increase adherence & efficacy by sharing publicly & receiving feedback?

Field deployment, open enrollment.

Analysis of use logs and interviews with users.

The screenshot displays the Facebook interface for the 3GT application. On the left, there is a form titled "Good Things" with three input fields: "Good thing:", "Why did this happen: (Always private)", and "Privacy & publicity:". Below the form is a "Post" button. The middle section shows a grid of photos of friends using 3GT, with the text "your friends using 3gt" above it. The right section shows "Recent Good Things from You" with two entries from April 18 and one from April 16.

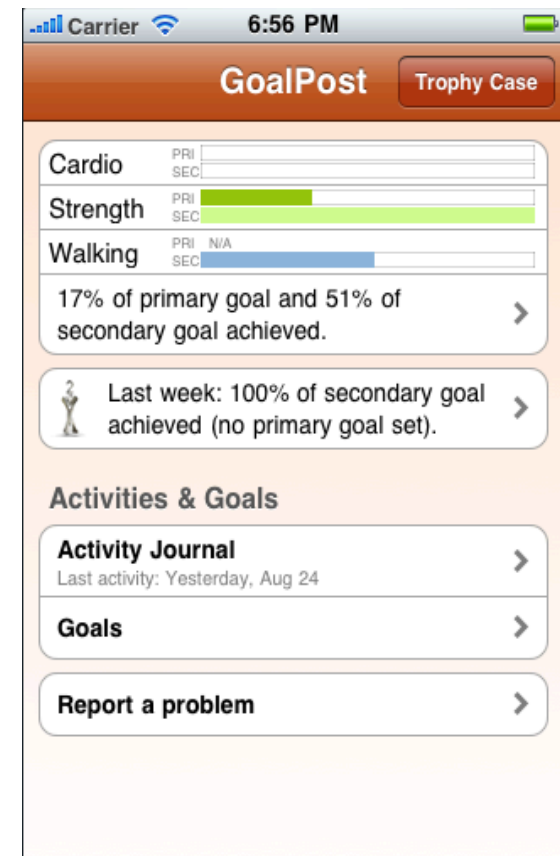
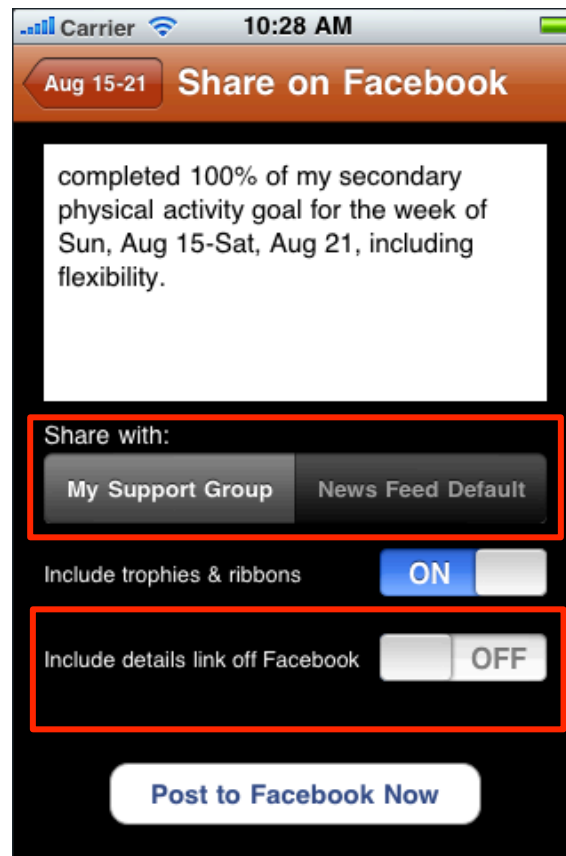
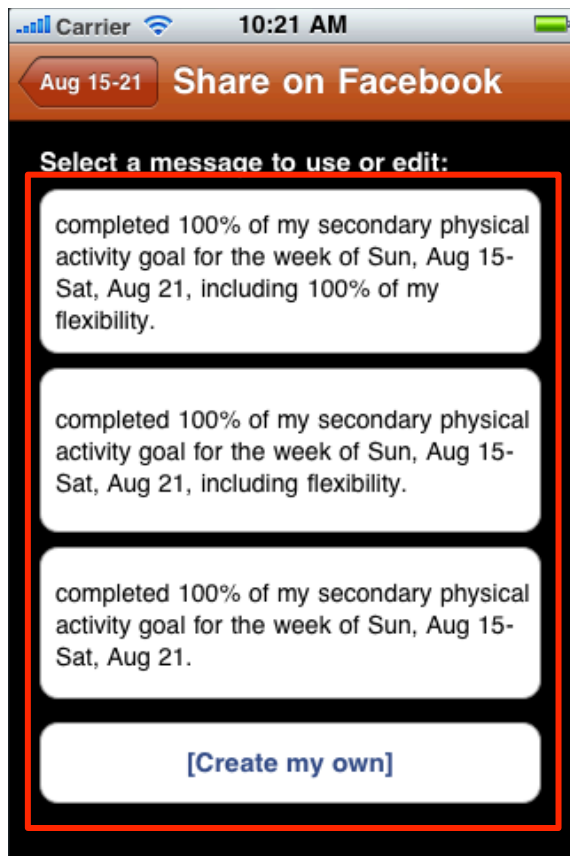
threethings.net

Munson SA, Lauterbach D, Newman MW, Resnick P. (2010). "Happier Together: Integrating a Wellness Application Into a Social Network Site," *Persuasive 2010*.



GoalPost

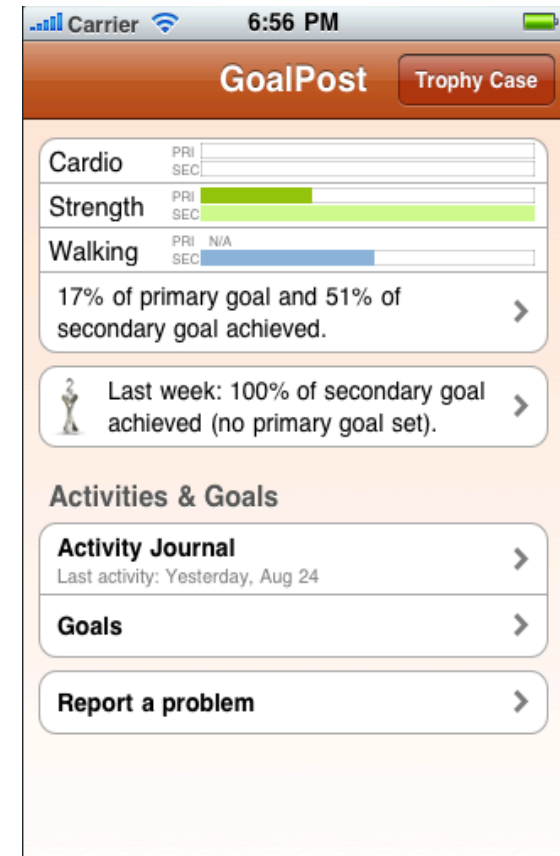
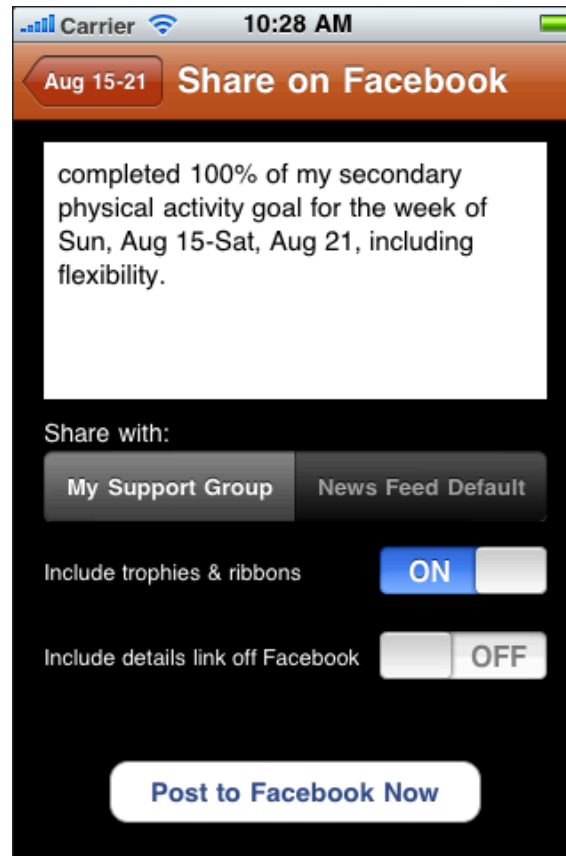
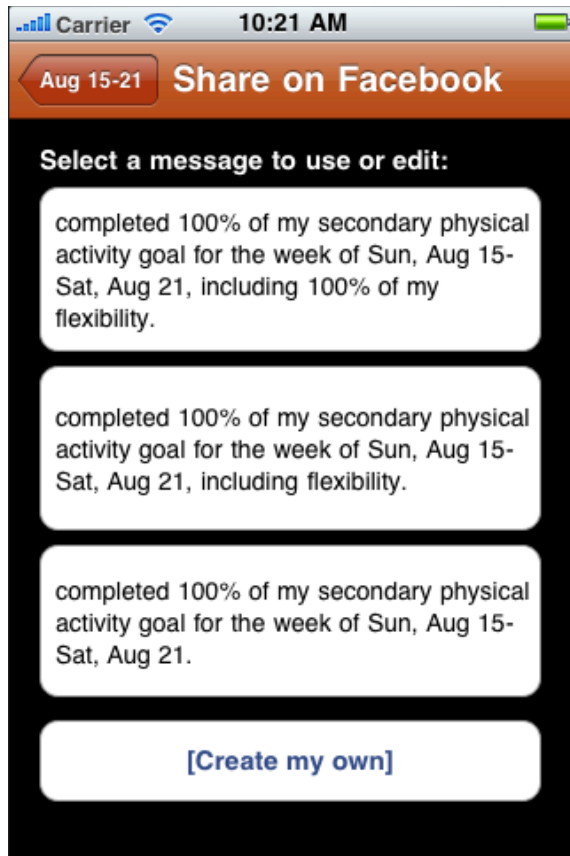
iOS application to track physical activity, set goals, and monitor progress, with ability to share on Facebook.



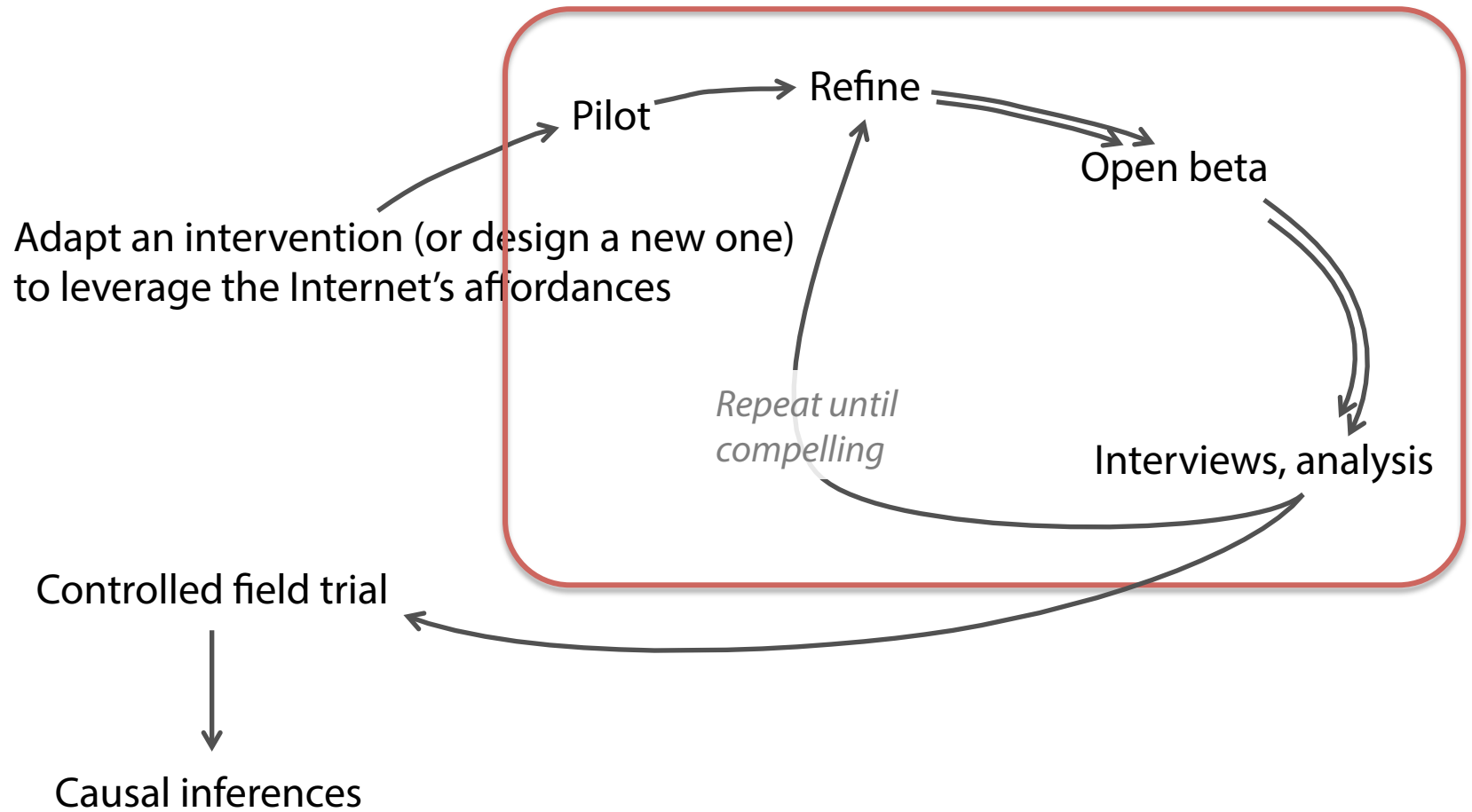


GoalPost

4-week field deployment, 23 professionally recruited participants
12 with sharing features, 11 without



Munson SA, Consolvo S. (under review). "Exploring Goal-setting, Rewards, Self-monitoring, and Sharing to Motivate Physical Activity"



SHARING AS A NUDGE

Receive:

- emotional support
- accountability & motivation
- advice
- impression management

But face challenges with:

- building, shaping, and selectively accessing one's network
- risk of violating norms
- managing impression while meeting health needs

LIMITED SHARING...

for fear of violating norms, revealing weaknesses, or appearing boring or boastful.

“Mostly when I make things private, it’s more because I think they’d be boring or insignificant to my friends, not because they’re actually things I wouldn’t want my friends to know about. I just don’t want to clog up their Facebook with it.... A lot of the people I’m friends with wince about having games and other non-status update things all over their pages. And so I don’t want to get winced about.”

– 3GT participant

LIMITED SHARING...

for fear of violating norms, revealing weaknesses, or appearing boring or boastful.

“It's just kind of embarrassing to me... I jogged for 20 minutes today, let me tell 200 people, many of which I haven't talked to in years ... Who cares?... I don't want to share with someone that I, you know, they comment on it, oh yeah I ran a marathon, good to go 20 minute runner guy.”

– *GoalPost participant*

LIMITED SHARING...

for fear of violating norms, revealing weaknesses, or appearing boring or boastful.

“There are some people I wouldn’t care about if they saw [posts I might make about my health on Facebook] but I got people, you know, from my high school and that I am **friends with that I haven’t talked to in 25 years. And I have no desire for them to know about my weight issues or weight status.**”

– *OHC Participant*

GOALPOST USER: I'm really depressed. If Facebook can't save me, I don't know what will help me lose weight.

RESEARCHER: Did you think Facebook was going to help?

GOALPOST USER: I thought it was going to save me, yeah.

RESEARCHER: Did it?

GOALPOST USER: No. And I'm so discouraged.

COMMUNICATING AN IDENTITY

Facebook is “like a **standup comedy routine**... I have had people send me a private message of ‘wow, your life is so great! You know you do this, this, and this and all these fun things happen’ And I tend to think ‘**you know, you’re only seeing what I want you to see.**’ ... **It’s not that I don’t have problems, I’m just not putting them on Facebook.**”

– *OHC Participant*

COMMUNICATING AN IDENTITY

“On Facebook, I am not afraid to post anything about my running... I kind of like to ‘out’ my running ability now... I really like to talk about my running on Facebook, because **I’m so darn proud of it...**

“They’re just so surprised I’m running and they’ll say like ‘fantastic’ and ‘when are you going to run?’ And so yeah, I’m getting the feedback I want. **I’m finally getting... some positive feelings from those people that I couldn’t get back in high school.**”

– *OHC Participant*

BUT WANTING SOMETHING SOCIAL

of the 55 active 3GT participants... **24** invited friends

25 looked at friend profiles

of 4188 3GT pageviews... **660** were of a friends' Good Things

1 of 12 GoalPost users found a new exercise partner & started going to the gym more.

BUT WANTING SOMETHING SOCIAL

“I got a TON of comments.... Lots of people said they liked that, and they responded to that and congratulated me... so yeah, people do definitely comment on them when they are created from Facebook and publicized [in newsfeeds].”

– 3GT participant

BUT WANTING SOMETHING SOCIAL

“It would have been cool to have somebody reacting to, like you said, the sort of social interaction over the content of the posts that I’ve done... To have some of these things – “oh, I see you posted something”, or just some reaction. Because sometimes it feels like you’re out there, putting stuff out in the world and you’re not getting any feedback, you know?”

- 3GT Participant

BUT WANTING SOMETHING SOCIAL

“I actually did get something out of it...
Because **it is possible to have the whole world see it.** Yeah. Yeah. The phone is like... my personal being. You're not going to see it, but that's [Facebook] definitely out there. If it's on the net it's on the net.”

– *GoalPost participant*



appropriate
“selfcasting” >> **privacy**



3GT

Social variation of positive psychology exercise around recording everyday good things.

facebook

Good Things

Good thing:

Why did this happen:
(Always private)

Privacy & publicity:

your friends using 3gt

3gt from all friends

- ### Recent Good Things from You
- April 18
- another round of happy class nostalgia
malcolm invited me, I moved my mee
 - 4.5hr of #si182 office hours makes me v
the course has come. Nice job @presnic
Eytan invited me; I had invited him w
- April 16
- 1 somewhat successfully sort of died pa

Sean Munson
logout

769 GOOD THINGS **0.8** PER DAY

YOUR TOP GOOD THING WORDS
3gt alex aston day delicious dinner
finally fun **good** great hike last
made more new night out run time up

YOUR TOP REASON WORDS

Post a Good Thing

Good thing:

Why it happened:

Public:

Post to Facebook wall:

Good Things

You · Everyone

Nancy Munson 0 cheers (Cheer) comments 10 hrs

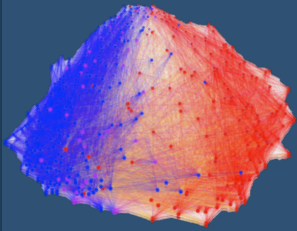
Got a very cool pair of running shoes that should be my Boston shoes!



Current work: Moving beyond the share button.

- Improved sharing & efficacy evaluation
- Goals & Commitments
 - Primary and secondary goals
 - Social commitments





Exposure to diverse political views



Improving health & wellness



How can **theory** and **knowledge of individual preferences** lead to the design of digital choice environments that better nudge?

- Goals & commitments
 - Multiple goals
 - Social commitments
- Choice sets & defaults
- Effective sharing
- Individual differences

thanks!

Sean A. Munson

smunson@uw.edu
@smunson

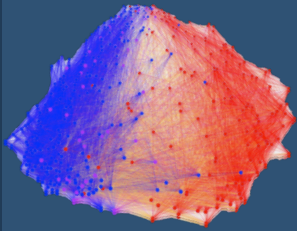
Collaborators

Paul Resnick
Xiaodan Daniel Zhou
Mark W. Newman
Margaret E. Morris
Debra Lauterbach
Caroline Richardson
Sunny Consolvo
Emily Rosengren
Erica Willar
Jeremy Canfield
Brian Ford
Peter Andrews
Stephanie Lee

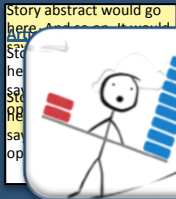
Funding

NSF Awards IIS-0916099 & IIS-0812042
Intel sponsored research & PhD Fellowship
Yahoo! Key Technical Challenge Grant
University of Michigan Rackham Graduate
Program – Research Grant

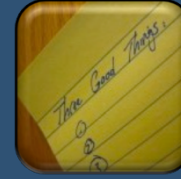
slides & references at smunson.com/talks/genst297w13



Exposure to diverse political views



Improving health & wellness



How can **theory** and **knowledge of individual preferences** lead to the design of digital choice environments that better nudge?

- Goals & commitments
 - Primary & Secondary Goals
 - Social Commitments
- Choice sets & defaults
- Effective sharing
- Individual differences

slides & references at smunson.com/talks/genst297w13