Social Web

Many slides adapted from Lora Aroyo
http://de.slideshare.net/laroyo
Produzieren
Konsumieren

Kognition
Emotion
Sozialisation
Wissen

WWW

Daten & Informationen
Protokolle
Anwendungen
Governance

Beobachtbare Mikro-Interaktionen im Web
Beobachtbare Makro-Effekte im Web

Makro-Effekte im Web

Beobachtbare Mikro-Interaktionen im Web
Motivations for Micro-interactions

- Economic incentives
  - Earning money
  - Buying goods
  - Trading
  - Auctions

- Social incentives
  - Communicating
    - Dating (17% couples in SF in 2010 via internet)
    - Peer groups
  - Interest groups
  - Self-expression
    - Blogs
  - Entertainment
    - Music
    - Video

Multiple motivations may exist for one action
Motivations may overlap
Social Web Sites

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Social Media Sites

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Social Networking Sites
Social Sites Categories

- Social networking sites (open vs closed)
  - General purpose: e.g. Facebook, LinkedIn
  - Vertical: e.g. Couchsurfing, Dogster

- Social media sites (open vs closed)
  - Media types
    - Images: Flickr,...
    - Video: YouTube, MyVideo,...
    - Audio: Spotify, Last.fm,...
What do people do on the social Web

Current record:
- 10,000 tweets/s in the last 3 min of Super Bowl
- 8,000 tweets/s during Madonna’s performance

Previous records:
- 9,000 tweets/s during MTV Video Music Awards (Beyoncé pregnant)
- 7,200 tweets/s before the end of the WC for women’s football (Japan beats US), July 2011
What do people do on the social Web

**HOW MUCH UGC IS UPLOADED & VIEWED?**

**GENERAL**
Source: royal.pingdom.com

- **25 BILLION**
  sent tweets on Twitter in 2010
- **175 MILLION**
  people on Twitter as of September 2010
- **600 MILLION**
  people on Facebook at the end of 2010

- **360 BILLION**
  pieces of content (links, notes, photos, etc.)
  shared on Facebook in one year
UGC ADVERTISING STATISTICS

CPM (COST PER 1000 IMPRESSIONS) FOR VARIOUS SITES. ALL BASED ON US MARKET.
Source: facebook.com & youtube.com

CPM FOR FACEBOOK ADS BY DEMOGRAPHIC

MEN
WOMEN
SINGLE
IN A RELATIONSHIP
MARRIED

CPM FOR YOUTUBE INVIDEO OVERLAY ADS BY VIDEO SUBJECT

AUTOS & VEHICLES
BOOKS & LITERATURE
BUSINESS & INDUSTRIAL
NEWS
SCIENCE
SPORTS
TRAVEL
CPM (cost per mille)

Also CPI (cost per impression)

An example of computing the CPM:

- Total cost for running the ad is $15,000.
- The total estimated audience is 2,400,000 people.
- CPM is calculated as: \( \frac{15,000}{2,400,000} \times 1000 = 6.25 \) per thousand views
CPC (cost per click)

Also cost per action (CPA)

- Much higher than per thousand views
- Conversion rate

- eCPM
- Effectiv Cost per Mille
Social media activities in numbers

- 800+ million – # of users on Facebook by the end of 2011.
- 350 million – # of Facebook users that log in to the service using their mobile phone.
- 100 million – # of active Twitter users in 2011.
- 18.1 million – People following Lady Gaga. Twitter’s most popular user.
- 250 million – # of tweets per day (October 2011).
- 8,868 – # of tweets per second in August for the MTV Video Music Awards.
- 70 million – Total # of WordPress blogs by the end of 2011.
- 1 billion – The number of messages sent with WhatsApp during one day (October 2011).
- 2.4 billion – Social networking accounts worldwide.

Social Computing

- interdisciplinary study
- social structure where technology puts power in communities (not institutions)
- internet provides a good platform for emerging social structures
- manifestos of social computing, e.g. social networks, blogs, podcasting, tagging, meet-ups, mash-ups, social search, user-generated-content, wikis, P2P content distribution, RSS, open source software, etc.*

Interdisciplinary

- way of interacting and collaborating on the Web (computer science)
- observing social phenomena & analyzing the interactions in communities (social science)
- behavioral economics, e.g. money-economy vs. social norms, why people behave irrationally/altruistically?

*Julita Vassileva (2009), Social Computing Course, University of Saskatchewan, Canada

*Dan Ariely (2007). Predictably Irrational
innovation will shift from top-down to bottom-up
- Designer house vs designer crowd
- Consultant vs topcoder

value will shift from ownership to experience
- Car vs driving
- CDs vs audio files
- DVDs vs streaming audio

power will shift from institutions to communities
- Uni Bayreuth vs Guttenplag

Charlene Li (2006), http://www.socialcustomer.com/2006/02/the_forrester_s.html
Social Web Stakeholders

1. Service providers
2. Community owners (often, but not always, identical with 1)
3. Institutional actors
   - Politics
   - Companies
     - Brand owners
     - Marketers
     - Sales institutions
   - Lobby groups
1. Service providers
2. Community owners (often, but not always, identical with 1)
3. Institutional actors
   - ...
   - NGOs
   - Diverse

4. Community member
   - Often: you!
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WWW
Some interesting questions for hosters & c owners

How to retain users on the web site

- Maximizing ad gains (ad impressions)
- Collecting and selling data (e.g. about users)
- Involving them in higher-value actions
  - Targeted advertising – higher click-through and conversion rates!
    - Dating services to singles
    - Childcare offerings to parents
    - Sports ads in YouTube sports videos
  - Upselling:
    - making them pay for premium services (freemium model)
    - Making them pay for further services (games on FB)
- Making them pay for other services (e.g. free music online, but highly paid life concerts!)
Some interesting questions for institutions

How to address community members such that
  - Own reputation is improved
  - Own brand is more visible and fashionable

- Triggering community members to do:
  - Buying
  - Recommendations to friends
  - Donations to non-commercial institutions
  - Joining a group / studying ...
  - ...
Some interesting questions for you

- How to
  - Earn money
  - Buy goods
  - Trade

- Communicate
- Encounter
- Learn
- Self-express myself
- Entertain myself
  - Music
  - Video
  - ...

- Trust

- Recommendations
  - ...

...
WHAT DOES THE SOCIAL WEB BRING BEYOND WEB 1.0?
New means of communication

- Beyond email, text messaging, and mobile phone
- Asynchronous (not requiring real-time response)
- A lot of communication seems irrelevant & trivial
- Some can be helpful and interesting

- Some people addicted

- Interesting twist between advertisements, self-promotion and stilling curiosity about celebrities
New form of communities

- Social web sites are in essence online communities
- Groups around a number of natural attributes
  - Schools attended
  - Employers
  - Cities of residence
- Groups around any type of interest, hobby or cause
  - Helping each other win information
  - Advice
- Personal networks
- Specific functions
  - LinkedIn most successful for its recruitment services
New source of knowledge

- beyond what search engines can dig into
  - Search for „interesting cool video“ on Google

- People can dig into their network of connections to find answers to questions
  - Folklore knowledge

- Friends-based news updates
- Friends-based senrendipity
- „world-wide directories“ of people
New source of entertainment

- Recommendations for
  - Movies
  - Music
  - Artists
  - Readings
  - Trivia
  - ...

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New venue for self-expression

- A surprisingly large number of people have had a strong desire for self-expression and desire for self-satisfaction that comes from helping others
- A major reason for Wikipedia success
  - More than 10 million articles
  - Hundreds of thousands of volunteers
    - Really active crowd is much smaller
  - Posting seems to create a sense of self-assurance and belonging
WEB 2.0 SUCCESS AND FAILURE FOR WHOM?
Systematic overprediction and underestimation

Recently in the news:
  „Social Web is overrated“
  „Good for service providers“
  „bad for us“

- Tenet
  - Near-future implications are overrated
  - Long-term implications are underestimated

- ....in almost every field at almost any time...
Systematic overprediction and underestimation

One reason:

Growth and Perception

E-commerce [this slide based on a 2001 CS99/73N class exercise]
- Gartner: 2000 prediction for 2004: 7.3 T$
- Revision: 2001 prediction for 2004: 5.9 T$ drastic loss?

Examples
Artificial Intelligence
Databases
Neural networks
E-commerce

Perception level
Invisible growth

Extrapolated growth
Combinatorial growth
Perceived growth
Perceived initial growth
Disappointment
Realistic growth
50 companies, each after 20% of the market

22-Oct-12

Gio W. CS207 2012
Let’s talk about human computation later....