



CS 6474/CS 4803 Social Computing: Polarization and Selective Exposure

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Perhaps one of the biggest strengths of social computing systems is that they allow people to find like minded others and form communities. This seems to be at odds with the dangers of polarization.

Bubble Trouble

Is Web personalization turning us into solipsistic twits?

By *Jacob Weisberg*



51



3



0



Eli Pariser

The first conversation I ever had about the Internet was in 1993 with Robert Wright, who was then a colleague at the *New Republic*.

This "Net" thing was going to be a big deal, I remember Bob telling me, but it could create a few problems. One was that it was going to empower crazies, since geographically

diffuse nut jobs of all sorts would be able to find each other online. Another was that it could hurt democratic culture by encouraging narrow-minded folk to burrow deeper into their holes. Wright spelled out those concerns in an **article** that stands as a model of prescience and a delightful time-capsule. ("People who 'post' on the Net's many different bulletin boards—its 'newsgroups'—know that their words can be seen from just about any chunk of inhabited turf on this planet.")



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Eli Pariser at TED2011

Beware online "filter bubbles"

Details

About the talk

Transcript

41 languages

Comments

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As web companies strive to tailor their services (including news and search results) to our personal tastes, there's a dangerous unintended consequence: We get trapped in a "filter bubble" and don't get exposed to information that could challenge or broaden our worldview. Eli Pariser argues powerfully that this will ultimately prove to be bad for us and bad for democracy.

This talk was presented at an official TED conference, and was featured by our editors on the home page.

4,081,649 views

Filmed

March 2011 at TED2011

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ABOUT



Eli Pariser · Organizer and author

Pioneering online organizer Eli Pariser is the author of "The Filter Bubble," about how personalized search might be narrowing our worldview.

How did we get here? What do you think was the reasoning behind online platforms promoting/encouraging polarization or selective exposure?

Class Exercise I

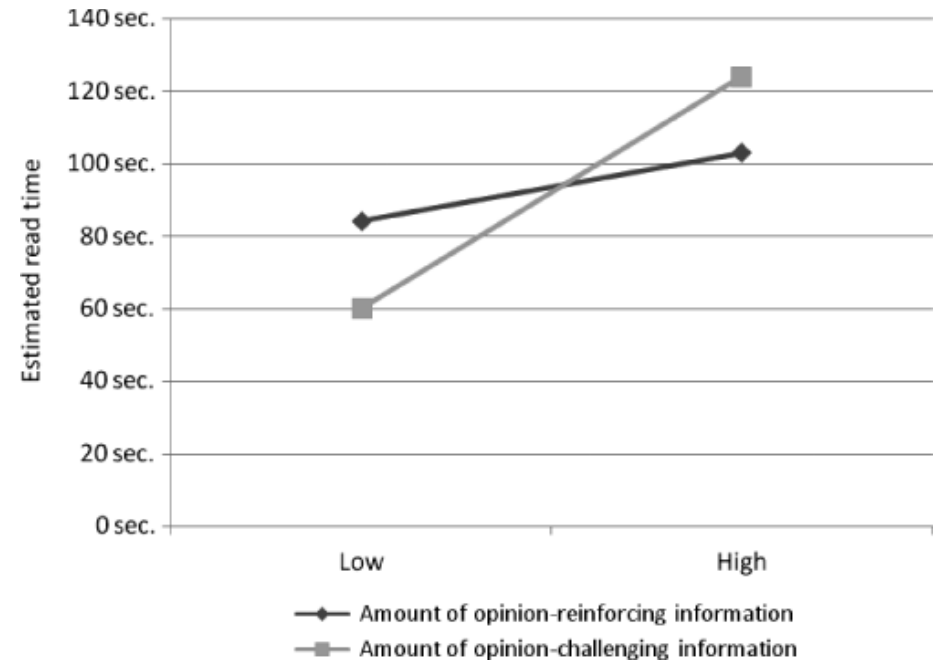
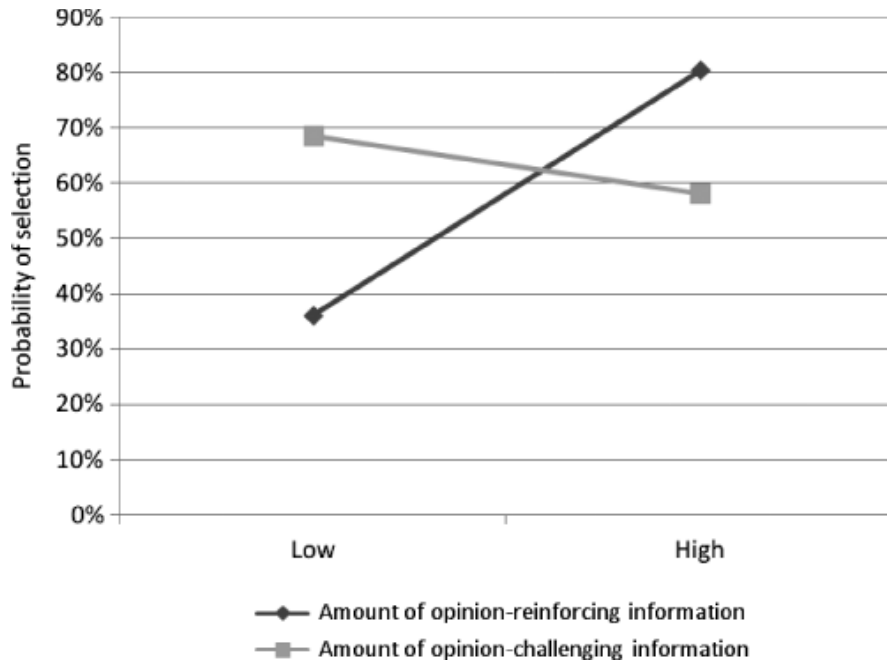
<http://graphics.wsj.com/blue-feed-red-feed/>

Echo Chambers Online?:
Politically Motivated Selective
Exposure among Internet
News Users

Summary

- The paper performs a survey study to examine how online news reading affects opinion reinforcement
- 700+ people were asked to read news on two news sites through a web-based behavioral study
 - Individuals more like to read news stories that reinforces their opinions than those which challenge them
- Important finding:
 - Opinion-reinforcing information promotes news story exposure while opinion-challenging information makes exposure only marginally less likely
 - Having decided to view a news story, evidence of an aversion to opinion challenges disappears: There is no evidence that individuals abandon news stories that contain information with which they disagree.
 - People don't actively seek to exclude information that challenges their opinions, unlike what popular knowledge indicated

Summary (Contd.)

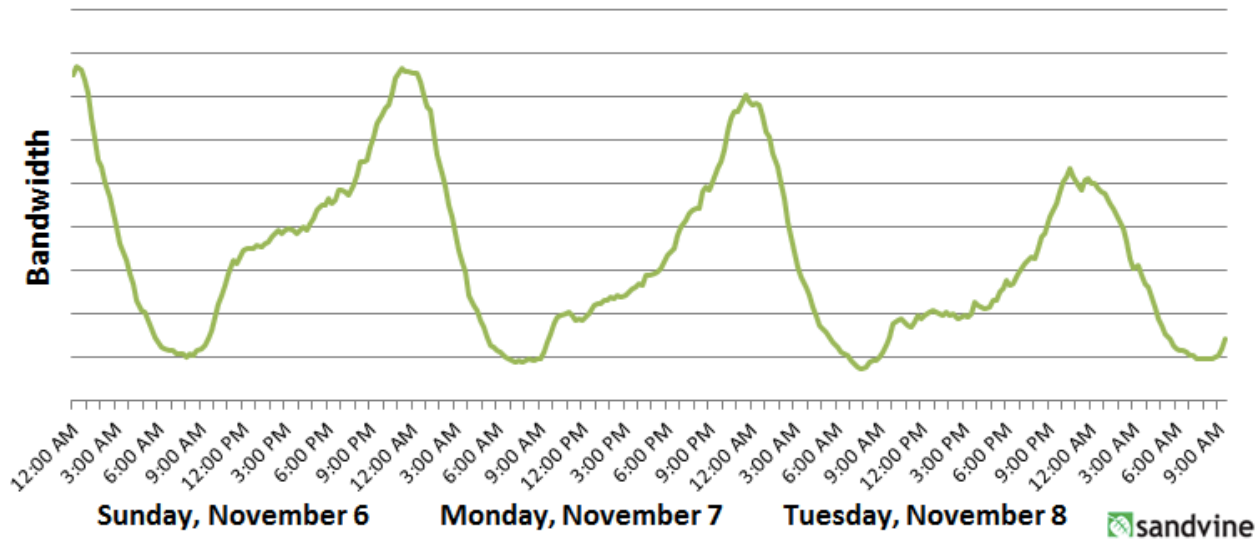


People spend more time looking at the opinion-challenging news items they do choose to read, reflecting a willingness to engage with (though not necessarily be persuaded by) other perspectives

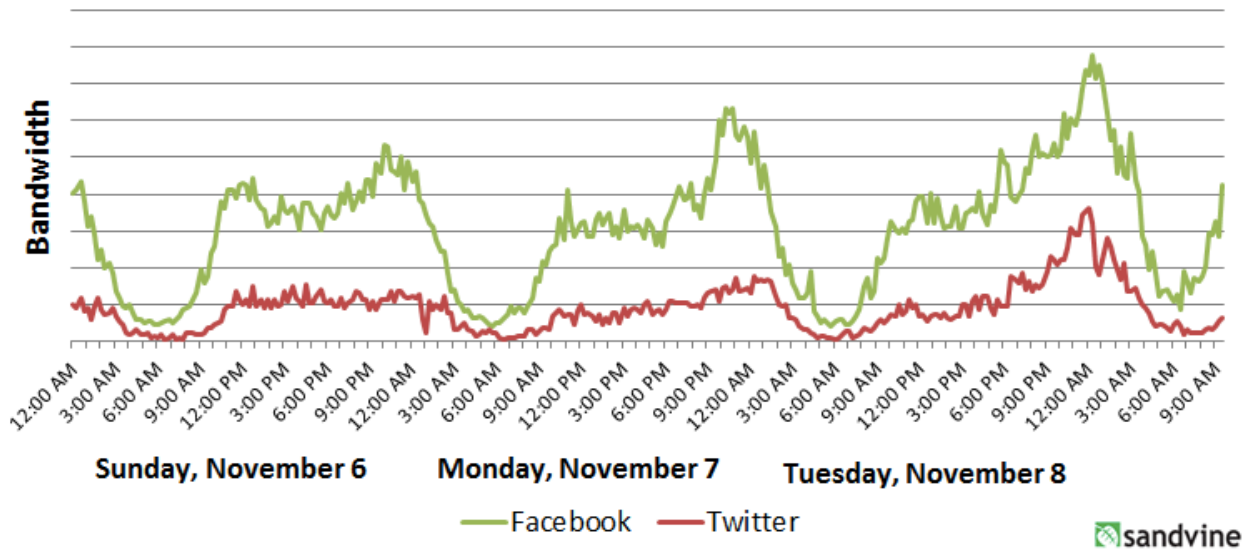
Exposure to ideologically
diverse news and opinion
on Facebook

Influence in the political sphere: 62% of adults in the US use social media to consume news, and 18% of adults are frequent consumers – Pew Internet

Netflix Traffic - Sample N. American, Fixed Network



Social Networking Traffic - Sample N. American, Fixed Network



TECHNOLOGY

Facebook, in Cross Hairs After Election, Is Said to Question Its Influence

By MIKE ISAAC NOV. 12, 2016



**Mark Zuckerberg** ✓[Follow](#)

November 12 at 10:15pm · 🌐

I want to share some thoughts on Facebook and the election.

Our goal is to give every person a voice. We believe deeply in people. Assuming that people understand what is important in their lives and that they can express those views has driven not only our community, but democracy overall. Sometimes when people use their voice though, they say things that seem wrong and they support people you disagree with.

After the election, many people are asking whether fake news contributed to the result, and what our responsibility is to prevent fake news from spreading. These are very important questions and I care deeply about getting them right. I want to do my best to explain what we know here.

Of all the content on Facebook, more than 99% of what people see is authentic. Only a very small amount is fake news and hoaxes. The hoaxes that do exist are not limited to one partisan view, or even to politics. Overall, this makes it extremely unlikely hoaxes changed the outcome of this election in one direction or the other.

That said, we don't want any hoaxes on Facebook. Our goal is to show people the content they will find most meaningful, and people want accurate news. We have already launched work enabling our community to flag hoaxes and fake news, and there is more we can do here. We have made progress, and we will continue to work on this to improve further.

This is an area where I believe we must proceed very carefully though. Identifying the "truth" is complicated. While some hoaxes can be completely debunked, a greater amount of content, including from mainstream sources, often gets the basic idea right but some details wrong or omitted. An even greater volume of stories express an opinion that many will disagree with and flag as incorrect even when factual. I am confident we can find ways for our community to tell us what content is most meaningful, but I believe we must be extremely cautious about becoming arbiters of truth ourselves.

Zuckerberg Has Thought About the Election and Decided Facebook Is Not to Blame



Rhett Jones

Yesterday 12:39pm · Filed to: HOAXES ▾



15.3K



88



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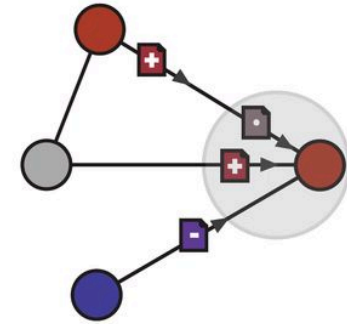
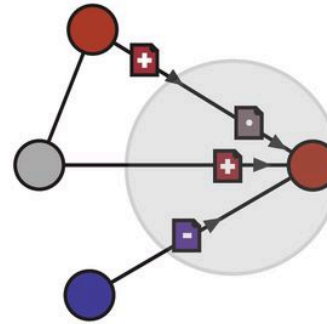
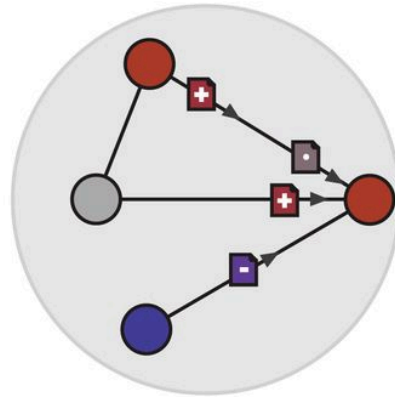


Summary

- Rigorous work spanning examination of how 10.1 million U.S. Facebook users interact with socially shared news
 - 7 million Web links in 2014-15
 - Hard and soft news
 - Ideological affiliation of a news link based on the average ideological preference of all Facebook users who shared it
- Directly measured ideological homophily in friend networks and examined the extent to which heterogeneous friends could potentially expose individuals to cross-cutting content
 - Examine how users clicked or engaged with ideologically similar or dissimilar content
- Main finding: Compared with algorithmic ranking, individuals' choices played a stronger role in limiting exposure to cross-cutting content.

A

Stage in media exposure process

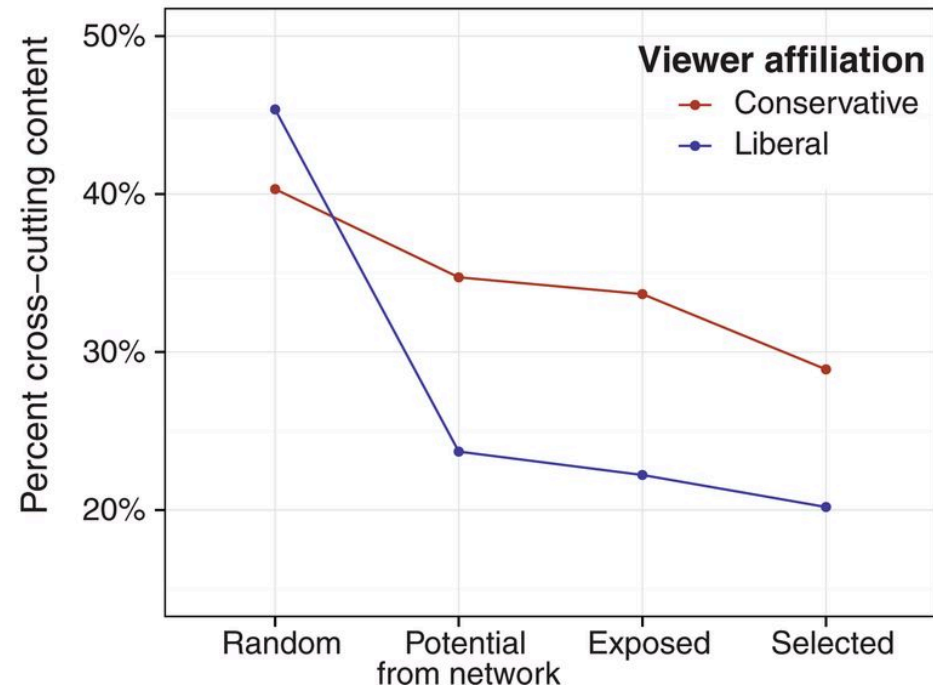
Potential from network**Exposed****Selected**

Proportion of content that is cross-cutting

1/3

1/2

0/1

B

What is the tentative interaction between selective exposure and people's belief systems (with respect to information consumption online)?
Can we quantify it?

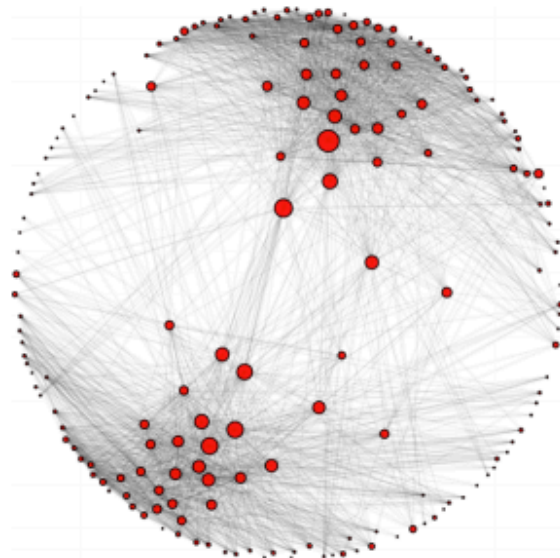
Reading opinion-reinforcing content can have widespread impact on our perceptions what is real and what is fake. Could this impact our credibility perceptions? – Connection to last week's discussions

Class Exercise II

If you were to re-design a tool that works on Facebook to reduce polarization, what would that tool look like? What would it do? What data would it use? How would you evaluate if the tool is working?

How to Burst the "Filter Bubble" that Protects Us from Opposing Views

Computer scientists have discovered a way to number-crunch an individual's own preferences to recommend content from others with opposing views. The goal? To burst the "filter bubble" that surrounds us with people we like and content that we agree with.



The term "filter bubble" entered the public domain back in 2011 when the internet activist Eli Pariser coined it to refer to the way recommendation engines shield people from certain aspects of the real world.

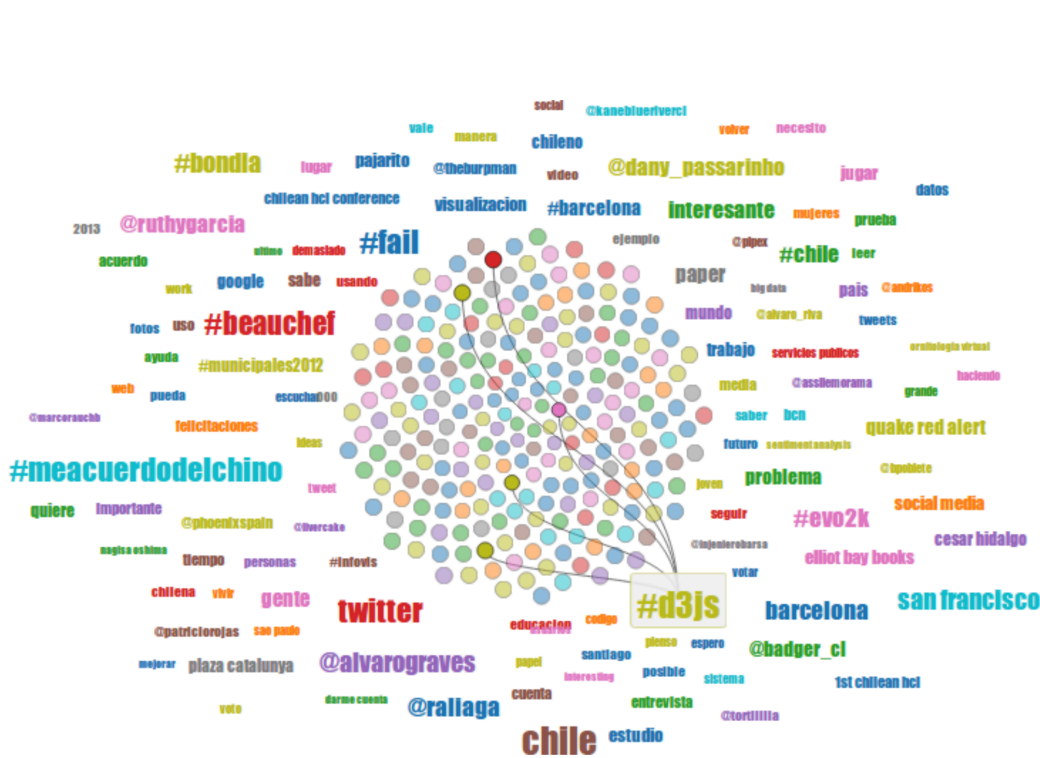
Pariser used the example of two people who googled the term

Data Portraits: Connecting People of Opposing Views

Eduardo Graells-Garrido
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Remember, humans have “agency”, so polarization should have something to do beyond just homophily and network structure. How would you incorporate a user’s intrinsic attributes to discourage polarized views of information?

What makes reducing polarization in social computing systems challenging?

“Zuckerberg defended the News Feed’s progress arguing that the filter bubble isn’t an issue for Facebook. He suggested the real problem is that people by nature engage with content they like and find agreeable, and dismiss things they don’t agree with online as they would in real life.” – Techcrunch

To what extent is polarization a new problem with social technologies, as against an offline phenomenon?

A deeper question (from TechCrunch): Why would [Facebook] want to change? And are people even ready for a fair Feed?