Social Networks and Smartphones
Fall 2014 - Prof. Oge Marques

Lecture 1 - Welcome to the new world: How the web became the place for content creation and sharing

Takeaways:
- The Word Wide Web (WWW) is part of our lives (and it's here to stay).
- It has revolutionized just about everything we do.
- We all use it, but we may not know exactly what it is and what makes it work the way it does.
- What, exactly, is the World Wide Web?
  - (*noun*) a part of the Internet accessed through a graphical user interface and containing documents often connected by hyperlinks —called also *Web* (Merrian-Webster)
  - (*noun*) an information system on the Internet that allows documents to be connected to other documents by hypertext links, enabling the user to search for information by moving from one document to another. (Google)
- <u>Do not confuse</u> the web with: the Internet, Google, your browser, or any specific computer or site.
- Important concepts:
  - **Client**: a computer that accesses (and interacts with) web-based content.
  - **Server**: a computer that stores web pages and serves the content to a client upon request.
  - **Website** (or simply site): a collection of pages and other assets that belong together and are accessible over the web.
  - **Browser**: a software program that allows accessing and displaying the contents of web sites. Examples: Google Chrome, Safari, Firefox, and Internet Explorer.
  - **Browser extension** (or add-on): a computer program that extends the functionality of a web browser in some way.
  - **Search engine**: a computer program, usually available as a web site, which is used to look for information on the Internet.
  - **Protocol**: a set of rules governing the exchange or transmission of data between devices.
  - **HTTP (HypertText Transfer Protocol)**: the protocol that establishes how data is exchanged between a server and a client on the web.
  - **HTML (HyperText Markup Language)**: a standardized system for tagging text files to achieve font, color, graphic, and hyperlink effects on web pages. The latest version is HTML 5.
  - **JavaScript**: a computer programming language commonly used to create interactive effects within web browsers.
  - **Flash**: a platform for producing and displaying animation and video in web browsers.
  - **ISP (Internet Service Provider)**: an organization that provides services for accessing, using, or participating in the Internet. Examples: AOL, AT&T, Comcast.
  - **Domain name**: a unique name that identifies an Internet resource such as a website. Examples: fau.edu, yahoo.com, whitehouse.gov, darpa.mil.

- The web has changed significantly over the years. These are some of the milestones and trends in the history of the Web (see http://www.pewinternet.org/2014/03/11/world-wide-web-timeline/ for more):
    - Tim Berners-Lee's original design (1989-90)
    - First browser (Mosaic 1.0) (1993)
    - The dot-com bubble (1997-2000)
    - From dial-up to broadband (2005)
    - Evolution of online shopping (2008)
    - The mobile web (2013)
- Top 15 most popular websites (October 2014):
    - Google, YouTube, Facebook, Yahoo, Amazon, Wikipedia, Twitter, Bing, eBay, MSN, Microsoft, LinkedIn, Pinterest, Ask, WordPress.
- Despite its convenience, the web has also brought about several problems and concerns:
    - Privacy and security concerns (hackers, stolen information, etc.)
    - Changes in our habits / personality (e.g., Internet addiction)
- Web 2.0: the shift from consumer to producer.
    - What makes us producers of content?
    - Every time we 'like' a Facebook post, rate a restaurant on Yelp, review a hotel on TripAdvisor or a book on Amazon, upload a picture to Flickr, etc. we become a producer.
    - But to be a true content creator you'd need to have a site or, at least, a blog or Twitter account.

Selected websites:
- http://www.w3.org/ (W3C: official, highly technical, information about the web)
- http://info.cern.ch/hypertext/WWW/TheProject.html (world's first web site)
- https://archive.org/web/ (Internet Archive: wayback machine)
- http://www.ebizmba.com/ (Statistics about best / most popular sites)
- http://html5test.com/ (Browser comparison, based on compatibility with HTML5)
- http://www.w3counter.com/globalstats.php (Statistics on browser market share)
- http://www.speedtest.net/ (Test Internet connection speed)

Practical recommendations:
- Browser:
    - Install two or more leading browsers (e.g., Chrome, Safari, Firefox, Opera)
    - Keep your browsers updated to the latest version (can be done automatically)
    - Beware of Internet Explorer (IE), especially older versions
    - Remember that "it takes two to tango" (not all sites run on all browsers)
    - Good uses for the incognito (private browsing) mode
- Browser extensions (Chrome) or add-ons (Firefox):
    - See list at: http://lifehacker.com/lifehacker-pack-for-chrome-our-list-of-essential-chrom-880863393
    - My recommendations: Evernote web clipper, HTTPS everywhere, 1Password, Adblock (Plus), Clearly, TrackMeNot, Feedly, Wunderlist, Save to Pocket.

Coming up next...
- Lecture 2: The image and video revolution: Instagram, YouTube, and camera phones.
- Lecture 3: Smartphones: "there's an app for that".
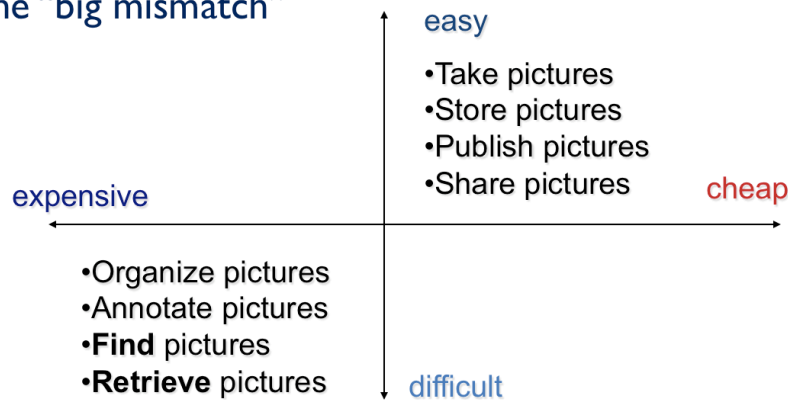- Lecture 4: The social network phenomenon: Twitter, Facebook, and more.

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Lecture 2 – Image and video everywhere!

Takeaways:

- Thanks to technological developments during the past 25 years, there has been a significant increase in the production and consumption of visually rich contents, including high-quality images and high-definition videos.
- There are more ways to capture, produce, edit, share, remix, and distribute visual content than ever before! Organizing, annotating, and finding images and videos, however, remains difficult and expensive.

The "big mismatch"

easy
- Take pictures
- Store pictures
- Publish pictures
- Share pictures

expensive   cheap

- Organize pictures
- Annotate pictures
- **Find** pictures
- **Retrieve** pictures

difficult

- **Taking** pictures today:
    - Everyone has a camera (app) in their pocket
    - "Selfie" was the Oxford Dictionary's new word of the year (2013)
    - iPhoneography is here to stay
    - RIP Kodak (1888-2012)
- **Storing** pictures today:
    - Inexpensive storage (no need to be too economical)
    - Access everywhere (using cloud-based storage)
- **Publishing, organizing, annotating, and sharing** pictures today:
    - Specialized sites (Flickr, PhotoBucket, Picasa, etc.)
    - Cloud-based repositories (e.g., DropBox)
    - Blogs
    - Twitter
    - Instagram
    - Pinterest
    - Snapchat
    - Facebook
- **Finding and retrieving** pictures today:
    - Google Image Search
    - Other search engines
    - The rise of mobile visual search (e.g., CamFind)

- The video (r)evolution
    - Changes in TV watching habits (time and space shifts)
    - 100s of channels and nothing on?
    - Smart TVs, DVRs, set-top boxes, video on demand
    - The YouTube phenomenon
    - Affordable high-quality video communications (Skype, FaceTime, Google Hangout)
    - Video in education: Khan Academy, MOOCs, etc.

Selected websites:
- http://vidstatsx.com/ (YouTube statistics)
- http://www.ebizmba.com/articles/photo-sharing-sites (Top 15 Most Popular Photo Sharing Sites)
- http://www.creativebloq.com/design-tools/best-photo-apps-513764 (32 Best photo apps for iPhone, iPad and Android – July 2014)
- http://marcolinaslate.com/iphoneobsessed/ (AppAlchemy)

Selected recommendations:
- TV / video apps:
    - YouTube
    - BuddyTV guide: http://www.buddytv.com/buddytv-guide.aspx
    - Netflix, Amazon Instant Video, Crackle
    - TED
    - ABC, NBC, HBO GO, etc.
    - WatchESPN, NBC Sports Live Extra
- Videoconferencing apps:
    - Skype, Google Hangout
- Image and video sharing apps:
    - Instagram, Twitter, Facebook, Pinterest, Vine
    - Padgram: http://www.padgram.com/
- Camera apps:
    - Hyperlapse: http://hyperlapse.instagram.com/
    - VSCO Cam: http://vsco.co/vscocam
- Photo editing apps:
    - Snapseed
    - Photoshop Express: http://www.photoshop.com/products/photoshopexpress
- Mobile Visual Search:
    - CamApp: http://camfindapp.com/
- Browser extensions (Chrome):
    - See: https://chrome.google.com/webstore/category/app/28-photos and https://chrome.google.com/webstore/category/app/83-online-videos and https://chrome.google.com/webstore/category/app/42-tv-movies

A few questions for reflection
    - What does the expression "watch TV" mean to each of us these days?
    - Are we reaching the eye limiting display resolution for some devices?
    - Are we missing this moment because we're too busy taking pictures?
    - Will we all be wearing *Google Glass*es in the future?

Lecture 3 – Smartphones

Outline:

- The evolution of telephone communications
- The pervasiveness of cellphones
- What makes a cellphone a **smart**phone?
- Market statistics: market growth, penetration, regional differences
- How are we using smartphones?
- Highlights from the US Mobile App Report 2014
- Which phone (family) should I choose: Android, iPhone, Windows Phone, Blackberry, or something else?
- There's an app for that! ™
- How many apps are there?
- Who pays for apps?
- Essential apps
- Recommended apps
- Beyond phones: watches, glasses, and more
- A few questions for reflection

Takeaways:

- Exponential growth in smartphone market, driven (primarily) by powerful, feature-rich, and relatively inexpensive hardware, many useful apps, and improving telecommunication infrastructure.
- Millions of apps! (**Literally!**)
- Shift from desktop to mobile (see chart below)

Percent Audience Reach on Desktop and Mobile App by Category

Source: comScore Media Metrix & Mobile Metrix, U.S., June 2014
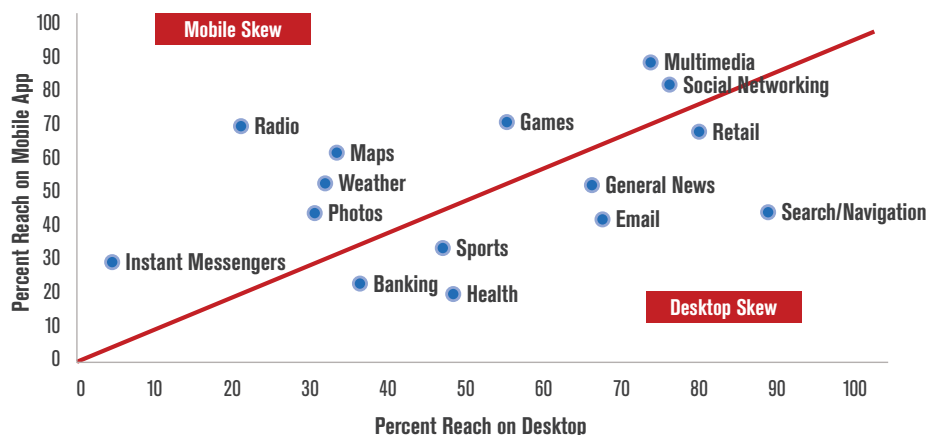
- Different usage patterns depending on age and other demographics, but with some common trends, such as:
  - 7 out of every 8 on minutes on mobile, are driven specifically by app usage
  - Facebook: #1 app in both audience size and share of time spent
  - The greatest amount of time spent in apps is in leisure-oriented content categories, such as social media, entertainment and messaging.
- Increasing dependence on cellphones
  - 67% of cell owners find themselves checking their phone for messages, alerts, or calls — even when they don't notice their phone ringing or vibrating.
  - 29% of cell owners describe their cell phone as "something they can't imagine living without."

Selected websites:
- http://firstdraftsofhistory.tumblr.com/ (Historic Wikipedia first drafts)
- http://www.windowsphone.com/en-us (Windows Phone)
- http://www.android.com/phones/ (Android phones)
- http://www.apple.com/iphone/ (iPhone)
- http://us.blackberry.com/smartphones.html (Blackberry smartphones)
- http://mashable.com/2014/10/16/most-popular-free-apps/ (The Most Popular Free Apps From A to Z)
- http://www.appbrain.com/stats/number-of-android-apps (Android statistics)
- http://www.pocketgamer.biz/metrics/app-store/ (Apple App Store statistics)
- http://news.microsoft.com/bythenumbers/index.html (Official Microsoft statistics)
- http://www.comscore.com/Insights/Presentations-and-Whitepapers/2014/The-US-Mobile-App-Report (The U.S. Mobile App Report – whitepaper)
- http://www.pewinternet.org/fact-sheets/mobile-technology-fact-sheet/ (Mobile Technology Fact Sheet)
- http://www.statista.com/topics/840/smartphones/ (Statistics and facts about Smartphones)
- http://think.withgoogle.com/mobileplanet/en/ (Our mobile planet)
- https://gsmaintelligence.com/ (Business intelligence for the mobile market)

Selected app recommendations (links to recently published lists):
- http://lifehacker.com/lifehacker-pack-for-iphone-our-list-of-the-essential-i-804543677
- http://www.pastemagazine.com/articles/2014/07/the-50-essential-iphone-apps.html
- http://www.pcmag.com/article2/0,2817,2400521,00.asp

A few questions for reflection
  - Will smartphones eliminate the digital divide?
  - Are we spending too much time with these devices?
  - Are smartphones changing our habits as couples?
  - Are smartphones changing our habits as a family?
  - Are smartphones making us lose the ability to memorize / concentrate?
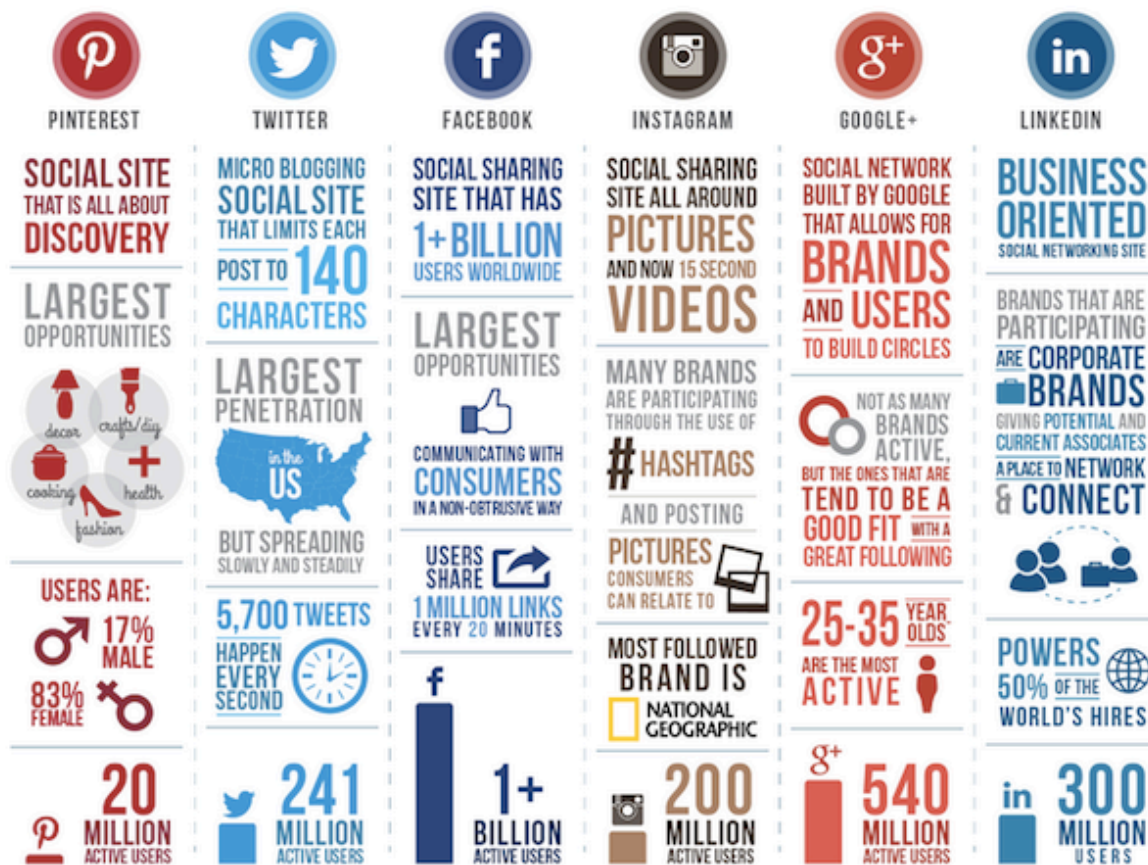
Lecture 4 – Social Networks

Outline:

- Social networks: what are they, who uses them, and why
- Twitter
- LinkedIn
- Google Plus
- Facebook
- Reflection: look down or look up?
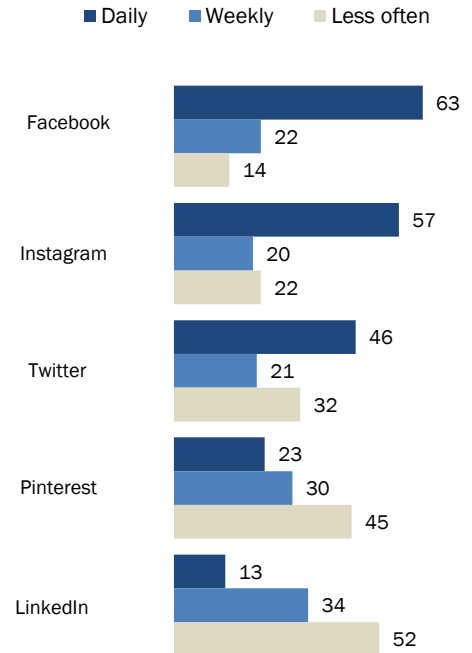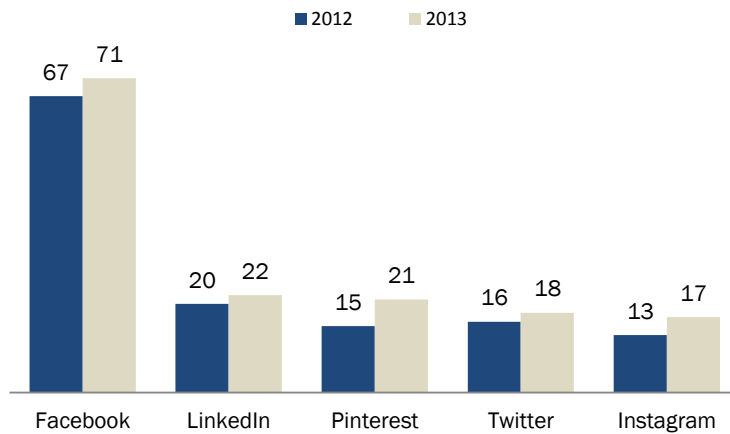
Takeaways:

- The big players in a nutshell

- Top 15 most popular social networking websites (October 2014)
  (http://www.ebizmba.com/articles/social-networking-websites):
  - **Facebook, Twitter, LinkedIn, Pinterest**, Google Plus, Tumblr, **Instagram**, VK, Flickr, Vine, Meetup, Tagged, Ask.fm, MeetMe, ClassMates.

Social media sites, 2012-2013

% of online adults who use the following social media websites, by year

Legend: ■ 2012 ■ 2013

Facebook: 67 (2012), 71 (2013)
LinkedIn: 20 (2012), 22 (2013)
Pinterest: 15 (2012), 21 (2013)
Twitter: 16 (2012), 18 (2013)
Instagram: 13 (2012), 17 (2013)

Legend: ■ Daily ■ Weekly ■ Less often

Facebook: Daily 63, Weekly 22, Less often 14
Instagram: Daily 57, Weekly 20, Less often 22
Twitter: Daily 46, Weekly 21, Less often 32
Pinterest: Daily 23, Weekly 30, Less often 45
LinkedIn: Daily 13, Weekly 34, Less often 52

Selected websites:

- http://computer.howstuffworks.com/internet/social-networking/information/10-things-you-should-not-share-on-social-networks.htm (Top 10 Things You Should Not Share on Social Networks)

- http://computer.howstuffworks.com/internet/social-networking/information/facebook-no-no-quiz.htm (Facebook No-nos Quiz)

- http://www.pewinternet.org/fact-sheets/social-networking-fact-sheet/ (Social networking fact sheet)

- http://www.pewinternet.org/2013/12/30/social-media-update-2013/ (Social media update 2013)

- http://www.statista.com/topics/1164/social-networks/ (Statistics and facts about Social Networks)

- http://www.momthisishowtwitterworks.com/ (A guide to Twitter basics)

- https://www.hashtags.org/platforms/twitter/twitter-for-beginners-basic-guidelines-before-you-start/ (Twitter for beginners)

- http://mashable.com/2013/10/08/what-is-hashtag/ (Beginner's guide to hashtags)

- https://www.youtube.com/playlist?list=PLA0CC69E3BD4024F4 ("How to use Facebook" – a YouTube playlist)

- https://www.linkedin.com/pulse/article/20140417174121-34888774-linkedin-etiquette-guide-20-do-s-don-ts (LinkedIn etiquette)

Keep learning and stay in touch!

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