

# Lecture 19: Social media and society

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Sociology 204: Social Networks  
Princeton University

2/2 Facebook NewsFeed and political polarization



# Exposure to ideologically diverse news and opinion on Facebook

Eytan Bakshy,<sup>1\*</sup>† Solomon Messing,<sup>1</sup>† Lada A. Adamic<sup>1,2</sup>

## The Filter Bubble

What [REDACTED] the [REDACTED]

[REDACTED]  
[REDACTED] Internet [REDACTED]

[REDACTED] Is [REDACTED]  
[REDACTED]  
[REDACTED] Hiding [REDACTED]

[REDACTED]  
[REDACTED] From [REDACTED]  
[REDACTED]  
[REDACTED] You [REDACTED]

Eli Pariser

Citizen Browser

# Split Screen How Different Are Americans' Facebook Feeds?

Snapshots from the Facebook feeds of our Citizen Browser panelists illuminate how Facebook's recommendation algorithm siloes information on the platform. See how we built this tool

News Stories



Forbes

Stacey Abrams-Founded Group Sues Georgia Over  
'Voter Suppression Bill'



Fox News

Boulder grocery massacre leaves 10 dead including cop,  
suspect in custody



NPR

Stop Blaming Tuskegee, Critics Say. It's Not An 'Excuse'  
For Current Medical Racism



PBS NewsHour

Arkansas governor signs bill allowing medical workers  
to refuse treatment to LGBTQ people



DAILY WIRE

Candace



The Wall Street Journal

Opinion | The Christian Baker Who Said 'No'

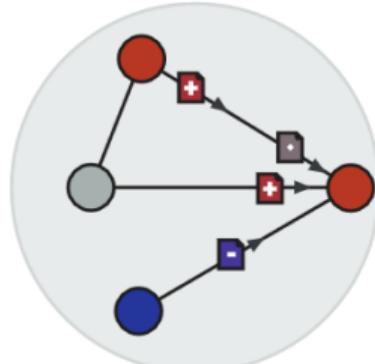
Note that these are all political stories, and most stories in NewsFeeds are not political.

More info: <https://themarkup.org/citizen-browser/2021/03/11/introducing-split-screen>

Information exposure on FB is a multi-step process

Stage in media  
exposure process

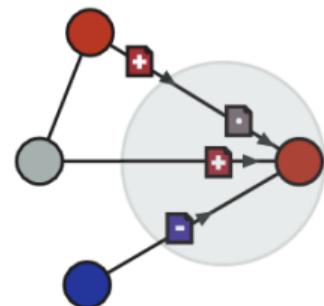
Potential from network



Proportion of content  
that is cross-cutting

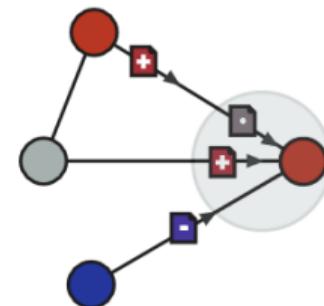
1/3

Exposed

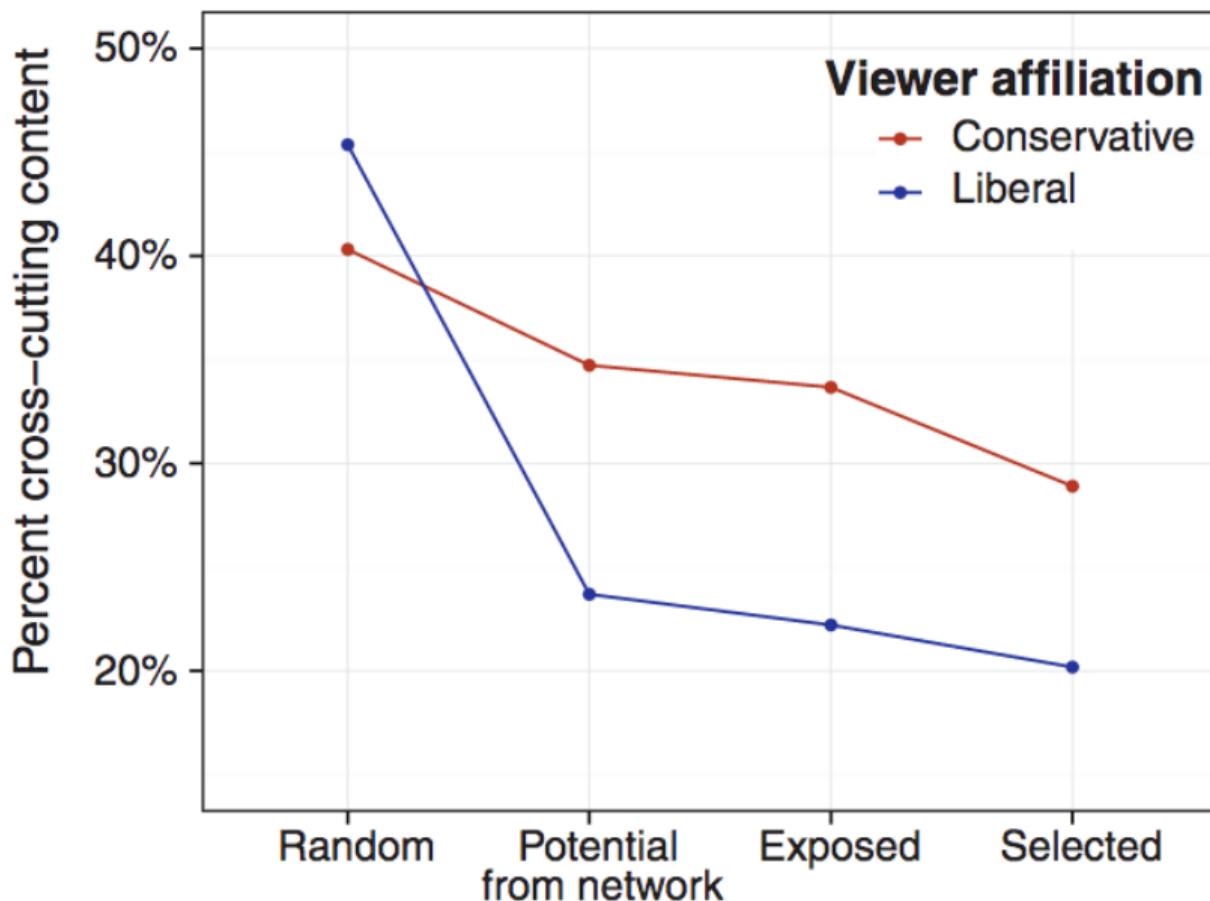


1/2

Selected



0/1



How did they measure the ideology of the subject?

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All Facebook users can self-report their political affiliation; 9% of U.S. users over 18 do. We mapped the top 500 political designations on a five-point, -2 (Very Liberal) to +2 (Very Conservative) ideological scale; those with no response or with responses such as “other” or “I don’t care” were not included. 46% of those who entered their political affiliation on their profiles had a response that could be mapped to this scale. We validated a sample of these labels against a survey of 79 thousand U.S. users in which we asked for a 5-point very-liberal to very-conservative ideological affiliation; the Spearman rank correlation between the survey responses and our labels was 0.78.

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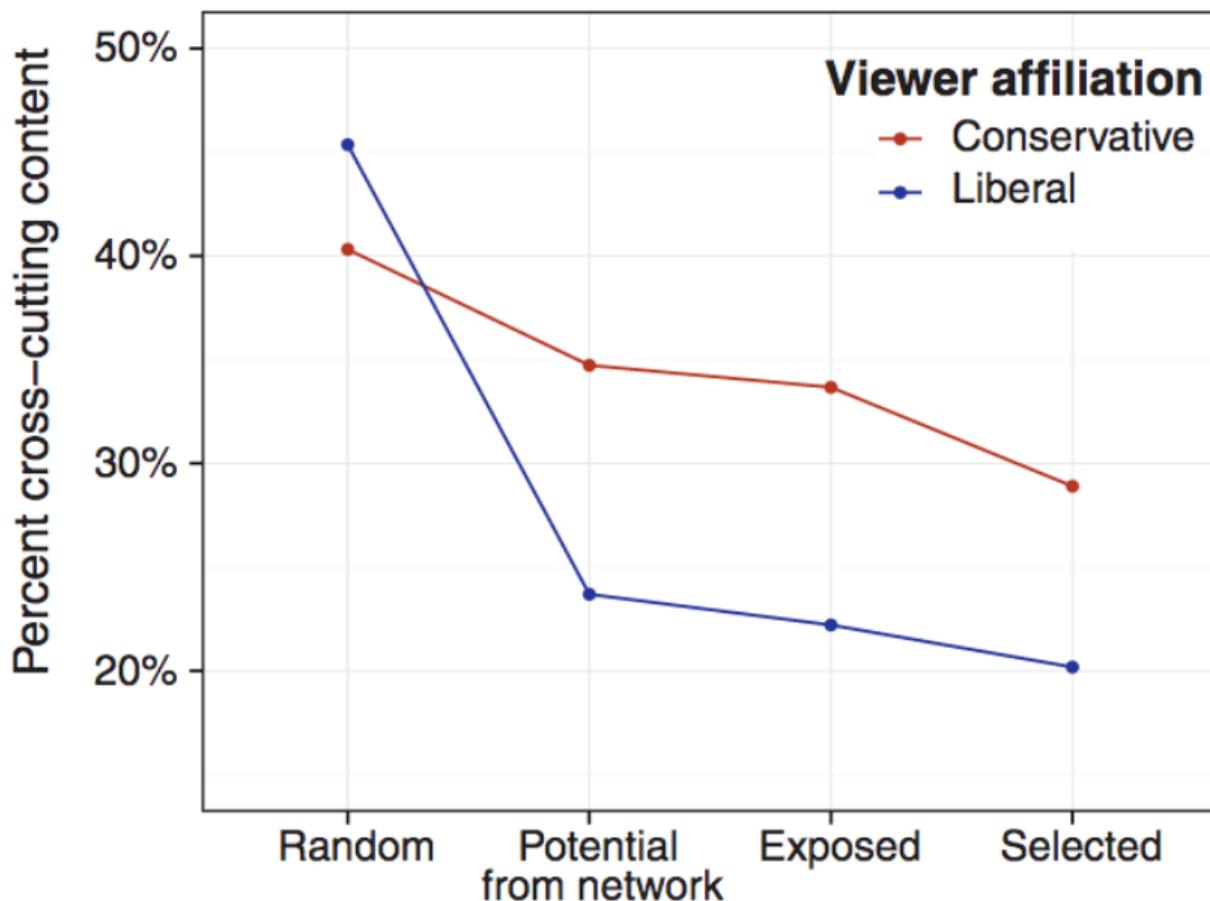
"We derive the alignment score  $A$  of an individual URL by averaging the political alignment of the set of people who share the URL."

What kind of posts?

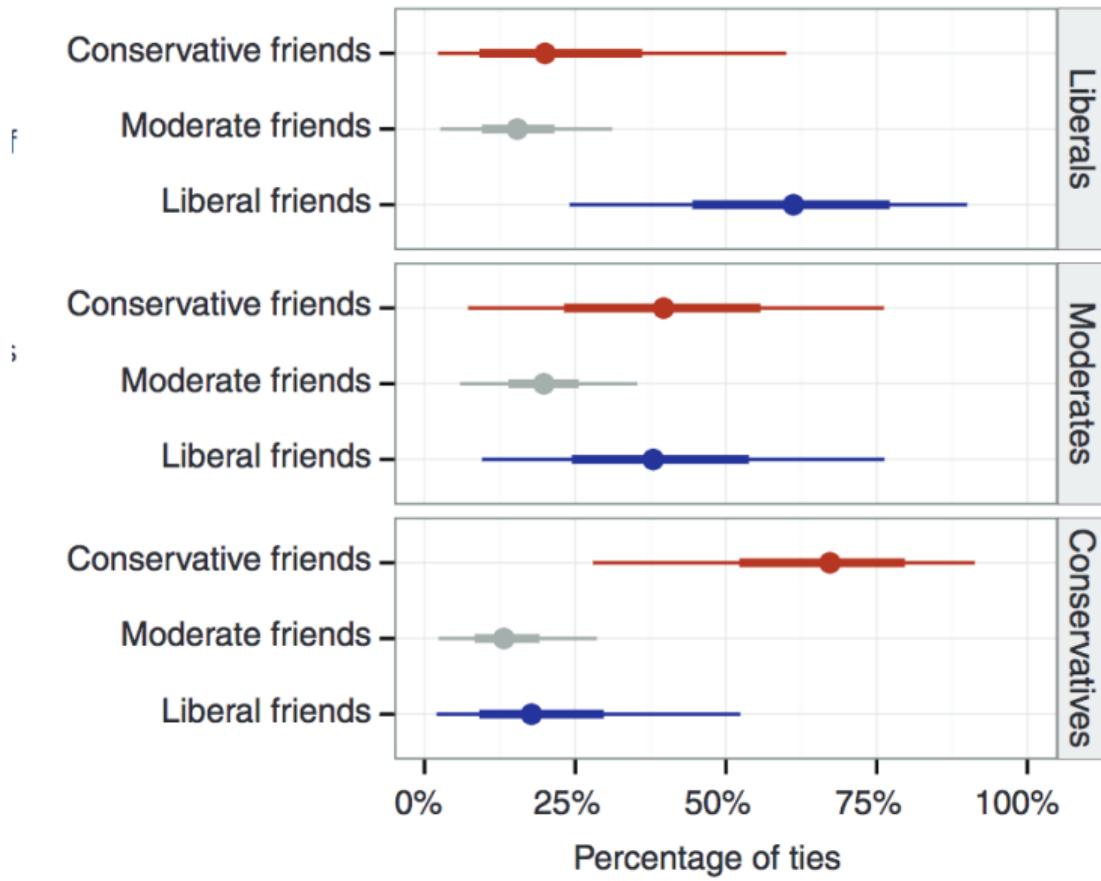
What kind of posts?

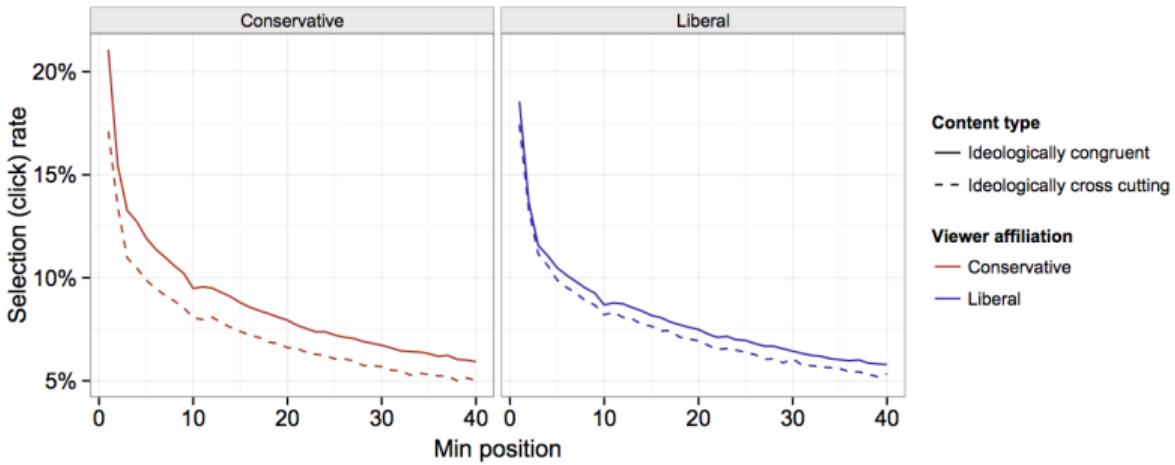
"We classified stories as either "hard" (such as national news, politics, or world affairs) or "soft" content (such as sports, entertainment, or travel) by training a support vector machine on unigram, bigram, and trigram text features (details are available in the supplementary materials, section S1.4.1)."

Approximately 13% were classified as hard news. Or approximately 87% were classified as soft news. This only counts links shared, not baby pictures. So we are talking about a small slice of a small slice.

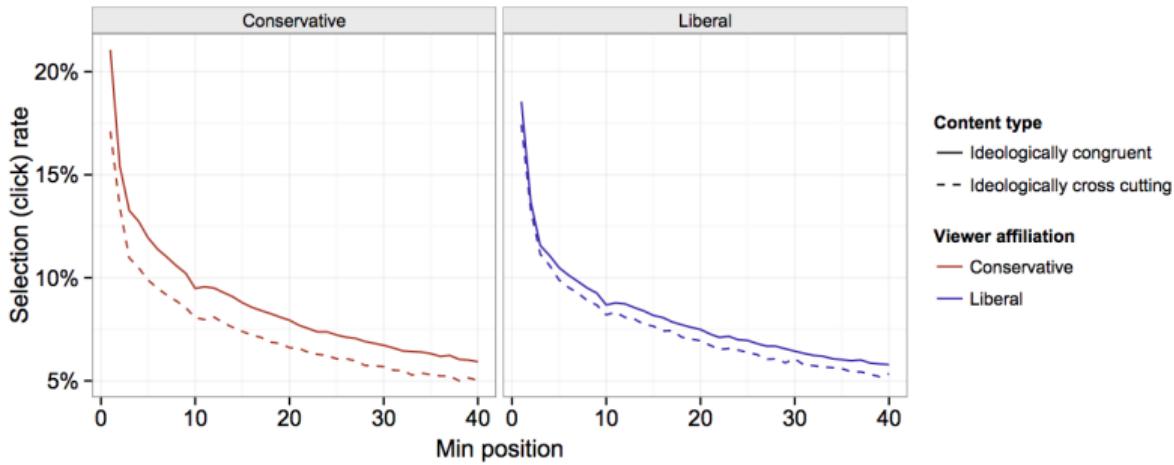


Two interesting, non-filter bubble findings





- ▶ people are more likely to click on content at the top of their feed (this might remind you of MusicLab)



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- ▶ both liberals and conservatives are more likely to click on ideologically congruent content

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- ▶ “Within the population under study here, individual choices more than algorithms limit exposure to attitude-challenging content in the context of Facebook.”
- ▶ “...our work suggests that the power to expose oneself to perspectives from the other sided in social media lies first and foremost with individuals”

Commentary and criticism:

- ▶ <https://www.wired.com/2015/05/facebook-not-fault-study/>
- ▶ <https://medium.com/message/how-facebook-s-algorithm-suppresses-content-diversity-modestly-how-the>
- ▶ <https://thesocietypages.org/cyborgology/2015/05/07/facebook-fair-and-balanced/>
- ▶ <http://crookedtimber.org/2015/05/07/why-doesnt-science-publish-important-methods-info-prominently/>

Descriptive vs normative

Thermostat problem:

- ▶ Facebook can control the amount of cross-cutting content that people see. How should they set the thermostat?

# Exposure to opposing views on social media can increase political polarization

Christopher A. Bail<sup>a,1</sup>, Lisa P. Argyle<sup>b</sup>, Taylor W. Brown<sup>a</sup>, John P. Bumpus<sup>a</sup>, Haohan Chen<sup>c</sup>, M. B. Fallin Hunzaker<sup>d</sup>, Jaemin Lee<sup>a</sup>, Marcus Mann<sup>a</sup>, Friedolin Merhout<sup>a</sup>, and Alexander Volfovsky<sup>e</sup>

More cross-cutting content can lead to more polarized attitudes (backfire effect)

- ▶ Could someone that didn't work at Facebook do this research? Does that matter?

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- ▶ I have received research funding from Facebook, Google, and Microsoft. Does that matter?
- ▶ Allcott, Baym, Wagman, and Persaud all worked at Microsoft Research. Does that matter?

Are algorithm filter bubbles different from other processes that create filter bubbles?

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## The measurement of partisan sorting for 180 million voters

Jacob R. Brown   and Ryan D. Enos  

Segregation across social groups is an enduring feature of nearly all human societies and is associated with numerous social maladies. In many countries, reports of growing geographic political polarization raise concerns about the stability of democratic governance. Here, using advances in spatial data computation, we measure individual partisan segregation by calculating the local residential segregation of every registered voter in the United States, creating a spatially weighted measure for more than 180 million individuals. With these data, we present evidence of extensive partisan segregation in the country. A large proportion of voters live with virtually no exposure to voters from the other party in their residential environment. Such high levels of partisan isolation can be found across a range of places and densities and are distinct from racial and ethnic segregation. Moreover, Democrats and Republicans living in the same city, or even the same neighbourhood, are segregated by party.

<https://www.nytimes.com/interactive/2021/03/17/upshot/partisan-segregation-maps.html>

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I think yes. Algorithmic filter bubbles are centrally controlled and set for profit.

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- ▶ This happens because of the choices of people and the choices of social media architects
- ▶ It is hard to isolate how much of this caused by human behavior and how much is magnified by the architecture of the environment

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<https://citp.princeton.edu/about/contact/subscribe/>
- ▶ learn about undergraduate certificate in Technology and Society, Information Technology Track: <https://citp.princeton.edu/programs/certificate/>

## Next class: Social ads in social media

- ▶ Duhigg, C. (2012). How companies learn your secrets. *New York Times*.
- ▶ Goel, S. (2010). Birds of a feather shop together. *Messy Matters blog*.
- ▶ Goel, S. and Goldstein D.G. (2014). Predicting Individual Behavior with Social Networks. *Marketing Science*.
- ▶ Bakshy, E. et al. (2012). Social influence in social advertising: Evidence from field experiments. *EC*