Today

- Facebook: what is it? Main features.
- Introduction to the Facebook API
- Collecting Facebook data using the API
- Quantitative analysis of Facebook data
- In-class exercise: capture and analyze your own Facebook data

Approximate timing of Lab 2

- Introduction to Facebook = 15 minutes

- Introduction to the Facebook API = 15 minutes

- Analysis of Facebook Data I = 20 minutes

- BREAK = 10 minutes

- Analysis of Facebook Data II = 30 minutes

- In-class exercise = 20 minutes

Facebook's numbers

- 1.5+ billion monthly active users
- 10 billion messages are sent everyday
- 1.3 trillion "like" activities since 2009
- 71% of online U.S. adults use Facebook
- 87% of young adults in US (18-29) report using Facebook actively
- 47% of Facebook users get news through this platform
- 99% of Members of U.S. Congress have a Facebook account

Social Media and Political Participation
  └─Facebook
      └─Facebook's numbers
          └─Facebook's numbers

2017-01-06

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Facebook was created by Mark Zuckerberg in his college room at Harvard in 2004. Initially it was restricted to college students (first Ivy League, then all universities), then in 2005 to high school students, and in 2006 to everyone. It is now the largest social media website in the world.

As in the case of Twitter, what's interesting about it is not only how many people use it, but also *how* they use: many important political actors are present, and people use it a lot to become informed about politics, and to get engaged in political conversations.

Facebook's main features

Barack Obama's Facebook Page

2017-01-06

Social Media and Political Participation
└─Facebook
  └─Facebook's main features
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Facebook's main features

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This is what a Facebook page timeline looks like.

So you see posts in chronologically inverse order, and on top of the screen you have the profile information.

In next slide, News Feed, which is the home page, and people spend most of their time. It was introduced afterwards, in 2006 (initially Facebook had only profiles), and features status updates, links posted by other users, changes in their profiles...

Recently some controversy about what content makes it to the News Feed,

since Facebook wants to avoid information overload.

The offline effects of Facebook

Three defining characteristics of Facebook

1. Most content is private
2. "Friends" are usually actual friends
3. Social metrics for every post

Consequences:

- Facilitates organization of collective action
    - → "Social Media and the Decision to Participate in Political Protest: Observations From Tahrir Square", by Tufekci and Wilson, *Journal of Communication* (2012)
- Channels social influence on political behavior
    - → "A 61-million-person experiment in social influence and political mobilization", by Bond et al, *Nature* (2012).
- Social cues that affect behavior
    - → "Endorsements Trump Partisan Source Affiliation when Selecting News Online", by Messing and Westwood, *Communication Research* (2014).

2017-01-06

Social Media and Political Participation
└─ Facebook
   └─ The offline effects of Facebook
      └─ The offline effects of Facebook

The offline effects of Facebook

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From an analytical perspective, 3 characteristics of Facebook are particularly relevant. First, unlike Twitter, users can set their content and private (and most do), so only their friends can see it. Second, connections here usually are "in real life" connections. So people choose their friends because they know them in person. Finally, there is a social layer to all content. Users can see likes, comments, shares... that gives a sense of context and modifies perceptions. Some of the consequences of these have been explored in recent research. For example, studies on the effect of social media on protest have highlighted how private groups on Facebook were key during the Arab Spring (mention Revolution 2.0, by Wael Ghonim, an engineer at Google that organized some of the first Facebook groups in 2011). The Bond et al piece focuses on the effects of social media use on turnout. It showed that a message with a social component made people more likely to vote. Finally, social metrics affect behavior: people are more likely to "like" content that is already "liked" by their friends.

Learning from Facebook networks

"Private traits and attributes are predictable from digital records of human behavior", by Kosinski, Stillwell, and Graepel, *PNAS* (2013)

ABSTRACT: We show that easily accessible digital records of behavior, Facebook Likes, can be used to automatically and accurately predict a range of highly sensitive personal attributes including: sexual orientation, ethnicity, religious and political views, personality traits, intelligence, happiness, use of addictive substances, parental separation, age, and gender.

2017-01-06
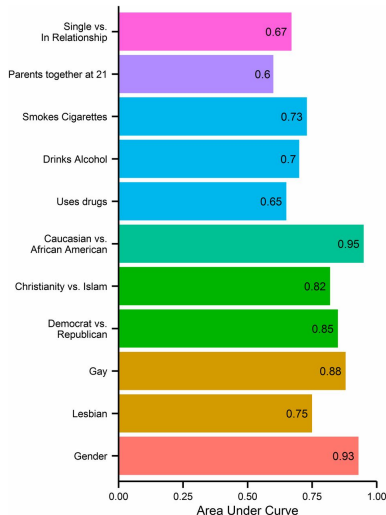
Social Media and Political Participation
└─Facebook
  └─Learning from Facebook networks
    └─Learning from Facebook networks

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Another interesting feature of Facebook is that people provide a lot of their private information. Some of that is explicit (gender, religion, political beliefs, sexual orientation...), but even just looking at users' likes we can learn a lot about users' private traits. That's what this paper published at PNAS does. It shows that all these characteristics were easily predicted looking at what people liked.

Also a new paper just came out that shows that personality can be measured using likes too.