computational social media

lecture 1: introduction (part 2)

daniel gatica-perez
a brief history of social media

1. what got us here?
2. a social media timeline
3. the social media paradox
1. what got us here?
networked individualism

Director, Pew Research Center's Internet & American Life Project

Non-profit, "fact tank" that studies the social impact of the internet

Sociologist, NetLab, U. Toronto

Founder, Int. Network for Social Network Analysis (1977)

MIT Press, 2012
Networked Individualism
The move to looser, far-flung networks

social life arranged around the individual rather than social units (e.g. family)

people operate more as networked individuals, less as members of tight groups

each person operates their own network

everyday life: online, mobile, social opportunities & challenges

slide by Lee Rainie: http://www.pewinternet.org/2013/11/07/networked-worlds-networked-enterprises/
Personal networks are:

+ more fragmented
+ differently composed
+ more specialized
+ more ephemeral
+ performing many functions: helpers, connectors, evaluators, audience
+ … and just as important as in the past

adapted from slide by Lee Rainie: http://www.pewinternet.org/2013/11/07/networked-worlds-networked-enterprises/
the triple revolution

social network revolution

internet revolution

mobile revolution

credit: Occupy Wall Street, http://www.flickr.com/photos/shankbone/6183443813 (cc)
revolution #1: social networks
trends enabling the social network revolution

A. widespread connectivity
B. weaker group boundaries
C. increased personal autonomy

credit: http://www.flickr.com/photos/hanspoldoja/5001818922 (cc)
A. widespread connectivity

A.1. “automobiles and airplanes have made travel wider-ranging and broadly affordable, helping spread social networks worldwide”

Figure 2.1
Percentage of U.S. households by number of vehicles.
Source: NHTS Summary of Travel Trends (2004); Vehicle Availability and Utilization.

A. widespread connectivity

Figure 2.2
Per capita airline boardings in the United States.
Source: U.S. Bureau of Transportation Statistics.
A. widespread connectivity

A.2. “growth of computing and communications has made communicating more powerful and more personal”
A. widespread connectivity

Figure 2.4
Number of landlines and mobile phones in the United States (per 100 inhabitants).
Source: U.S. Federal Communications Commission.
A. widespread connectivity

A.3. “general outbreak of peace and spread of trade have driven commercial and social connectedness”
B. weaker group boundaries

B.1. “family composition, roles, and responsibilities transformed households from groups to networks”

Figure 2.9
Distribution of households in the United States as percentage. 

B. weaker group boundaries

B.2. “structured voluntary organizations are replaced by more open and informal networks of civic and religious practice”

Table 2.1

<table>
<thead>
<tr>
<th></th>
<th>Childhood</th>
<th>Current</th>
<th>Net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baptist</td>
<td>20.9</td>
<td>17.2</td>
<td>-3.7</td>
</tr>
<tr>
<td>Methodist</td>
<td>8.3</td>
<td>6.2</td>
<td>-2.1</td>
</tr>
<tr>
<td>Nondenominational</td>
<td>1.5</td>
<td>4.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Lutheran</td>
<td>5.5</td>
<td>4.6</td>
<td>-0.9</td>
</tr>
<tr>
<td>Presbyterian</td>
<td>3.4</td>
<td>2.7</td>
<td>-0.7</td>
</tr>
<tr>
<td>Pentecostal</td>
<td>3.9</td>
<td>4.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Anglican/Episcopal</td>
<td>1.8</td>
<td>1.5</td>
<td>-0.3</td>
</tr>
<tr>
<td>Catholic</td>
<td>31.4</td>
<td>23.9</td>
<td>-7.5</td>
</tr>
<tr>
<td>Mormon</td>
<td>1.8</td>
<td>1.7</td>
<td>-0.1</td>
</tr>
<tr>
<td>Jehovah’s Witness</td>
<td>0.6</td>
<td>0.7</td>
<td>0.1</td>
</tr>
<tr>
<td>Jewish</td>
<td>1.9</td>
<td>1.7</td>
<td>-0.2</td>
</tr>
<tr>
<td>Muslim</td>
<td>0.3</td>
<td>0.4</td>
<td>0.1</td>
</tr>
<tr>
<td>Buddhist</td>
<td>0.4</td>
<td>0.7</td>
<td>0.3</td>
</tr>
<tr>
<td>Hindu</td>
<td>0.4</td>
<td>0.4</td>
<td>0</td>
</tr>
<tr>
<td>Other faiths</td>
<td>0.3</td>
<td>1.2</td>
<td>0.9</td>
</tr>
<tr>
<td>Unaffiliated: atheist, agnostic, “nothing in particular”</td>
<td>7.3</td>
<td>16.1</td>
<td>8.8</td>
</tr>
</tbody>
</table>

B. weaker group boundaries

B.3. “common culture spread through few mass media firms has shifted to fragmented culture spread through more channels & hardware”
C. increased personal autonomy

C.1. “work became flexible in developed world, from pushing atoms in manufacturing to pushing bits in white-collar work”
C. increased personal autonomy

C.2. “American society has become less bounded by ethnicity, gender, religion, sexual orientation”

Figure 2.12
Percentage of adults aged 18 and older not in favor of a law banning racial intermarriage.

revolution #2: the internet
trends enabling the internet revolution

1. “government and scientists were first users; light regulatory role once popular

2. tech improved dramatically: computing power grew, prices dropped, bandwidth increased, storage improved

3. internet remained an interconnected network

4. applications led people to embrace it”
Computers support networked individualism

Affordances: “possible actions a person can perform on an object” (Don Norman)

1. personal
2. connected
3. humanized
4. private
5. decentralized
6. open to choice
7. asynchronous

design choices in hardware/software fostered networked individualism

credit: http://www.flickr.com/photos/pocait/2634190989 (cc)
how americans use the internet

Source: Surveys conducted 2000-2018. Data for each year based on a pooled analysis of all surveys conducted during that year.

http://www.pewinternet.org/fact-sheet/internet-broadband/
how americans use the internet

% of U.S. adults who use the internet, by education level

- Less than high school graduate
- High school graduate
- Some college
- College graduate

http://www.pewinternet.org/fact-sheet/internet-broadband/
a new culture: creating & sharing material online

“internet users...

blog, upload images/videos, tweet
belong to online support groups
critique, rank, and rate books, movies, people
advocate for political and social cases
mash up existing media into parodies
chronicle their travels
give tips about their hobbies and passions”
revolution #3: mobile phones
mobile phone trends

Cellphone Ownership, 2004-2013

Percentage of American adults who own a cell phone

Source: Pew Research Center’s Internet & American Life Project, April 17-May 19, 2013 Tracking Survey. Interviews were conducted in English and Spanish and on landline and cell phones. Margin of error is +/-2.3 percentage points based on all adults (n=2,252).

PEW RESEARCH CENTER

http://pewinternet.org/Infographics/2013/Cell-Phone-Ownership.aspx
1-in-10 adults are smartphone-only internet users: they do not use home broadband service

% of U.S. adults who do not use broadband at home but own smartphones, by age

http://www.pewinternet.org/fact-sheet/internet-broadband/
the income divide

% of U.S. adults who do not use broadband at home but own smartphones, by income

Source: Surveys conducted 2013–2016. Data for each year based on a pooled analysis of all surveys containing broadband and smartphone questions fielded during that year.

PEW RESEARCH CENTER

http://www.pewinternet.org/fact-sheet/internet-broadband/
2.

a social media timeline
participation in social media

% of U.S. adults who use at least one social media site

69% as of January 2018

http://www.pewinternet.org/fact-sheet/social-media/
participation in social media (3)
Among the users of each social media site, the % who use that site with the following frequencies

Facebook
Snapchat
Instagram
Twitter
YouTube

http://www.pewinternet.org/fact-sheet/social-media/
3. the social media paradox
Mark Zuckerberg:

“We're not thinking about ourselves as a community — we're not trying to build a community — we're not trying to make new connections. [...] What we're trying to do is just make it really efficient for people to communicate, get information and share information. **We always try to emphasize the utility component.**” Jul. 2007

“Maybe electricity was cool when it first came out, but pretty quickly people stopped talking about it because it’s not the new thing, the real question you want to track at that point is: are fewer people turning on their lights because it’s less cool?” […] **Our society needs a new digital social fabric...We can help build it.**” Sep. 2013
Jack Dorsey:

"I think Twitter's a success for us when people stop talking about it, when [...] people just use it as a utility, use it like electricity [...] It fades into the background, something that's just a part of communication.... That's where we want to be.“ Jun. 2009
“Social media as **neutral** platforms upon which users freely interact, much like the Web itself – an infrastructure that transports streams, regardless of who its users are and indifferent to the contents they exchange.”

“…yet social media do not just transport streams of live tweets; neither the platforms are simple carriers of information. Streams of data are **engineered to promote certain uses and users over others**, challenged by the pressure to **make content streams profitable**.”

credit: intelfreepress@flickr (cc) http://www.flickr.com/photos/intelfreepress/6722295999
the social media paradox

enable **connectedness** while engineering **connectivity**

propagate **neutrality** while securing **profitability**
in summary

**network individualism** (Rainie & Wellman)
+ societal shifts: widespread connectivity, weaker group boundaries, increased personal autonomy
+ internet and the web support network individualism
+ mobile computing consolidates it

**social media paradox** (van Dijck)
+ social media platforms are not public utilities
+ enable **connectedness** while engineering **connectivity**;
  propagate **neutrality** while securing **profitability**
references and further reading


J. van Dijck, The Culture of Connectivity, A Critical History of Social Media, Chapter 1-2, Oxford University Press, 2013
questions?

daniel.gatica-perez@epfl.ch