

CSCI5070 Advanced Topics in Social Computing

01-Introductions

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Course Information

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- email: king@cse.cuhk.edu.hk
- <http://www.cse.cuhk.edu.hk/irwin.king/teaching/csci5733/2013>
- Office hours: M8 and T8 from 3:30 pm - 4:30 pm
- Tutor: Mr. Baichuan Li and Ms. Yuanyuan Man
- <http://www.cse.cuhk.edu.hk/~king/PUB/CSCI5733>



A Quick Survey

- Programming languages and tools
 - Python (packages and APIs)
 - R or Matlab
 - Graphviz
 - Web crawler
 - NetworkX
- Machine learning and data mining
 - Classification and clustering algorithms
 - Graph theory
 - Matrix operations, linear algebra, etc.
 - Natural language processing
 - PageRank, HITS, etc.



Grade Assessment Scheme

- Assignments (20%)
 - Written assignments
 - Optional quizzes
- Midterm Examination (30%)
- Project (50%)
 - Report (30%)
 - Presentations (20%)
- Extra Credit (There is no penalty for not doing the extra credit problems. Extra credit will only help you in borderline cases.)

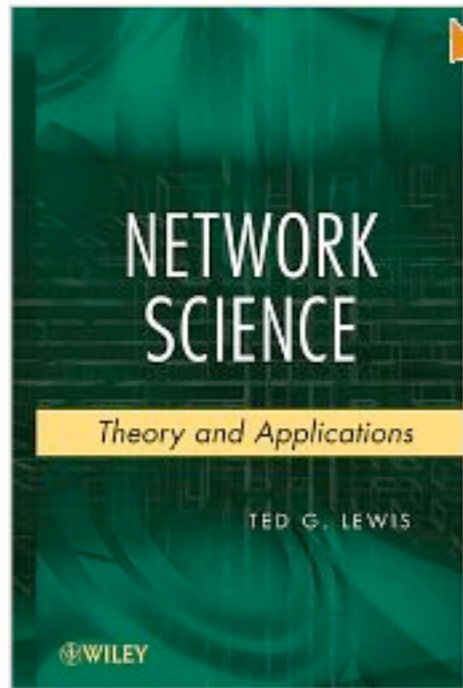


Class Project

- Project is for everyone
- Up to four persons per project group
- Sept. 30 - Project proposal submission
- Oct. 7 - Project feedback
- Nov. 4 - Midterm check
- Nov. 25 - Project presentations



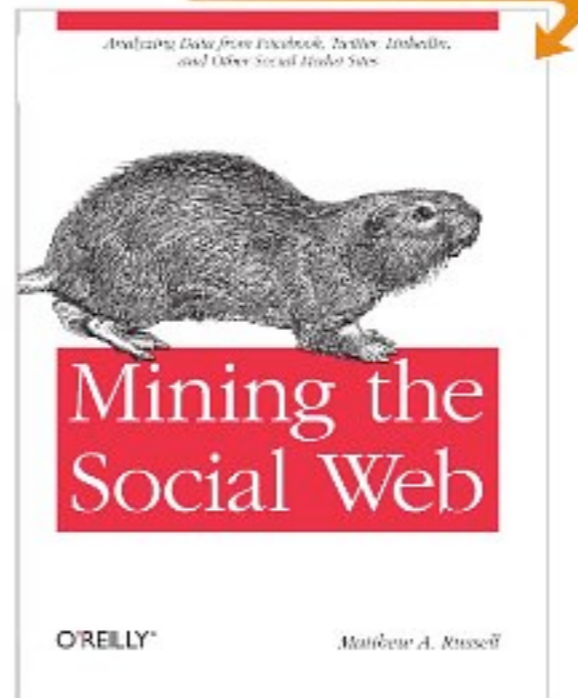
Click to **LOOK INSIDE!**



Network Science:
Theory and Applications

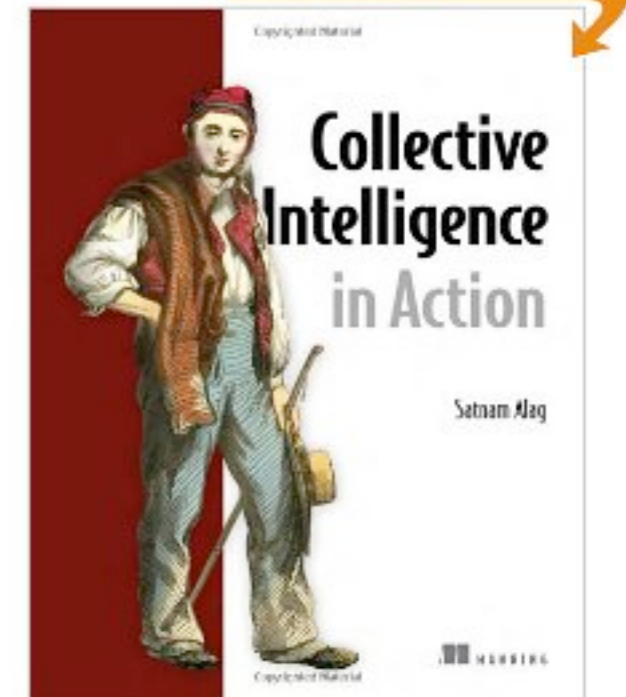
References

Click to **LOOK INSIDE!**



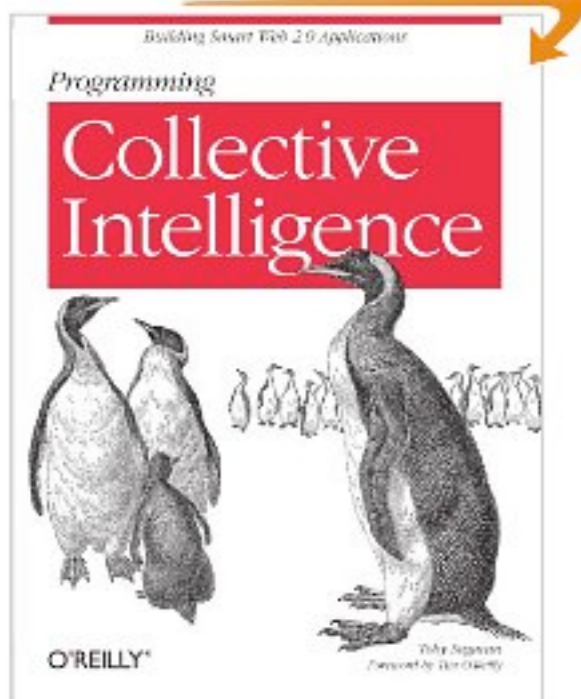
Mining the Social Web:
Analyzing Data from
Facebook, Twitter,
LinkedIn, and Other Social
Media Sites

Click to **LOOK INSIDE!**



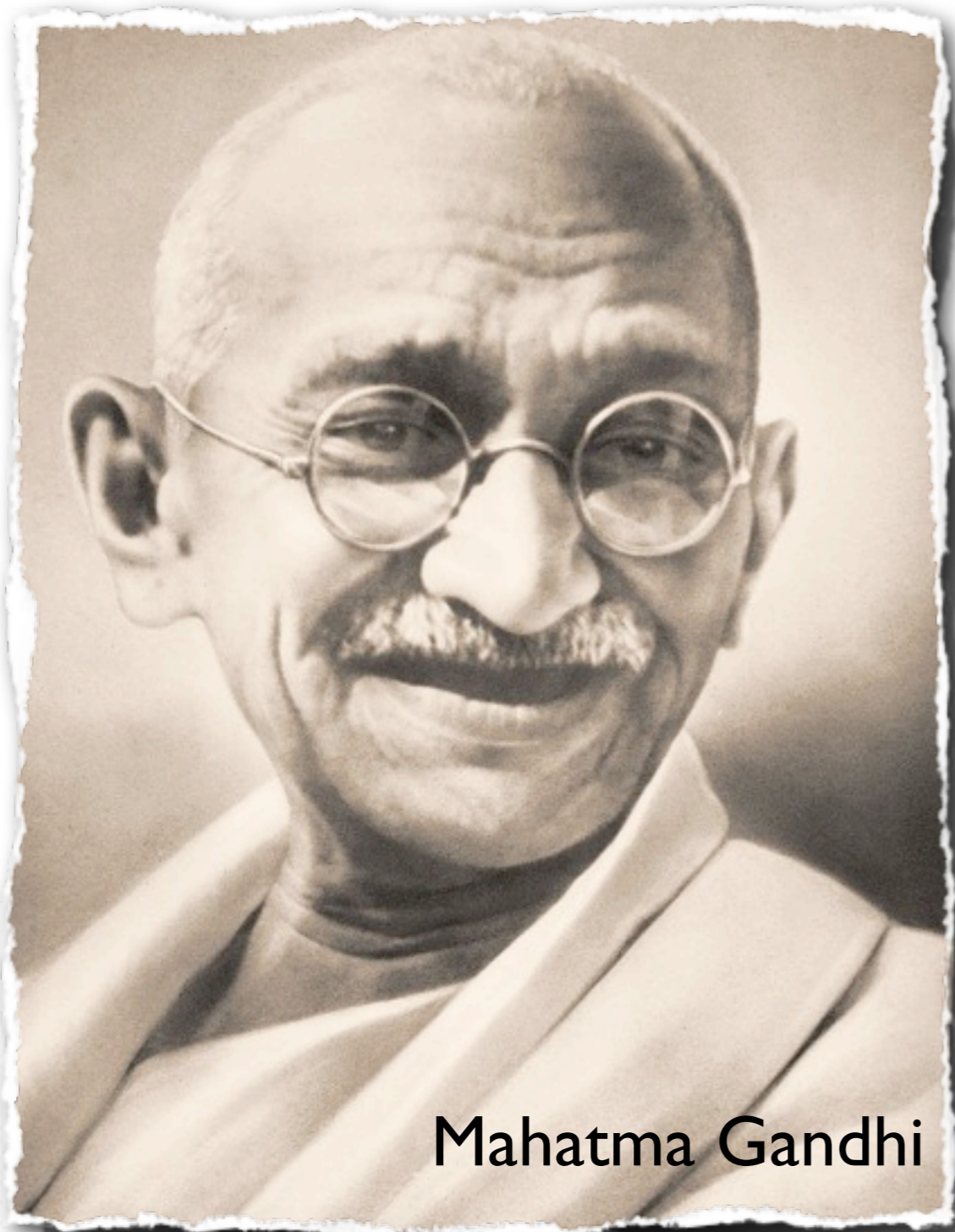
Collective Intelligence in
Action

Click to **LOOK INSIDE!**



Programming Collective Intelligence:
Building Smart Web 2.0 Applications





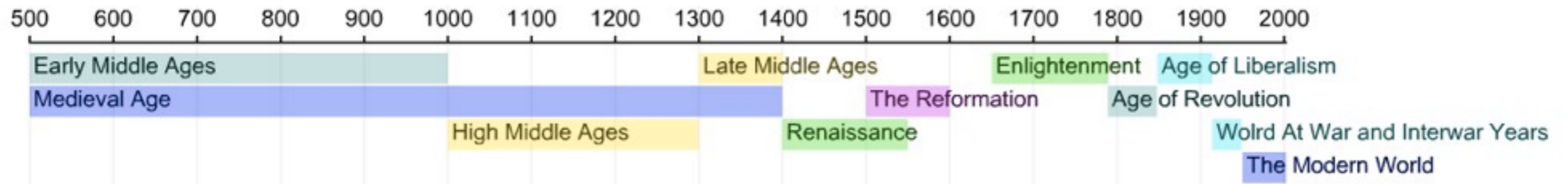
Mahatma Gandhi

Interdependence is and ought to be as much the ideal of man as self-sufficiency.

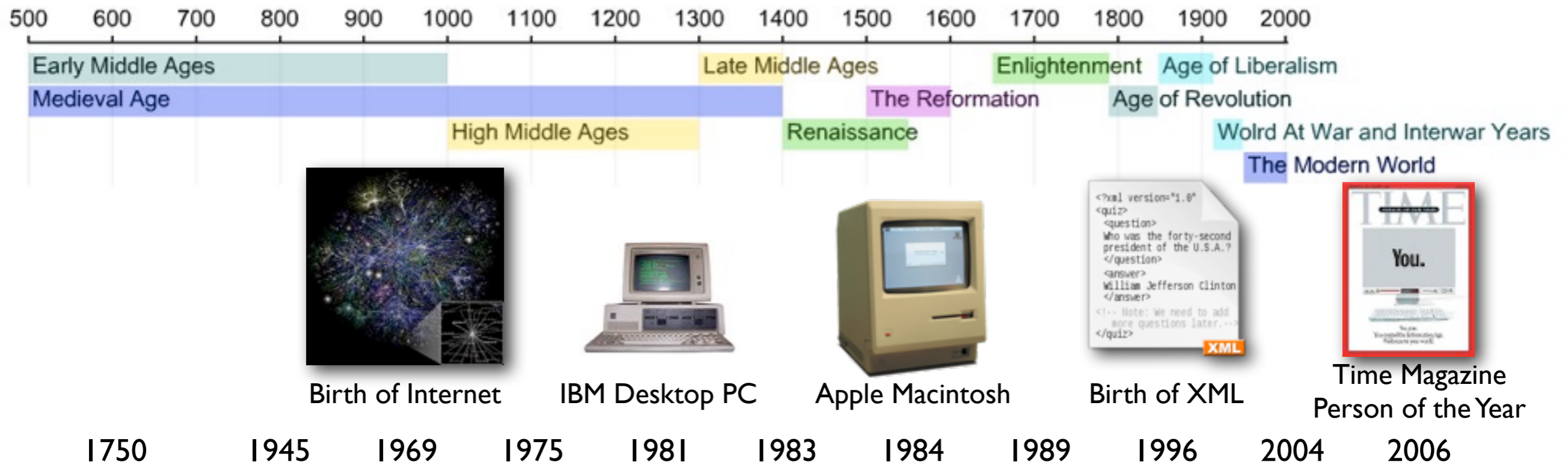
Man is a social being.



A Brief History of the World



A Brief History of the World



Industrial Revolution

Information Age

Internet Age

WWW Age

Attention Age

ENIAC



The MITS Altair
Apple II



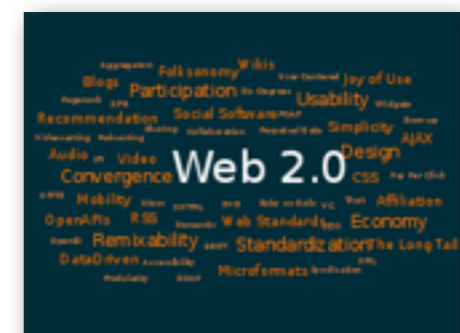
Time Magazine
Person of the Year



Birth of WWW



Birth of Web 2.0





intel.

revolution in evolution

Highlights from the Journey to 1 Billion PCs

1,000,000,000
900,000,000
800,000,000
700,000,000
600,000,000
500,000,000
400,000,000
300,000,000
200,000,000
100,000,000

1,000,000,000
900,000,000
800,000,000
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300,000,000
200,000,000
100,000,000



1971 - Intel, founded by Robert Noyce, Gordon Moore and Andy Grove, introduces the world's first microprocessor and calls it the Intel® 4004.

1974 - Intel introduces the 8008 microprocessor, which was used in the first commercially successful personal computer - the Intel 8080.

1976 - Apple Computer, Inc. releases the Apple I, the first single-board computer. The following year, the company introduces the Apple II, the first for a personal computer, the Apple II featured color graphics.



Microsoft ships the Windows® operating system with a graphical user interface. America Online is founded.

1986 - The number of PCs shipped worldwide reaches nearly 64 million and a 15-year period of continuous growth begins.

1987 - Toshiba introduces the T1000 laptop PC, making portable computing more widely available.

1988 - Removable CD-ROM drives become available.

1991 - Creative Labs introduces a Multimedia Upgrade Kit containing a CD-ROM drive, Sound Blaster® Pro card, speakers and multimedia software.



1992 - The number of PCs shipped worldwide reaches 200 million.

1993 - Intel introduces the Pentium® processor, which was used in the first commercially successful personal computer - the Intel 80486.

1994 - Intel introduces the Pentium® Pro processor, which was used in the first commercially successful personal computer - the Intel 80500.

1995 - Intel introduces the Pentium® MMX processor, which was used in the first commercially successful personal computer - the Intel 80500.

1996 - Intel introduces the Pentium® II processor, which was used in the first commercially successful personal computer - the Intel 80500.

1997 - Intel introduces the Pentium® III processor, which was used in the first commercially successful personal computer - the Intel 80500.

1998 - Intel introduces the Pentium® III processor, which was used in the first commercially successful personal computer - the Intel 80500.

1999 - Intel introduces the Pentium® III processor, which was used in the first commercially successful personal computer - the Intel 80500.

2003-2006 - The number of PCs shipped worldwide may reach 2 billion, according to industry analyst firm Gartner Dataquest.



Social Networking

HOW TO USE WEB 2.0 IN THE ENTERPRISE



*PART 1:
COMMUNICATE WITH YOUR EMPLOYEES*



Billionaires' Shuffle

2007



2008



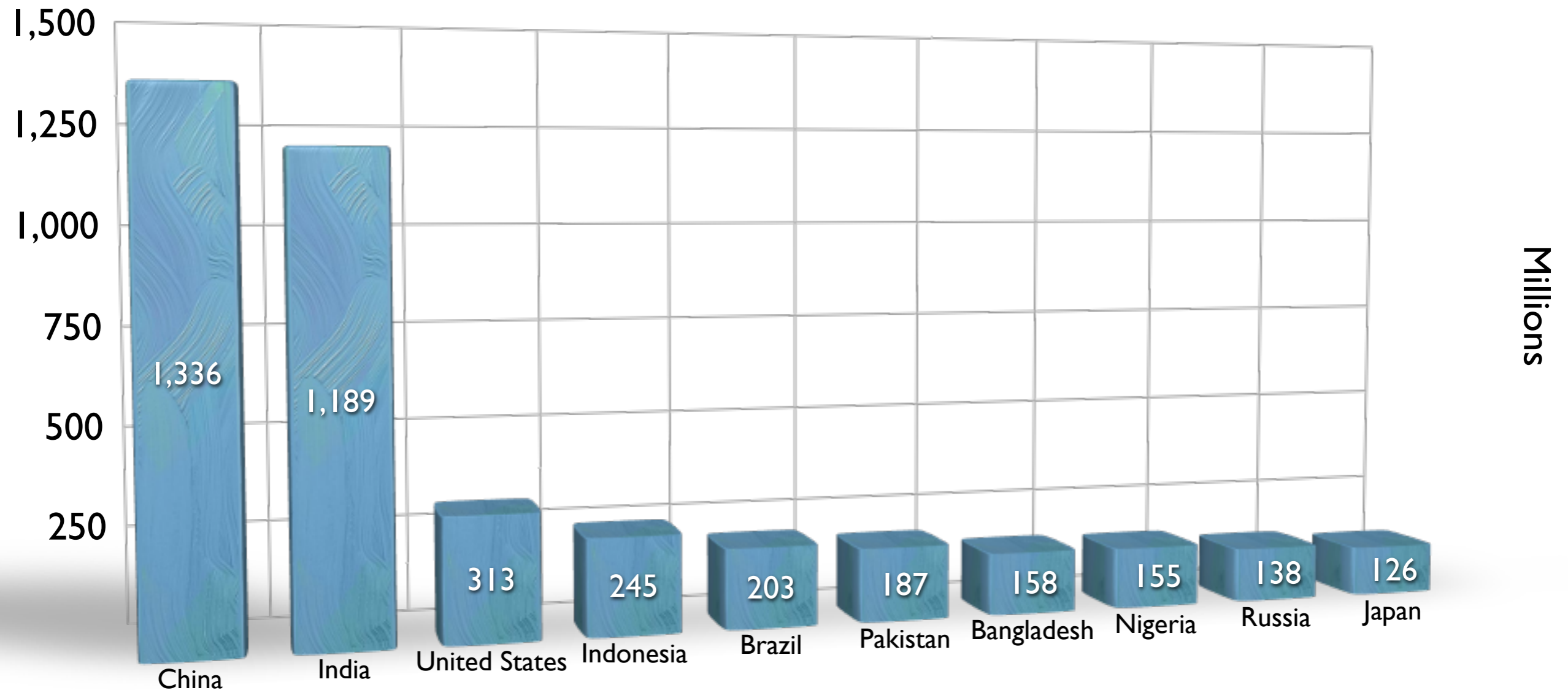
Facebook in 2004.02

2008
at **23** and \$ **1.5** billion later...



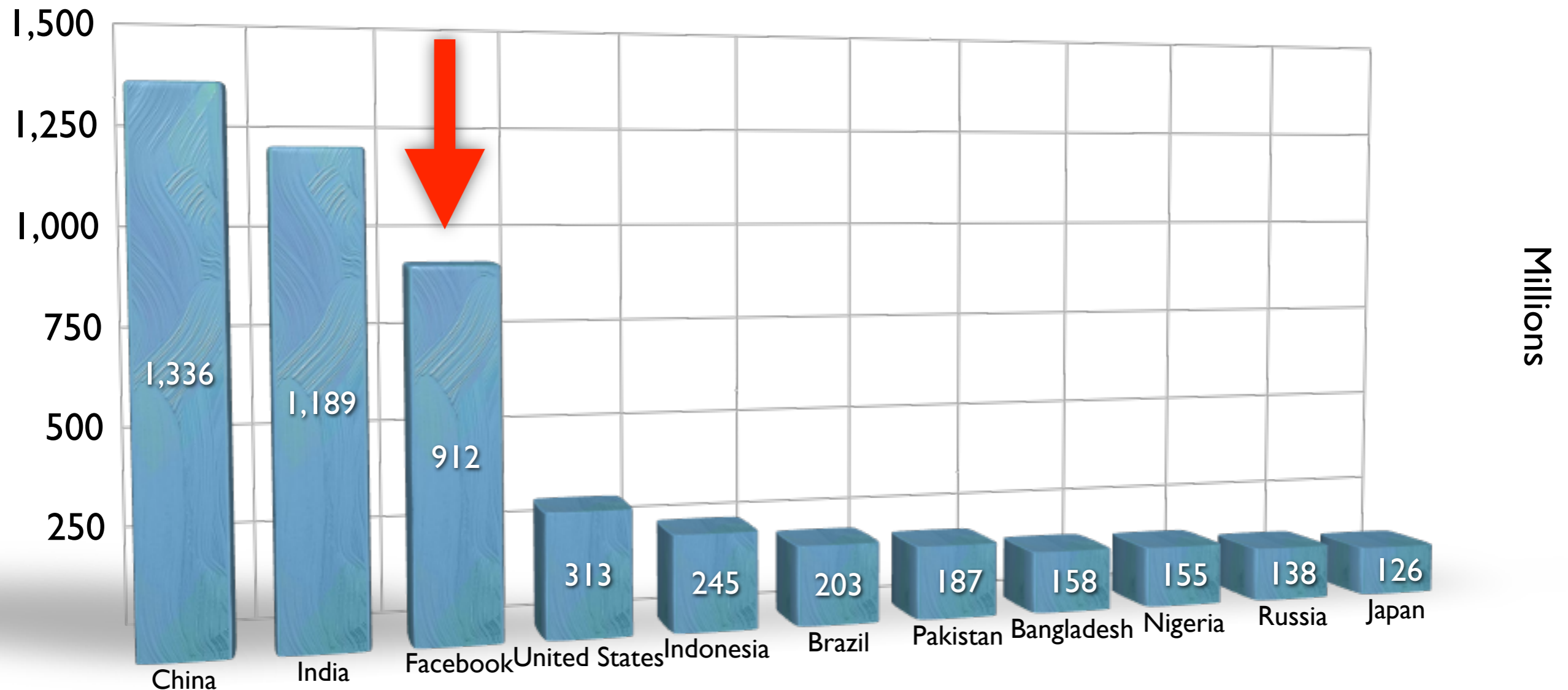
Top 10 Populations by Countries

as of December 31, 2011



Top 10 Populations by Countries

as of September 8, 2012



Facebook's Global Audience

Global Audience: 316,402,840

Data for 11/03/2009



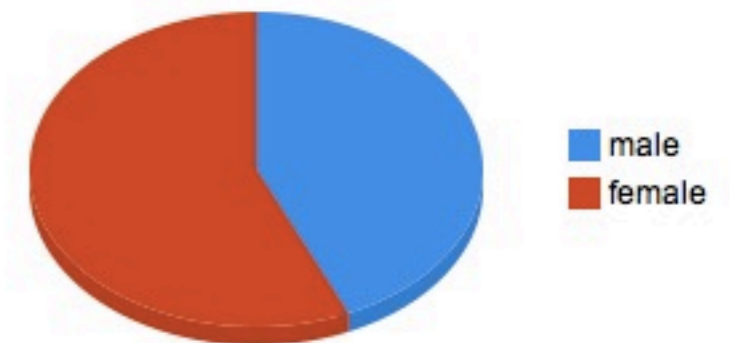
United States

Country Audience: 94,748,820

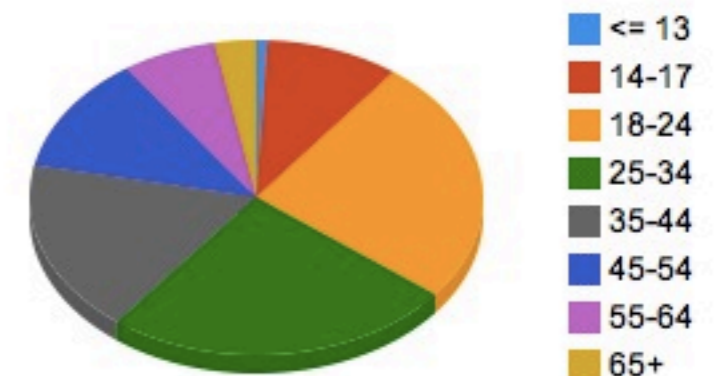
Percent of Global Audience: 29.95%

Share This Site 1543 retweet

United States Male / Female



United States Age Distribution



Facebook's Global Audience

Global Audience: 912,496,580

Data for 09/08/2012

About CheckFacebook.com



Start monitoring your Facebook Page today!

- ✓ Analyze your competition
- ✓ Track most engaging content
- ✓ Compare your results with leaders

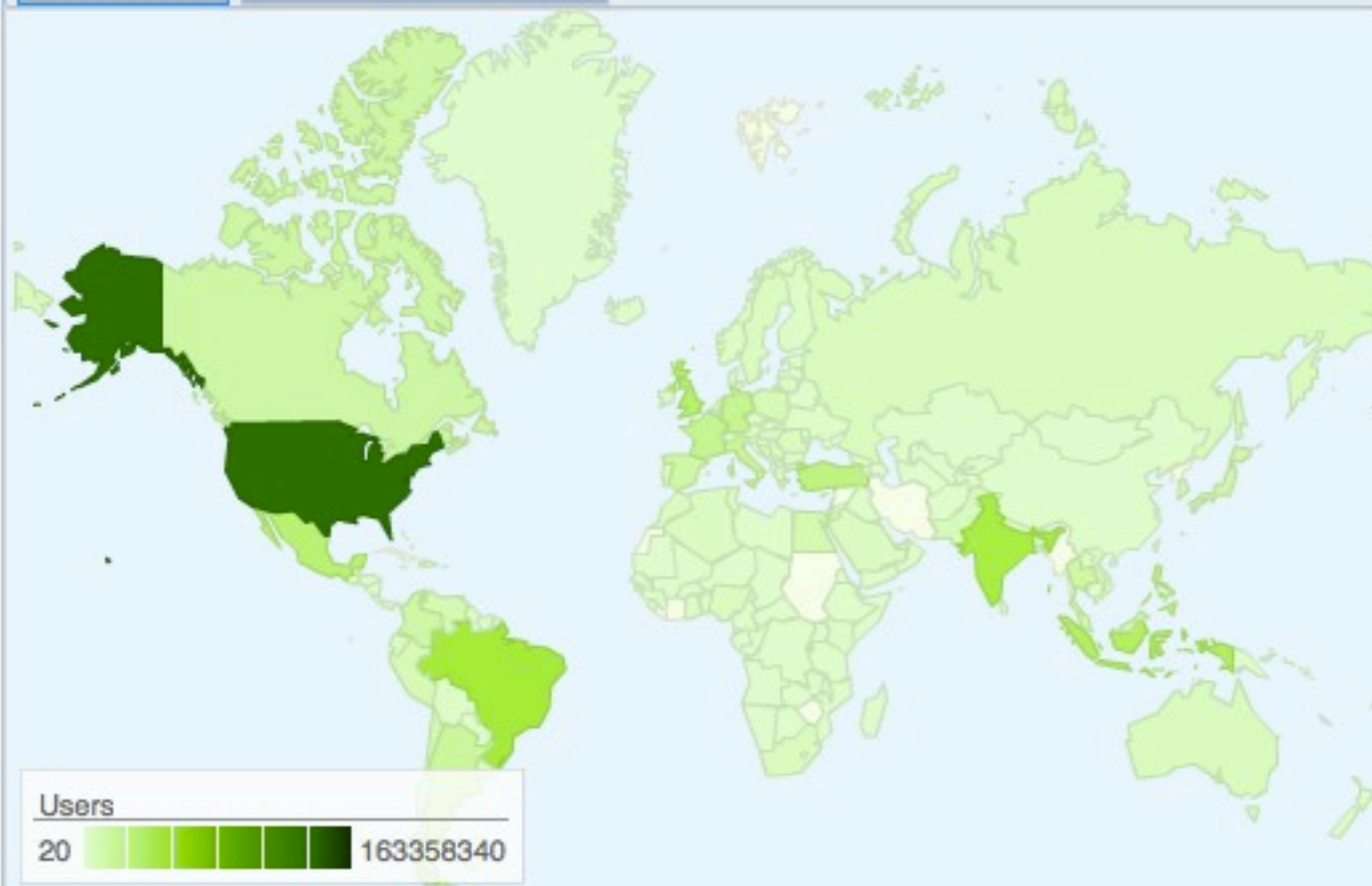
Most comprehensive analytics platform for Facebook out there

Start right NOW!

George May | DOB

Total Users

% Online Population



Not Pictured: [Hong Kong](#), [Maldives](#), [Palestine](#), [Singapore](#), [Taiwan](#)

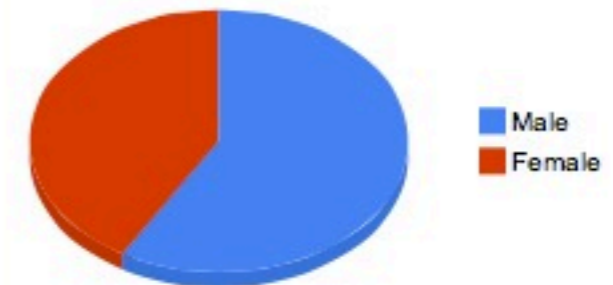
China

Country Audience: 552,560

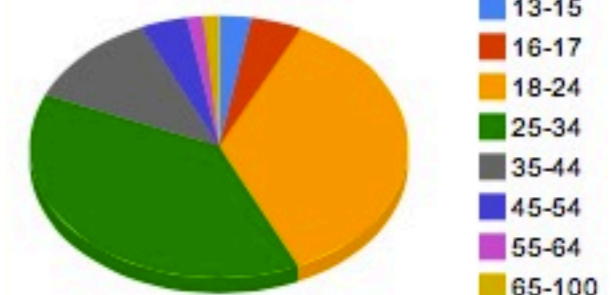
Percent of Global Audience: 0.13%

Share This Site 4163 retweet

China Male / Female



China Age distribution



PRO Analytics
for facebook page!

- ✓ Local Industry benchmarks
- ✓ Discover what works
- ✓ Competitive reporting



Facebook's Growth Stats

Statistics

Company Figures

More than 400 million active users
50% of our active users log on to Facebook in any given day
More than 35 million users update their status each day
More than 60 million status updates posted each day
More than 3 billion photos uploaded to the site each month
More than 5 billion pieces of content (web links, news stories, blog posts, notes, photo albums, etc.) shared each week

10 Largest Countries

| | |
|-------------------|------------|
| 1. United States | 94,748,820 |
| 2. United Kingdom | 22,261,080 |
| 3. Turkey | 14,215,880 |
| 4. France | 13,396,760 |
| 5. Canada | 13,228,380 |
| 6. Italy | 12,581,060 |
| 7. Indonesia | 11,759,980 |
| 8. Spain | 7,313,160 |
| 9. Australia | 7,176,640 |
| 10. Philippines | 6,991,040 |

10 Fastest Growing Over Past Week

| | | |
|-----------------|---------|---------|
| 1. Poland | 12.46 % | 137,900 |
| 2. Thailand | 10.96 % | 161,300 |
| 3. Portugal | 9.81 % | 80,040 |
| 4. South Africa | 9.25 % | 189,080 |
| 5. Taiwan | 7.82 % | 367,400 |
| 6. Romania | 7.65 % | 28,060 |
| 7. Germany | 7.54 % | 350,240 |
| 8. Malaysia | 7.43 % | 236,840 |
| 9. Indonesia | 6.84 % | 752,640 |
| 10. Iraq | 6.72 % | 6,380 |



Facebook's Growth Stats

(as of September 2012)

Statistics

955 million monthly active users at the end of June 2012.

Approximately 81% of our monthly active users are outside the U.S. and Canada.

552 million daily active users on average in June 2012.

543 million monthly active users who used Facebook mobile products in June 2012.

| 10 Largest Countries | | | 10 Fastest Growing Over Past Week | | |
|----------------------|----------------|-------------|-----------------------------------|----------------------|--------------------|
| 1. | United States | 163,358,340 | 1. | Vietnam | 100.09 % 3,598,480 |
| 2. | Brazil | 56,804,900 | 2. | Brazil | 0.18 % 100,060 |
| 3. | India | 53,624,320 | 3. | Thailand | 0.21 % 34,780 |
| 4. | Indonesia | 44,156,440 | 4. | Colombia | 0.19 % 32,060 |
| 5. | United Kingdom | 40,036,380 | 5. | Romania | 0.44 % 21,940 |
| 6. | Mexico | 37,542,740 | 6. | Croatia | 0.84 % 13,120 |
| 7. | Turkey | 31,108,760 | 7. | Netherlands Antilles | 12.76 % 9,720 |
| 8. | Philippines | 29,136,040 | 8. | Canada | 0.05 % 9,700 |
| 9. | France | 24,639,540 | 9. | Chile | 0.10 % 9,560 |
| 10. | Germany | 24,300,340 | 10. | Jordan | 0.37 % 8,980 |



Global Internet Traffic

| Alexa as of August 2011 | China | USA | Japan | India | Brazil | Global |
|-------------------------|--------------|------------------|------------------|------------------|---------------------|------------------|
| 1 | Baidu | Google | Yahoo.jp | Google.in | Google.br | Google |
| 2 | QQ | Facebook | Google.jp | Google | Google | Facebook |
| 3 | Sina | Yahoo! | FC2 | Facebook | Facebook | YouTUBE |
| 4 | Taobao | YouTUBE | YouTUBE | YouTUBE | YouTUBE | Yahoo! |
| 5 | Google.hk | Amazon | Google | Yahoo! | Universo Online | Blogger |
| 6 | 163 | Wikipedia | Ameblo.jp | Blogger | Windows Live | Baidu |
| 7 | Weibo | Blogger | rakuten | Wikipedia | Globo | Wikipedia |
| 8 | Google | Twitter | livdoor | LinkedIn | Orkut.com.br | Windows Live |
| 9 | ifeng | eBay | Facebook | Twitter | Yahoo! | Twitter |
| 10 | Yahoo | Craigslist | Wikipedia | Rediff | Orkut.com | QQ |



| Alexa as of May 2009 | China | USA | Japan | India | Brazil | Global |
|----------------------|-----------|------------------|-----------------------|-----------------------|-----------------|-----------------------|
| 1 | Baidu | Google | Yahoo.jp | Google.in | Google | Google |
| 2 | QQ | Yahoo! | FC2 | Google | Orkut.br | Yahoo! |
| 3 | Sina | Facebook | Google.jp | Yahoo | Windows Live | YouTube |
| 4 | Google.cn | YouTube | YouTube | Orkut.in | Universo Online | Facebook |
| 5 | Taobao | Myspace | Rakuten | YouTube | YouTube | Windows Live |
| 6 | 163 | MSN | Livedoor | Blogger | Globo | MSN |
| 7 | Google | Windows Live | Ameblo.jp | Rediff | MSN | Wikipedi a |
| 8 | Sohu | Wikipedia | mixi | Facebook | Google | Blogger |
| 9 | Youku | Craigslist | Wikipedi a | Wikipedi a | Yahoo! | Baidu |
| 10 | Yahoo | EBay | Google | Windows Live | Terra | Myspace |

| Alexa as of August 2011 | China | USA | Japan | India | Brazil | Global |
|-------------------------|--------------|------------------|-----------------------|-----------------------|--------------------------|-----------------------|
| 1 | Baidu | Google | Yahoo.jp | Google.in | Google.br | Google |
| 2 | QQ | Facebook | Google.jp | Google | Google | Facebook |
| 3 | Sina | Yahoo! | FC2 | Facebook | Facebook | YouTube |
| 4 | Taobao | YouTube | YouTube | YouTube | YouTube | Yahoo! |
| 5 | Google.hk | Amazon | Google | Yahoo! | Universo Online | Blogger |
| 6 | 163 | Wikipedia | Ameblo.jp | Blogger | Windows Live | Baidu |
| 7 | Weibo | Blogger | rakuten | Wikipedi a | Globo | Wikipedi a |
| 8 | Google | Twitter | livedoor | LinkedIn | Orkut.co m.br | Windows Live |
| 9 | ifeng | eBay | Facebook | Twitter | Yahoo! | Twitter |
| 10 | Yahoo | Craigslist | Wikipedi a | Rediff | Orkut.co m | QQ |



The Brave New Words

博客

維基

AVATAR

头像

tag cloud

推特

unfriend

tweet

blogsphere

twitterati

defriend

SEXTING

hashtags

Folksonomy




Politics

HOME PAGE TODAY'S PAPER VIDEO MOST POPULAR TIMES TOPICS

The New York Times
Friday, June 19, 2009

News

Search All NYTimes.com 

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SPORTS OPINION ARTS STYLE TRAVEL JOBS REAL ESTATE AUTOS


The Lede

[The New York Times News Blog](#)

June 2, 2009, 7:05 PM

China's Great Firewall Blocks Twitter

By ROBERT MACKEY



Catherine Henriette/Agence France-Presse — Getty Images

Search This Blog

Previous Post: [Bloggers Ponder Last Message From Missing Jet's Computer](#)

Next Post: [Punditry From Bin Laden and Zawahiri on Obama's Trip to the Middle East](#)

Recent Posts

June 18 (38 comments) [Latest Updates on Iran's Disputed Election](#)
To supplement reporting from New York Times correspondents inside Iran on Thursday, The Lede will continue to track the aftermath of Iran's disputed presidential election online.

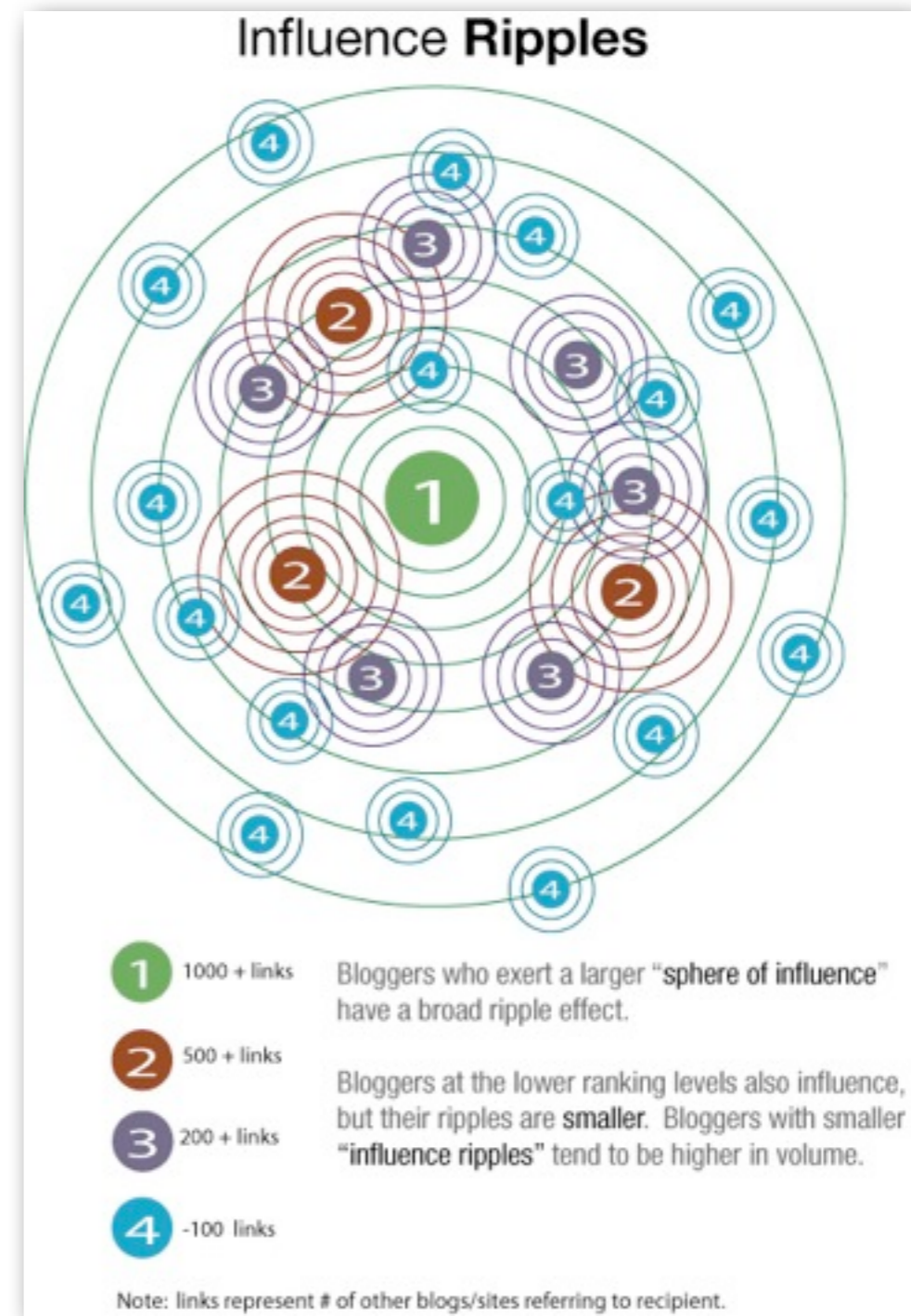
June 17 (129 comments) [Wednesday: Latest Updates on Iran's Disputed Election](#)
On Wednesday, The Lede will continue to track the aftermath of Iran's disputed presidential election online, to supplement reporting from New York Times correspondents inside Iran.

June 16 (198 comments) [Tuesday: Latest Updates on Iran's Disputed Election](#)
To supplement reporting from New York Times correspondents inside Iran, The Lede



Commerce

- Social marketing
- Who are the **brokers**?
- Who can exert the **most influence** on buying/selling?
- How **much** should one advertise?

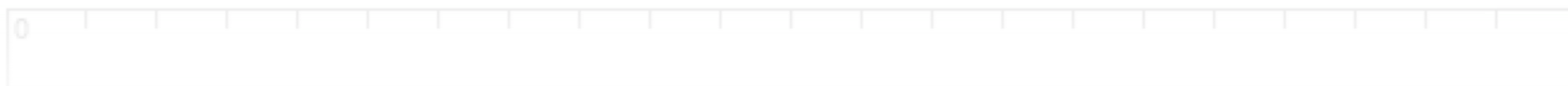


Public Health

- People's **behavior** can be monitored
- What is on people's mind translates to **search queries**
- Google predicts flu trends...

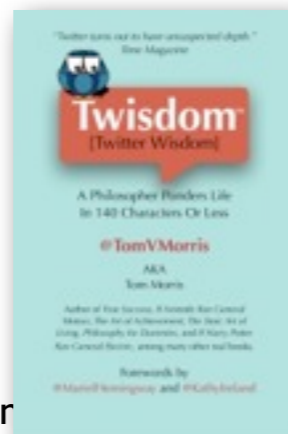
2007–2008 U.S. Flu Activity - Mid-Atlantic Region

ILI percentage



Pop Culture

- Twisdom: Twitter Wisdom
 - A Philosopher Ponders Life in 140 Characters or Less
 - “I don’t know the key to success, but the key to failure is trying to please everybody.” Bill Cosby Do what you know in your soul is right!
 - It is a miserable state of mind to have few things to desire, and many things to fear. – Francis Bacon
- The Longest Poem In the World-the awesome twitter poem! 956,644 verses this morning and ~4,000 a day!



The Choir of Hong Kong, CSC!



The Social Media Generation

The image shows a screenshot of the Oscars' YouTube channel page. At the top left is the Oscar statuette logo in a yellow circle. To its right is the text "THE ACADEMY OF MOTION PICTURE ARTS AND SCIENCES". Further right are three buttons: "VISIT OSCARS.ORG", "BECOME A FAN", and "SIGN UP FOR NEWS". Below the header is a navigation bar with "Oscar® Oscars's Channel", a "Subscribe" button, and tabs for "Uploads" and "Favorites". The main video player shows a wide shot of the Oscars ceremony stage, with a progress bar at the bottom indicating 0:01 / 9:45. Below the video player are options for "Info", "Comments", "Favorite", "Share", "Playlists", and "Flag". The video title is "Steve Martin and Alec Baldwin hosting the Oscars®" with 61 ratings and 312 views. Below the title is a description: "Steve Martin and Alec Baldwin, co-hosts of the 82nd Academy Awards®, in their opening monologue." To the right of the video player is a search bar and a list of recommended videos. The recommended videos include: "Opening Number at the 2010 Oscars®" (303 views - 4 hours ago), "The Hurt Locker winning Best Picture" (303 views - 4 hours ago), "John Hughes Tribute at the Oscars®" (301 views - 5 hours ago), "Kathryn Bigelow winning the Oscar® for Directing" (301 views - 5 hours ago), "Sandra Bullock winning Best Actress" (309 views - 5 hours ago), "Jeff Bridges winning Best Actor" (334 views - 5 hours ago), "Steve Martin and Alec Baldwin hosting the" (312 views - 6 hours ago), and "Editing Oscar® Nominees" (27,246 views - 4 days ago).

THE ACADEMY
OF MOTION PICTURE ARTS AND SCIENCES

VISIT OSCARS.ORG
BECOME A FAN
SIGN UP FOR NEWS

Oscar® Oscars's Channel [Subscribe](#) [Uploads](#) [Favorites](#)

Search

Date Added | Most Viewed | Top Rated

Steve Martin and Alec Baldwin hosting the Oscars® 61 ratings ★★★★★
From: Oscars | March 10, 2010 | 312 views
Steve Martin and Alec Baldwin, co-hosts of the 82nd Academy Awards®, in their opening monologue.

[View comments, related videos, and more](#)

Opening Number at the 2010 Oscars®
303 views - 4 hours ago

"The Hurt Locker" winning Best Picture
303 views - 4 hours ago

John Hughes Tribute at the Oscars®
301 views - 5 hours ago

Kathryn Bigelow winning the Oscar® for Directing
301 views - 5 hours ago

Sandra Bullock winning Best Actress
309 views - 5 hours ago

Jeff Bridges winning Best Actor
334 views - 5 hours ago

Steve Martin and Alec Baldwin hosting the
312 views - 6 hours ago

Editing Oscar® Nominees
27,246 views - 4 days ago



The Age of FaceBook

The screenshot shows the Facebook interface for Barack Obama's official page. At the top, the Facebook logo and navigation links (Home, Profile, Account) are visible. The page header includes a search bar and a 'Become a Fan' button. The main content area features a large profile picture of Barack Obama and a navigation menu with tabs for Wall, Info, Boxes, Events, Notes, and Photos. Below the navigation, there are three posts:

- Post 1:** A status update with a large number '8' and the text: "Barack Obama 8: the number of people every minute who are denied coverage, charged a higher rate, or otherwise discriminated against because of a pre-existing condition." It includes a link to "Health Reform by the Numbers: 8" on www.whitehouse.gov and is dated "27 minutes ago".
- Post 2:** A video post titled "Barack Obama Speaking about health insurance reform this morning at Arcadia University - starting at 11:00 a.m. ET." with a "LIVE" badge and a link to "President Obama Speaks on Health Insurance Reform" on www.whitehouse.gov. It is dated "Yesterday at 12:21am".
- Post 3:** A video post titled "Barack Obama I need your help in urging all Americans who want health reform to make their voices heard." with a link to "President Obama's message to supporters: 'We need you in this final march for reform'" on www.youtube.com. It is dated "March 5 at 8:14am".

On the right side of the page, there is a sidebar with a "Create an Ad" section and a "Connect With More Friends" section featuring an envelope icon and the text: "Share the Facebook experience with more of your friends. Use our simple invite tools to start connecting." Below this is a "More Ads" link.

On the left side, there is a section titled "Add to My Page's Favorites" and "Suggest to Friends". Below that, a text box states: "This page is run by Organizing for America, the grassroots organization for President Obama's agenda for change. To visit the White House Facebook page, go to: http://bit.ly/2bVCm. OFA is a special project of the Democratic National Committee." At the bottom left, there is an "Information" section with the text: "Current Office: Office: President of the United States".



Outline

- Introduction to Social Computing
- Social Network Theory
- Graph mining
- Ranking and Link Analysis
- Recommender Systems
- Human Computation
- Opinion Mining/Sentiment Analysis
- Opinion mining and sentiment analysis
- Social Computing in Education
- Social Monetization
- and possibly more...



Web 2.0

- Web as a medium vs. **Web as a platform**
- Read-Only Web vs. **Read-and-Write Web**
- Static vs. **Dynamic**
- Restrictive vs. **Freedom & Empowerment**
- Technology-centric vs. **User-centric**
- Limited vs. **Rich User Experience**
- Individualistic vs. **Group/Collective Behavior**
- Consumer vs. **Producer**
- Transactional vs. **Relational**
- Top-down vs. **Bottom-up**
- People-to-Machine vs. **People-to-People**
- Search & browse vs. **Publish & Subscribe**
- Closed application vs. **Service-oriented Services**
- Functionality vs. **Utility**
- Data vs. **Value**

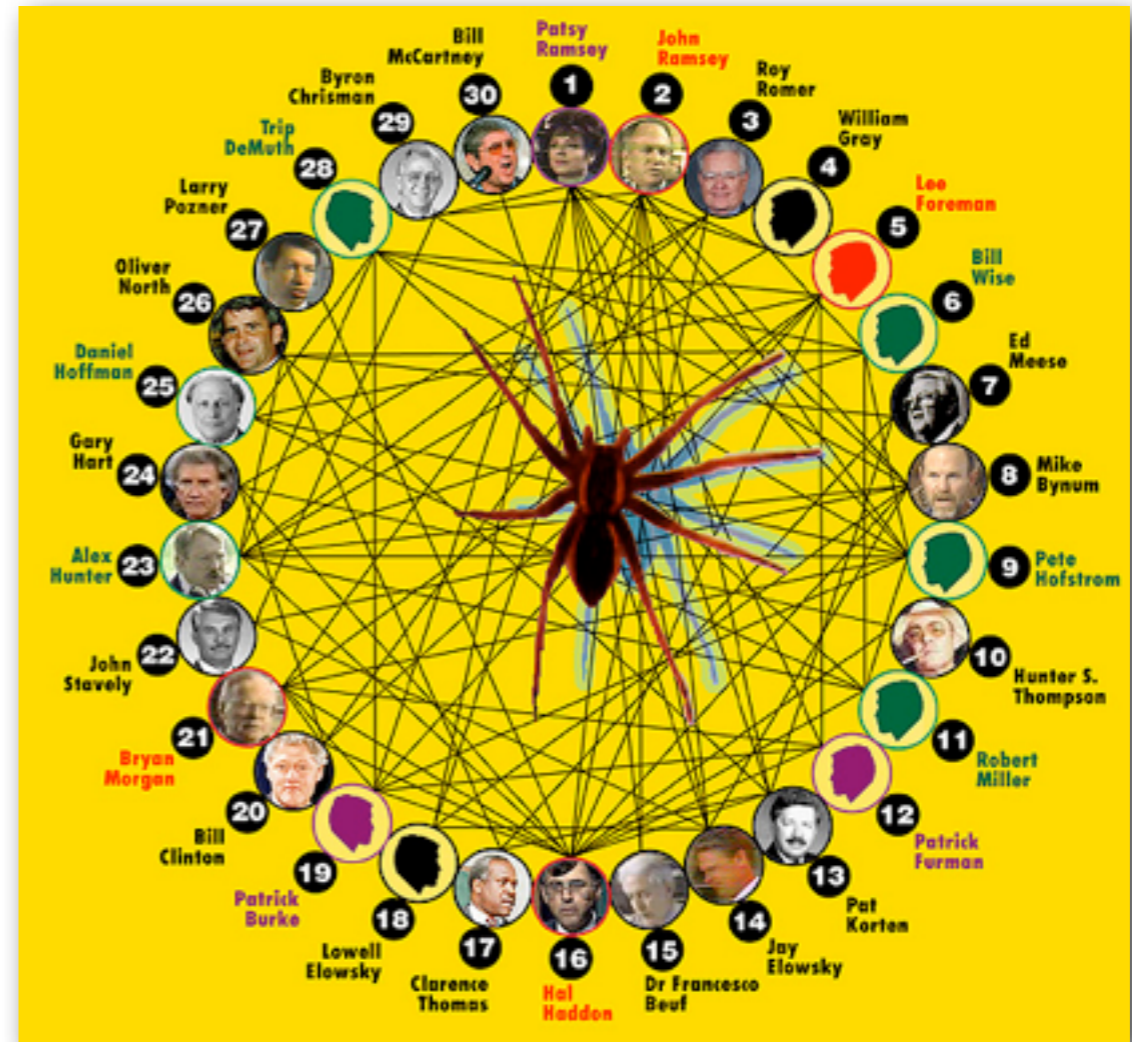


Social Networks

Society:

Nodes: individuals

Links: social relationship
(family/work/friendship/etc.)

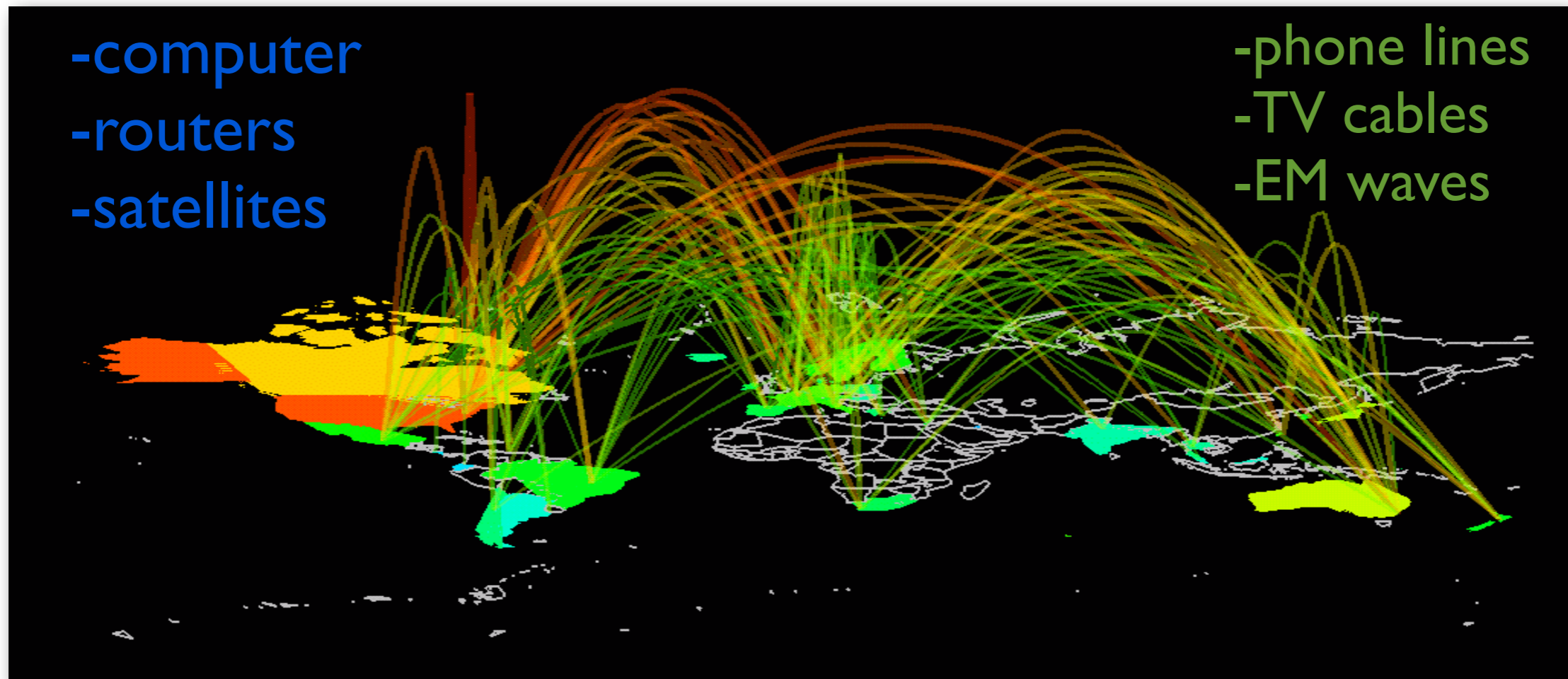


S. Milgram and John Guare: **Six Degree of Separation.**
Social networks: Many **individuals** with diverse **social interactions** between them.



Social Networks

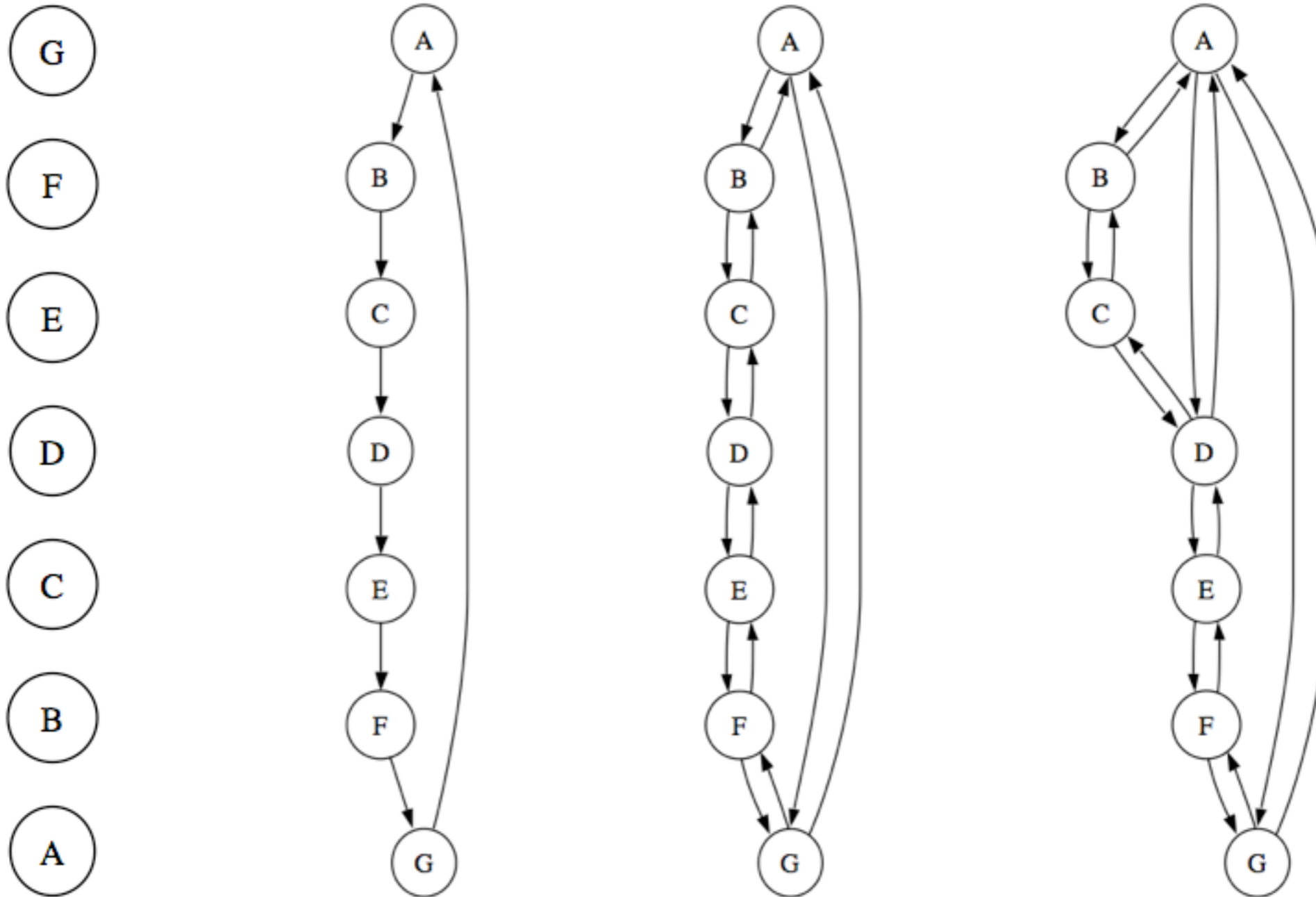
- The Earth is developing an electronic nervous system, a network with diverse **nodes** and **links**.



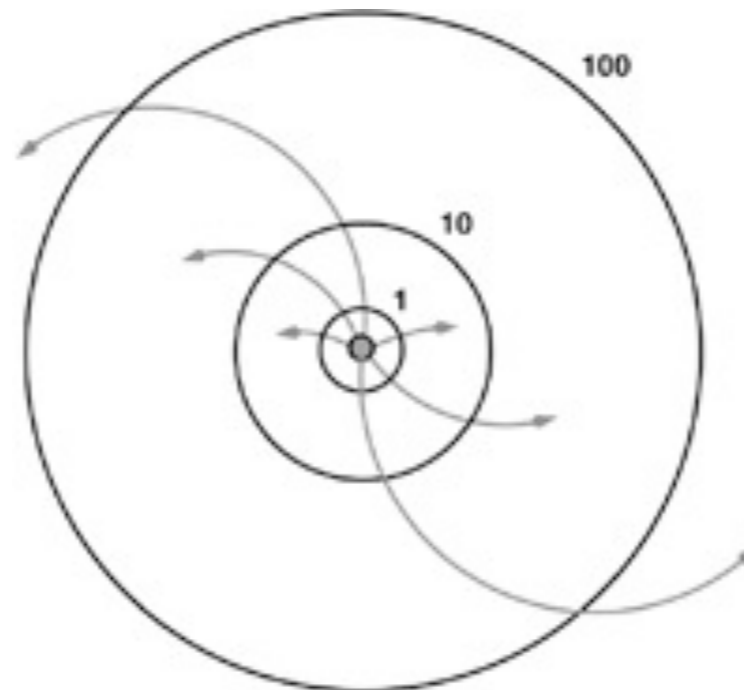
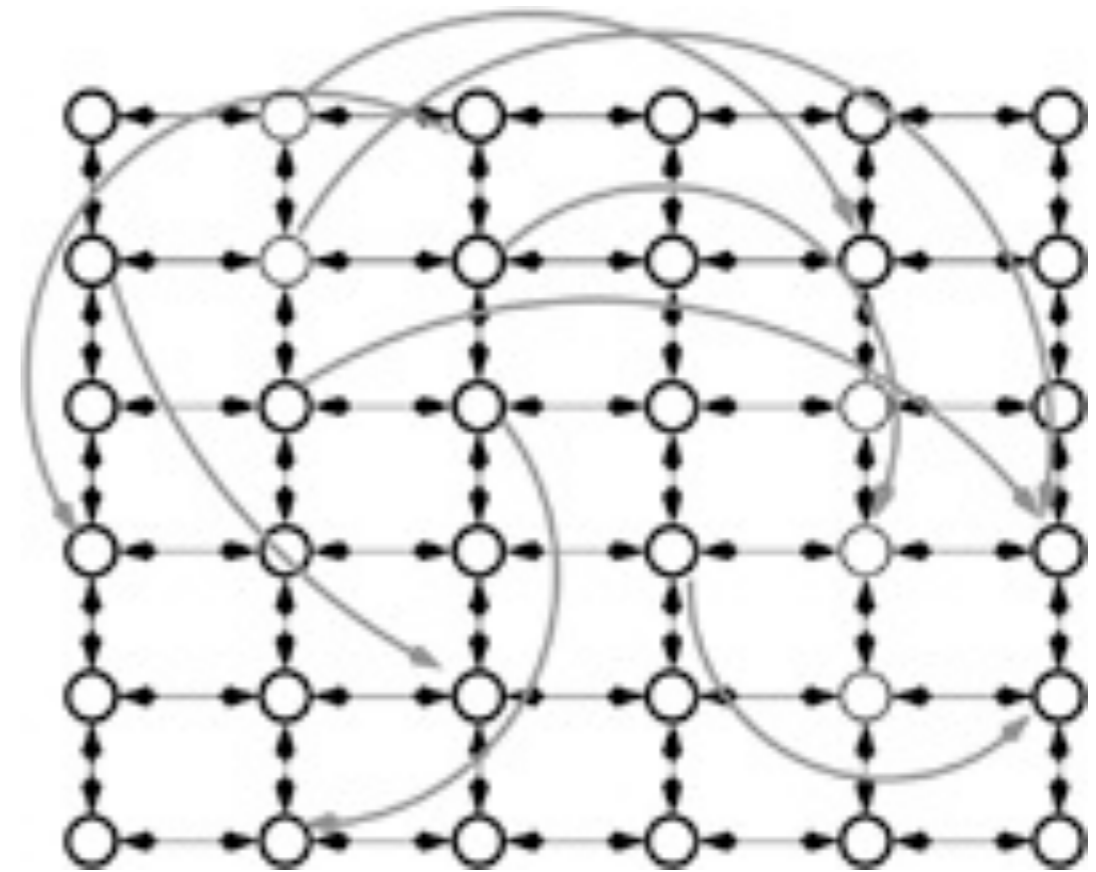
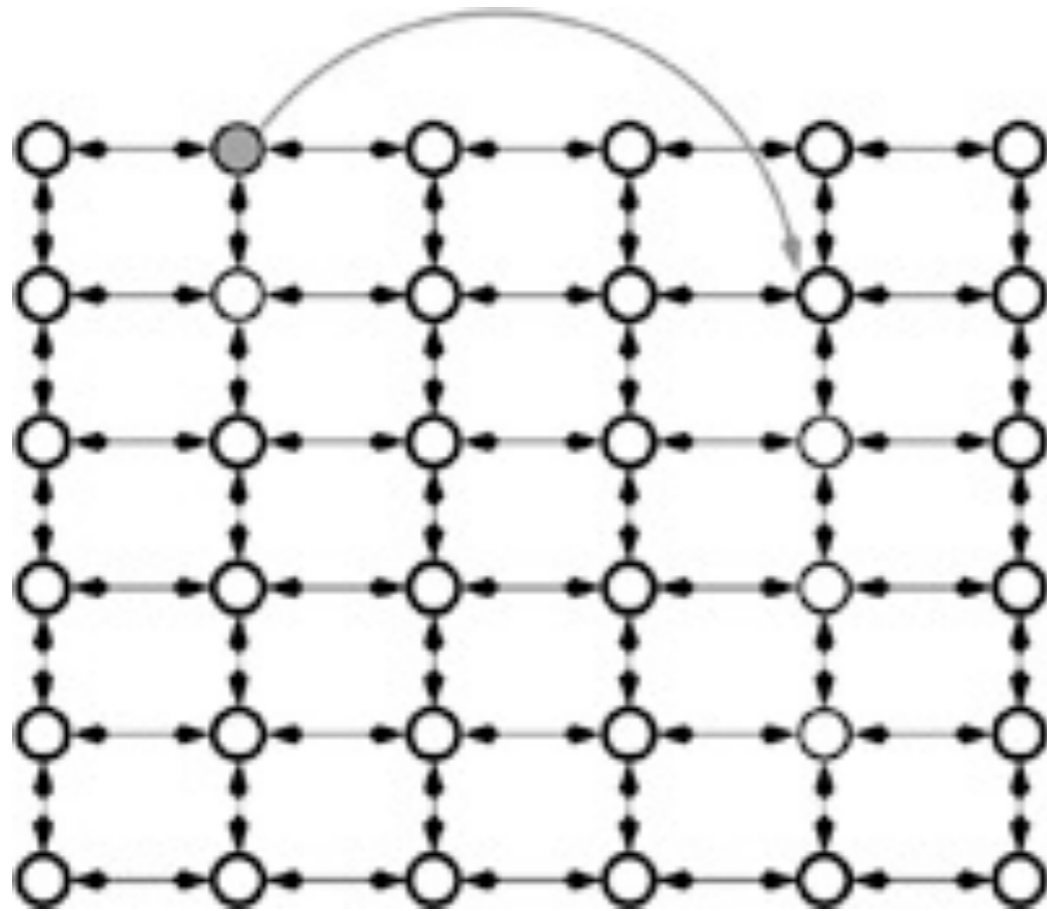
Communication networks: many non-identical components with diverse connections between them.



The Flow of Information



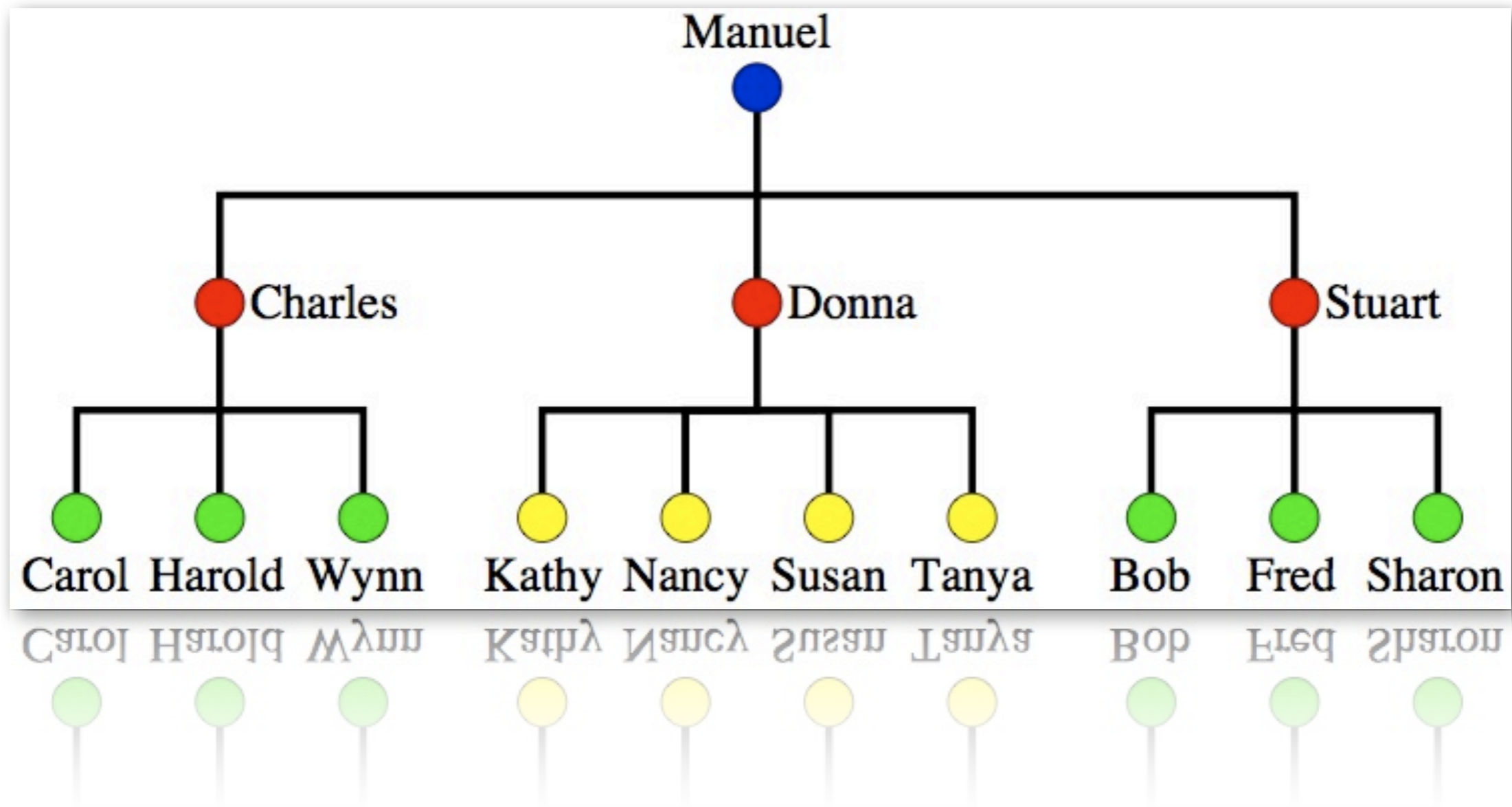
Examples



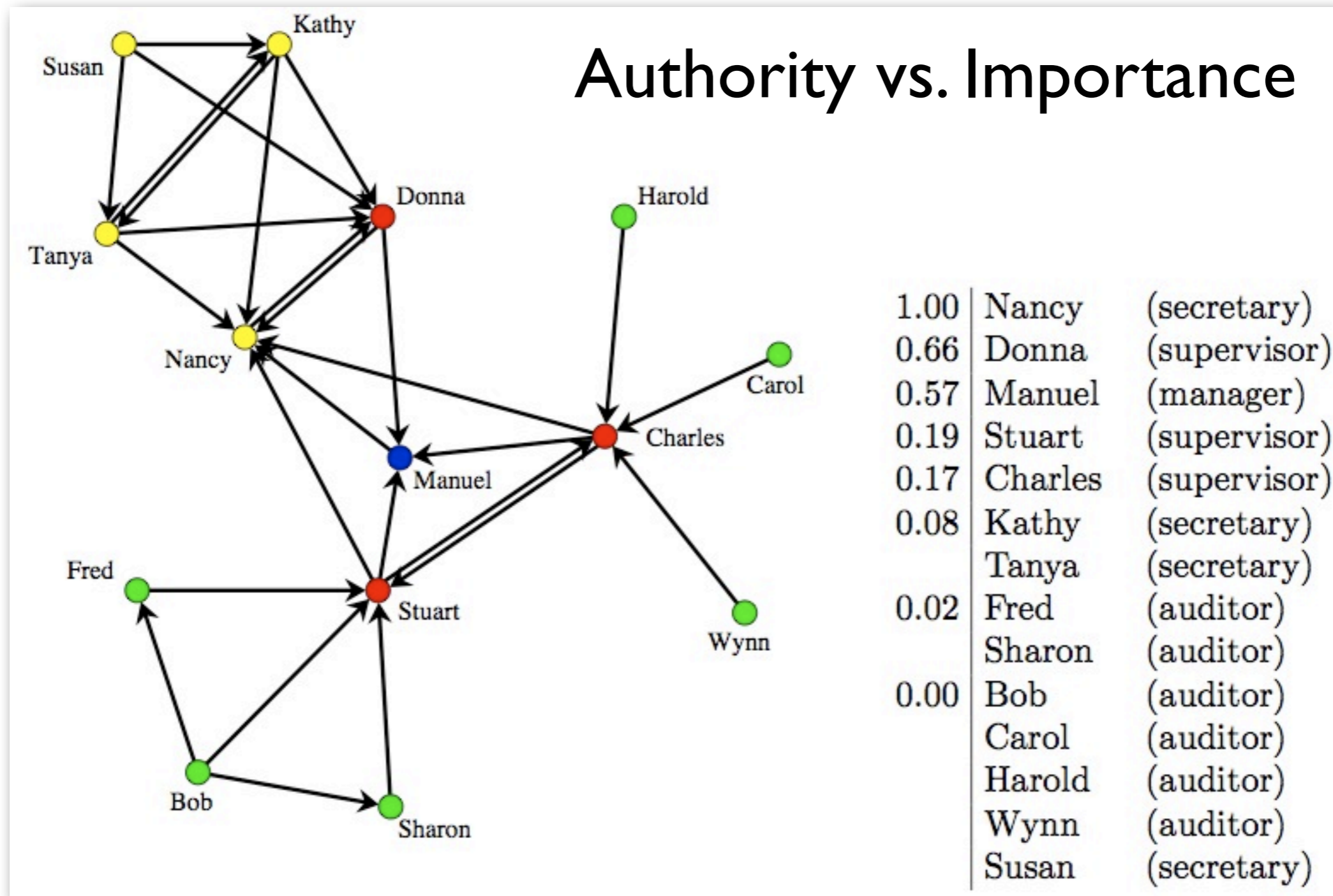
[Kleinberg 1999]



Organizational Chart



Social Network Chart



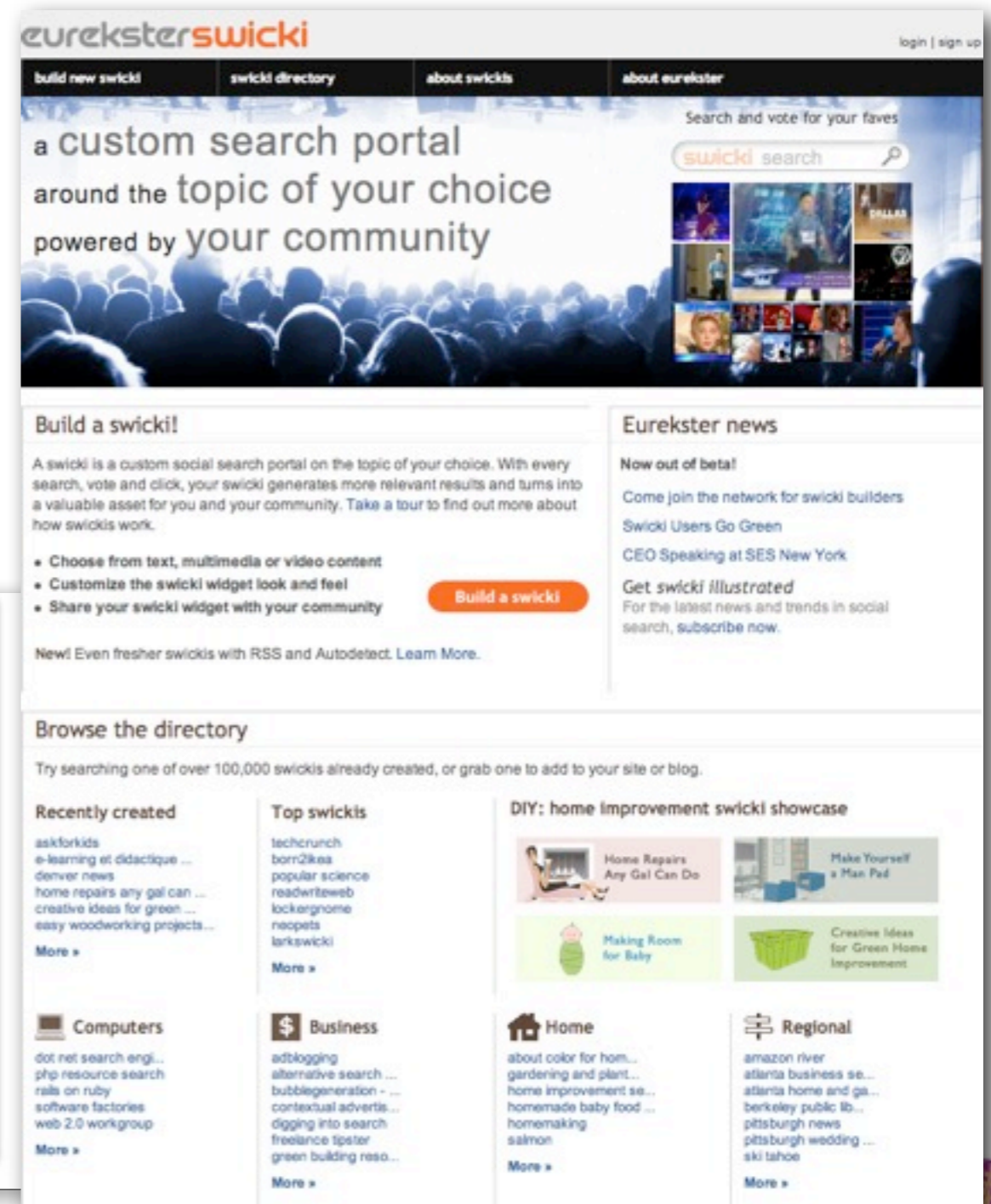
Social Networking Sites

- Example of Social Networking Sites: FaceBook, MySpace, Blogger, QQ, etc.



Social Search

- Social Search Engine
- Leveraging your social networks for searching



Social Media

The screenshot shows the YouTube homepage with the following elements:

- Header:** YouTube logo with the tagline "Broadcast Yourself™". Navigation tabs for Home, Videos, Channels, and Community. A search bar and an "Upload" button.
- Videos being watched right now...:** A row of five video thumbnails with their durations (02:13, 03:29, 01:58, 07:01, 03:53).
- Promoted Videos:** Four video thumbnails with titles like "Think Again Awards" and "第14屆十大電視廣告頒獎典禮 - 飛出...".
- Featured Videos:** A list of featured videos with titles and view counts:
 - David Sedaris delivers a pizza:** From [weaknights](#), Views: 11,313, 5 stars, 01:01. More in [Comedy](#).
 - Erbert and Gerbert's Candle Cannon:** From [candlecannon](#), Views: 109,029, 5 stars, 02:34. More in [Entertainment](#).
 - Girl's Night Out:** From [danidovine](#), Views: 169,435, 5 stars, 03:49. More in [Comedy](#).
 - Lionel Neykov - Freeze My Senses:** From [LionelNeykov](#), Views: 150,758, 5 stars, 03:35. More in [Music](#).
- What's New:** A yellow box containing:
 - YouTube Mobile:** "New! Watch ALL YouTube videos on your mobile device."
 - Warp!** "Visually fly through YouTube videos in the Fullscreen player."
 - RSS Feeds:** "Click on the 'RSS this page' link to get fresh videos delivered."
 - SXSW on YouTube:** "For the next week and a half, the SXSW festival is taking over Austin, Texas, to celebrate music, film and all things interactive. [Read more in our Blog](#)"
- Login:** A form with fields for Username and Password, a "Login" button, and links for "Sign Up | Help", "Forgot Username | Forgot Password", and "Login with your Google account".

The screenshot shows the Flickr homepage with the following elements:

- Header:** Flickr logo and a "Sign In" link.
- Main Content:** A large photo of a small plant growing in a crack in the pavement. Text: "Share your photos. Watch the world." Below it is a search bar and a "SEARCH" button.
- Statistics:** "3,802 photos uploaded in the last minute · 558,832 photos tagged with urban · 2.2 million photos uploaded this month · [Take the tour](#)"
- Navigation:** Four icons with labels: "Share & stay in touch", "Upload & organize", "Make stuff!", and "Explore...".
- Footer:** A "Take the Tour" button and a link to "Explore Flickr Blog, the World Map, Camera Finder or interesting photos from the last 7 days."

The screenshot shows the Second Life homepage with the following elements:

- Header:** Second Life logo with the tagline "Your World. Your Imagination." and a "Resident Login | Join" link.
- Navigation:** Links for "What is Second Life?", "SHOWCASE", "COMMUNITY", "BLOG", and "SUPPORT". A search bar labeled "Search Second Life".
- Main Content:** A large image of a man and a woman flying through a blue sky. Text: "Get Started! Membership is FREE! Second Life is an online, 3D virtual world imagined and created entirely by its Residents." Below this is a button: "Discover a whole new world of friends, fashion, music, videos and fun! Explore the best of Second Life >>".
- Footer:** A section titled "Your Organization in Second Life!" with text: "Find out why your business, school or nonprofit organization should get its own virtual world presence." Below this are several small images and text boxes related to organizations in Second Life.

Social News/Mash Up

The screenshot shows the Digg website interface. At the top, there are navigation links for "Join Digg", "About", and "Login". Below that, there are tabs for "All", "News", "Videos", "Images", "Podcasts", and "Customize". A secondary navigation bar lists various categories: "Technology", "World & Business", "Science", "Gaming", "Lifestyle", "Entertainment", "Sports", and "Offbeat". The main content area is titled "News, Videos, Images" and features a list of articles. The first article is "Microsoft Demos 'ADD TO DIGG' Feature in IE8" with a thumbnail and a brief description. Other articles include "It was only a matter of time, The SIMS 3 Official" and "Universe submerged in a sea of chilled neutrinos". On the right side, there is a "Visual Studio" advertisement and a "Top in All Topics" section with a list of trending items like "The ravages of aging: Sean Connery, 20 years ago vs Today".

The screenshot shows the Twitter website homepage. At the top, there is the Twitter logo and a "Select Language" dropdown. Below the logo, there are navigation tabs for "What?", "Why?", and "How?". A prominent banner features a yellow bird on a branch with the text "What is Twitter?". To the right, there is a "Watch a video!" button and a sign-in section with fields for "user name or email address" and "password", along with a "Remember me" checkbox and a "Sign in" button. Below the banner, there is a section titled "Twitter is a service for friends, family, and co-workers to communicate and stay connected through the exchange of quick, frequent answers to one simple question".

The screenshot shows the FoxyTunes website for the artist Björk. The page features a search bar at the top with the text "Search: artist or song name" and a "Go" button. Below the search bar, there are tabs for "Albums" and "Tracks", and a "+ Add widgets" button. The main content area is divided into several sections: "Videos on YouTube" with a video thumbnail for "All is full of love", "Lyrics from Yahoo! Music" with a list of songs including "5 Years", "Alarm Call", and "Bachelorette", "Flickr Photos" with a gallery of images, and "Artist on Last.fm" with a list of similar artists like "The Sugarcubes" and "Goldfrapp".

The screenshot shows the TwitterVision website, which displays a map of the United States. A tweet is overlaid on the map, showing a profile picture of a penguin and the text "Killane I feel odd 17 minutes ago in North of Seattle". The map includes labels for various geographical features such as "Chukchi Sea", "Beaufort Sea", "Baffin", "Gulf of Alaska", "North Pacific Ocean", and "United States". The TwitterVision logo is visible in the top right corner of the map area.

Social Knowledge Sharing

WIKIPEDIA

English
The Free Encyclopedia
2 268 000+ articles

Deutsch
Die freie Enzyklopädie
718 000+ Artikel

Français
L'encyclopédie libre
631 000+ articles

日本語
フリー百科事典
474 000+ 記事

Nederlands
De vrije encyclopedie
414 000+ artikelen

Español
La enciclopedia libre
339 000+ artículos

Svenska
Den fria encyklopedin
277 000+ artiklar

Polski
Wolna encyklopedia
477 000+ hasel

Italiano
L'enciclopedia libera
421 000+ voci

Português
A enciclopédia livre
364 000+ artigos

search · suche · rechercher · szukaj · 検索 · ricerca · zoeken · busca
buscar · sök · поиск · 搜索 · søk · haku · suk · cerca · căutare · ara

English

KNOL™
BETA

Welcome to Knol

Share what you know

Write and post a knol (nōl) — a unit of knowledge.

Create
easy to write and manage

Control
each knol is owned by you, the author

Search
searchable through popular search engines

Ευθύγημ

πύααα · ααα · ποναα · 語語 · ααα · ηααα · ααα · αααα · αααααα · ααα
ααααα · ααααα · αααααααααα · αααααα · ααααα · αααααα · αααααα · πύααα

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αααααα



Social News and Knowledge Sharing

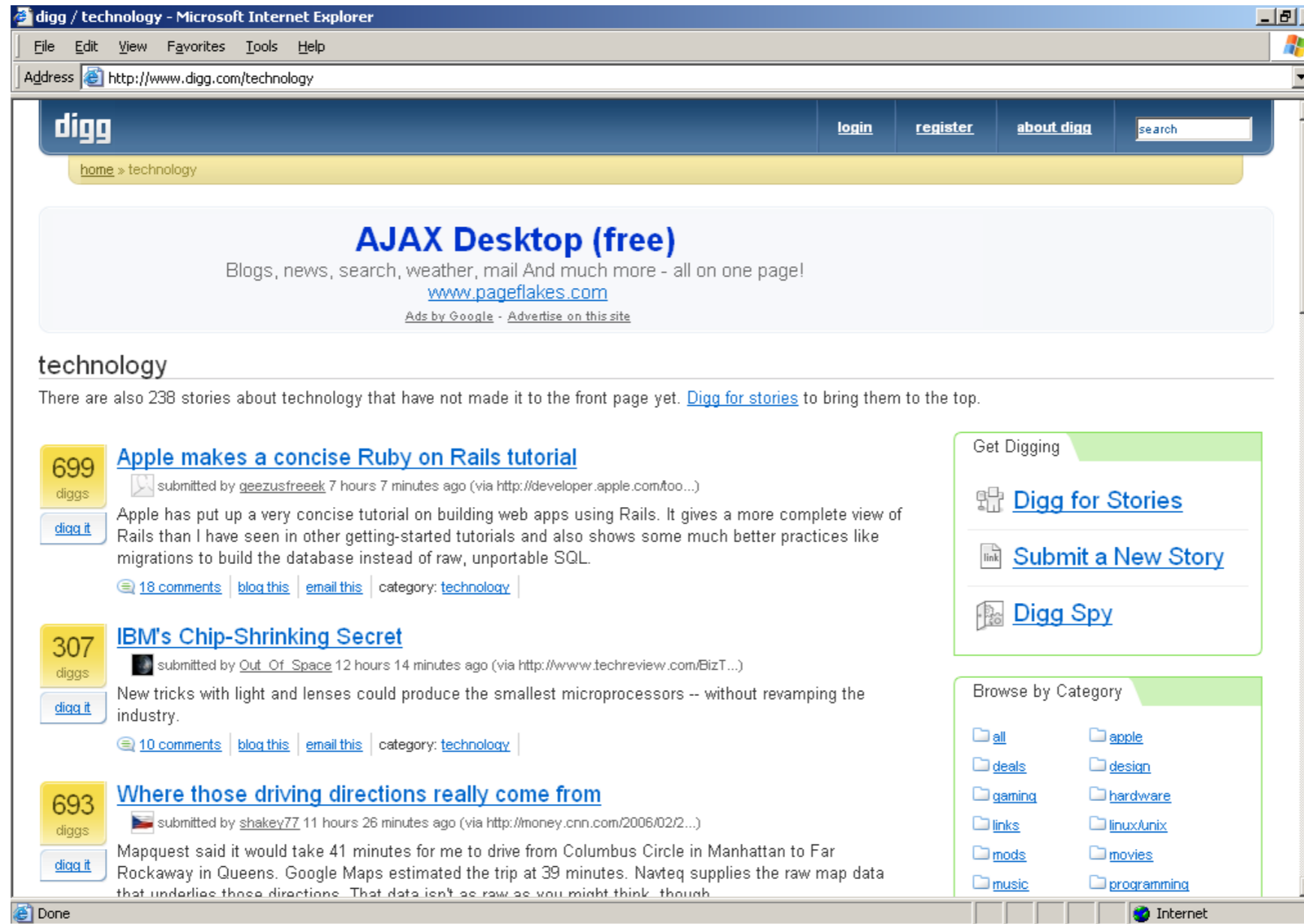
- Social news refers to websites where users can submit their own information. Users can also vote on news or other links to determine which links are presented



Wikis allow collaborative publishing. Anyone can create new articles or edit existing articles. All versions are kept.



Social News and Knowledge Sharing



- **Digg.com** members “vote” for stories to appear on the home page



Social News and Knowledge Sharing

- The notion that each individual contributes to a collective pool of knowledge is further realized in AnswerBus, Webclopedia, Yahoo's babelfish, etc.



Webclopedia
Targeted Delivery of Multilingual Information

YAHOO! BABEL FISH



Social News and Knowledge Sharing

- Question and answering

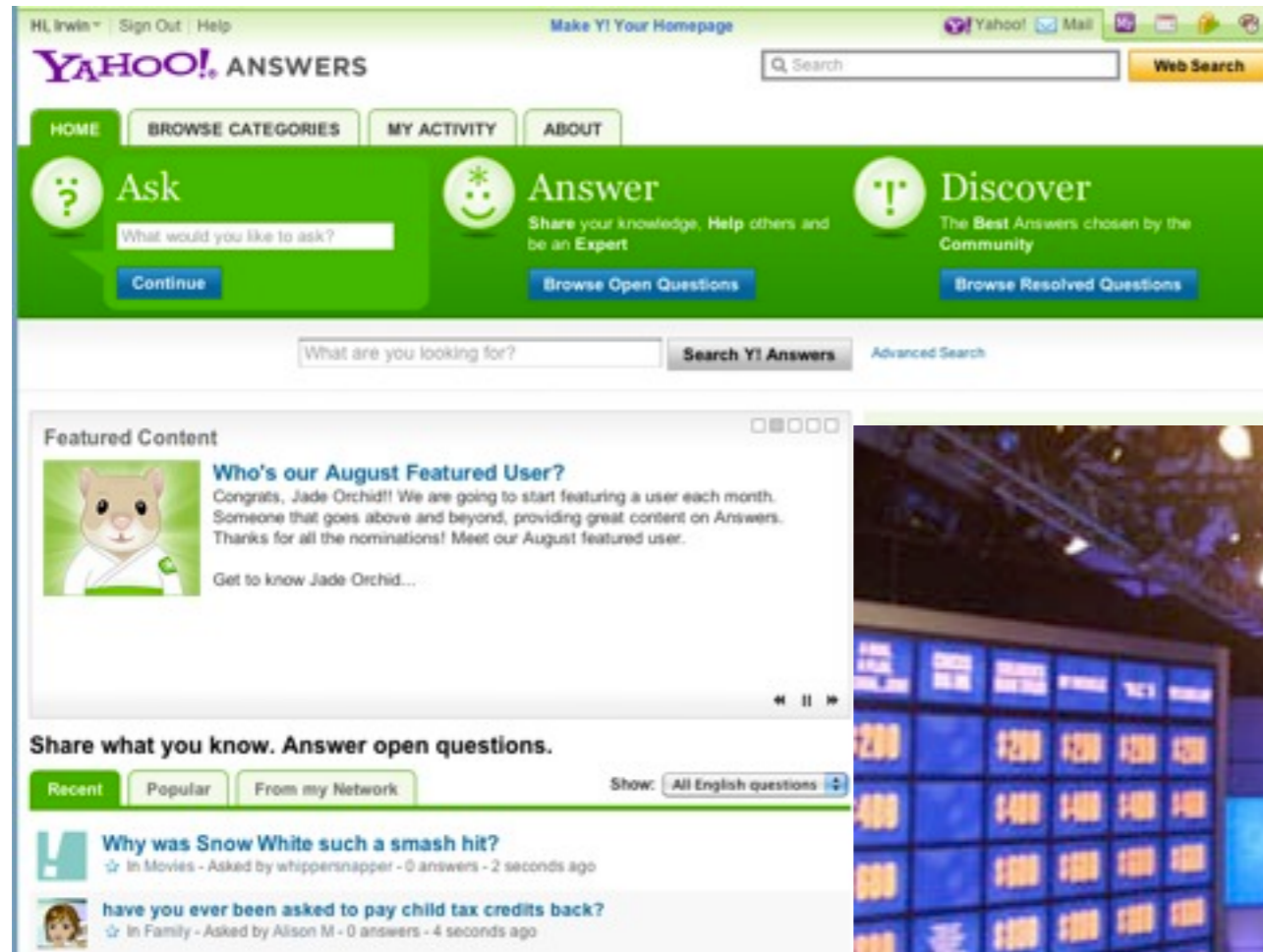


PHOTO: JULIANNE PEPITONE/CNNMONEY



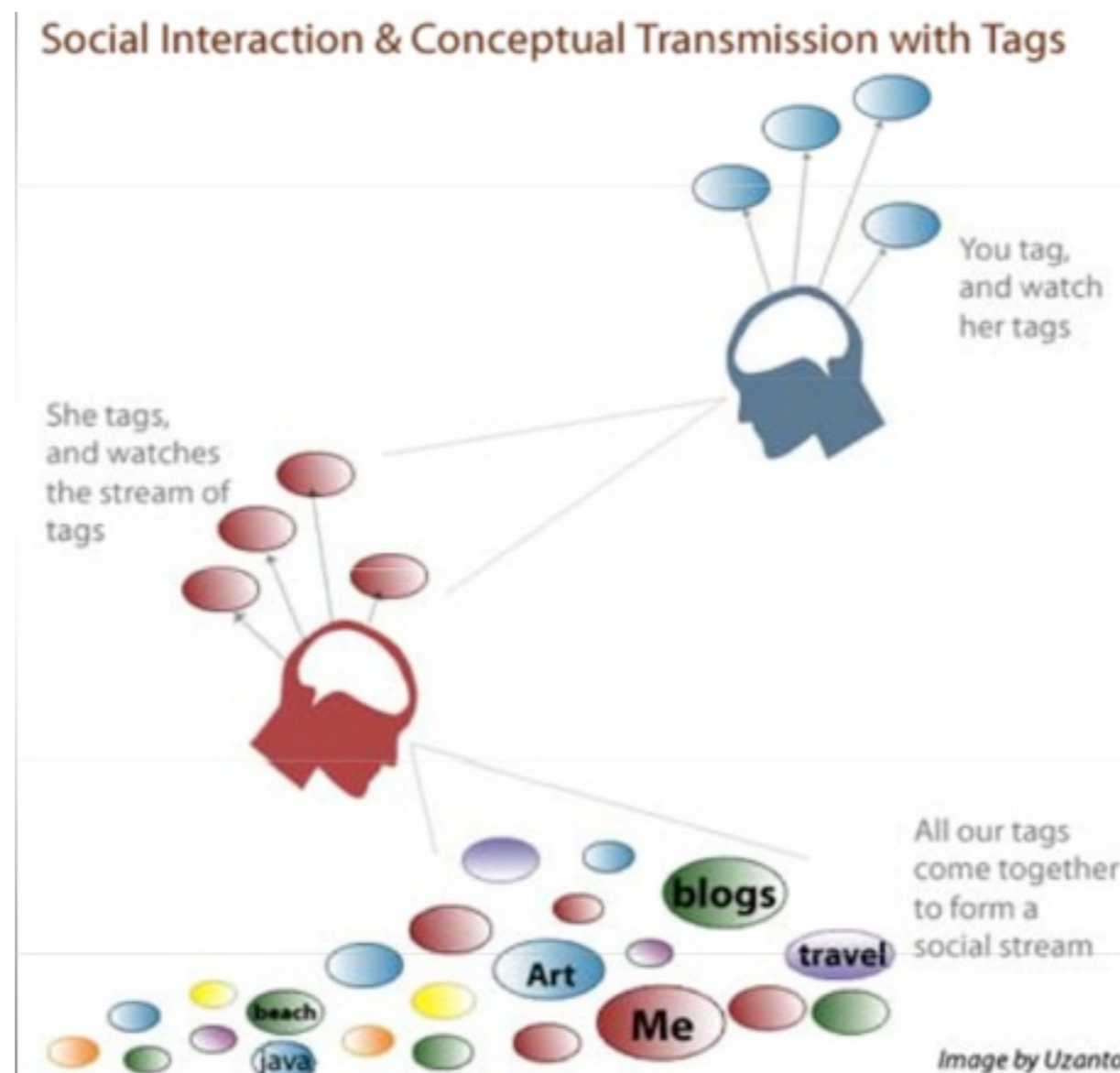
Social Bookmarking

- **What is a tag?**
 - Descriptive metadata
 - A keyword or term associated with or assigned to a piece of information
 - User defined, created and shared
 - Many web users do it every day, with very little conscious awareness that they are “cataloging”
- **What gets tagged?**
 - Pictures, blog posts, video clips, catalog entries, just about anything...



Social Bookmarking

- Share one's tags
- Make the individual browsing experience a social one

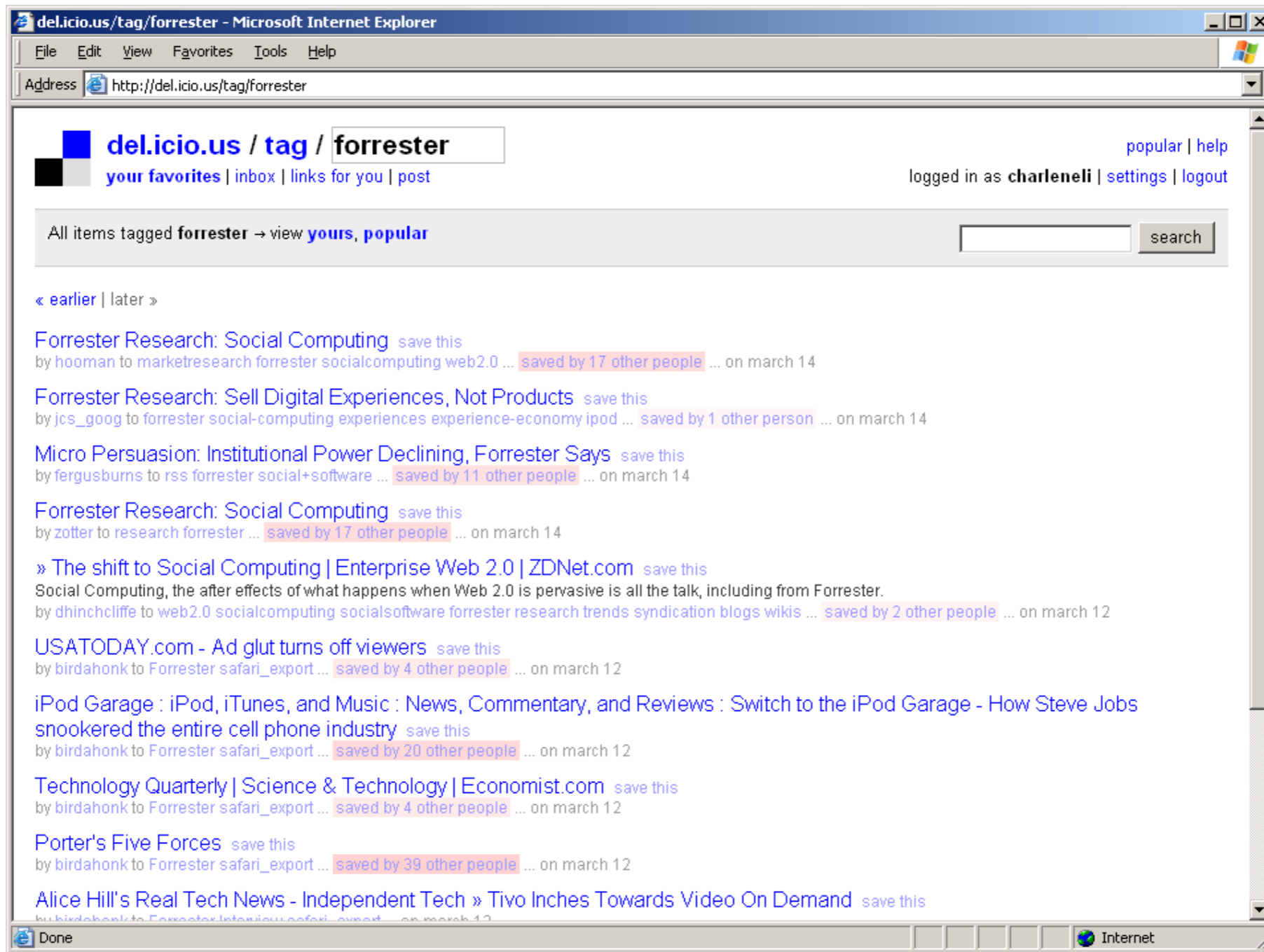


Why users tag?

- Tagging means something specific to the user
- It is easy -- anyone can do it
- Finding things on the Internet
- Serendipitous discovery
- It is social
- New ways to share and discover



Social Bookmarking in del.icio.us



Social Bookmarking in StumbleUpon

- **StumbleUpon** allows users to discover and rate web pages, photos, and videos. It chooses which web page to display based on the user's ratings of previous pages, ratings by his/her friends, and by the ratings of users with similar interests.



Tagging is Everywhere



Folksonomies

- Folksonomies are the actual output result of collaborative tagging
- Literally, it is taxonomy by “folks”
- Grass-roots
- Community based
- Inclusive -- everyone can get involved
- Scalability



Tag Clouds

- Visualization of tags
- Weighted value -- based on size, frequency of use of tag



Social/Human Computation

Security Check: Enter both words below, separated by a space. What's This?
Can't read this? Try another.
Try an audio captcha



Text in the box:

I have read and agree to the Terms of Use and Privacy Policy

Sign Up

Problems signing up? Check out our help pages

Security Check: Enter both words below, separated by a space. What's This?
Can't read this? Try another.
Try an audio captcha



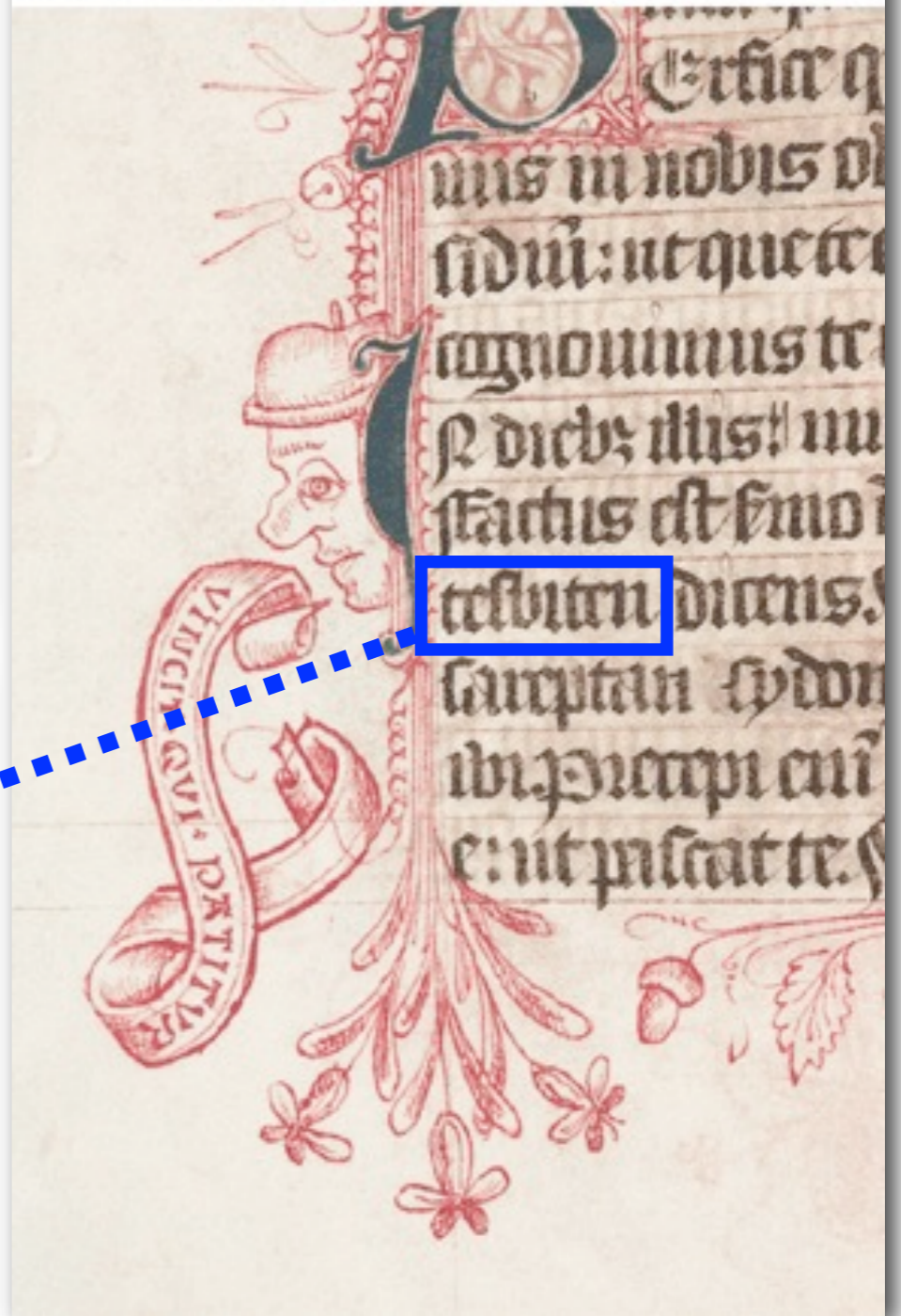
Text in the box:

I have read and agree to the Terms of Use and Privacy Policy

Sign Up

Problems signing up? Check out our help pages

MS. Don. b. 6, fol. 48v (detail) © Bodleian Library, University of Oxford



Problems signing up? Check out our help pages

Sign Up

I have read and agree to the Terms of Use and Privacy Policy



Human Computation

The screenshot shows the Google Image Labeler interface. At the top left is the Google logo and 'Image Labeler BETA'. The main title is 'Google Image Labeler'. On the left, there is a sidebar with 'time left' (01:17), 'score' (0), and 'passes' (0). The main area contains a text input field with a 'label' button and a 'pass' button. Below the input field, it says 'Your partner has suggested 10 labels.' A central image of a lake and mountains is shown with a 'zoom out' button below it. On the right, there are two sections: 'off-limits' with labels 'sky', 'water', 'blue', 'lake', 'mountain' and 'my labels' which is currently empty. At the bottom, there are links for 'Privacy Policy', 'Terms of Use', and 'Return to Google Image Search', along with a copyright notice '© 2007 Google'. Red starburst shapes are overlaid on the interface, highlighting the input field, the 'off-limits' list, and the 'my labels' section.



Crowdsourcing

amazonmechanical turk Artificial Intelligence

Already have an account? Sign in as a Worker | Requester

Your Account | HITs | Qualifications

Introduction | Dashboard | Status | Account Settings

Mechanical Turk is a marketplace for work.
 We give businesses and developers access to an on-demand, scalable workforce.
 Workers select from thousands of tasks and work whenever it's convenient.
210,857 HITs available. [View them now.](#)

Make Money by working on HITs

HITs - Human Intelligence Tasks - are individual tasks that you work on. [Find HITs now.](#)

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work



or [learn more about being a Worker](#)

Get Results from Mechanical Turk Workers

Ask workers to complete HITs - Human Intelligence Tasks - and get results using Mechanical Turk. [Register Now](#)

As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results



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CrowdConf 2011
 The world's largest crowdsourcing conference
 November 1-2 [GET TICKETS NOW](#)

PRESS

- CrowdFlower Broadens Executive Team**
 TMCnet.com | August 04, 2011
- San Francisco-Based CrowdFlower Names New CEO and CFO**
 Silicon Valley Wire | August 02, 2011
- CrowdConf2011: Get More Out of Your Crowdsourcing Efforts**

EVENTS

- PopTech**
 October 18-22 [See more](#)
- Wolfram Data Summit 2011**
 September 8-9 [See more](#)
- CrowdConf 2011**
 November 1-2 [See more](#)

BLOG

- Should organizations establish a Crowdsourcing**



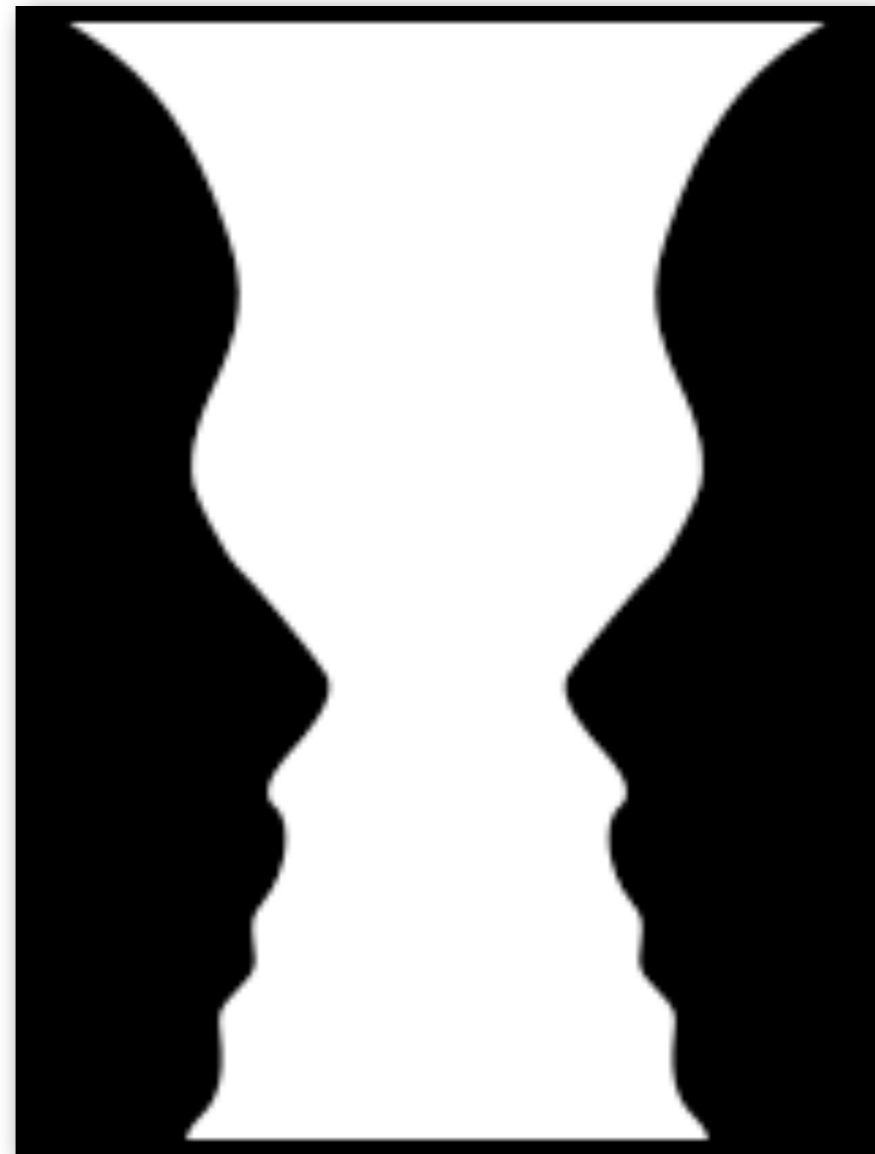
Web 2.0 Revolution

- **Glocalization**-think globally and act locally!
- **Weblication**-Web is the application!
- Three C's

Connectivity

Collaboration

Communities

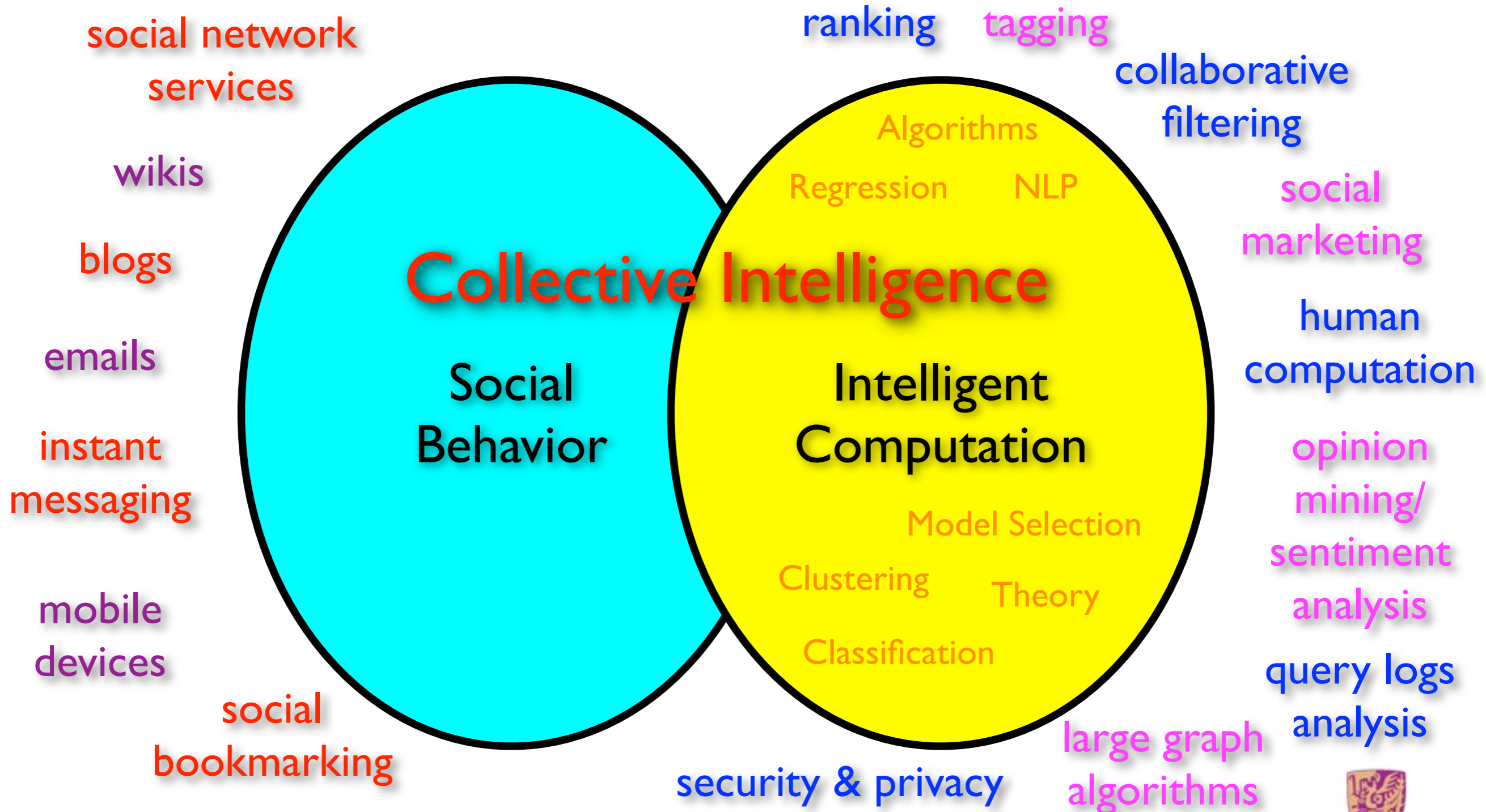


Social Relations

presence
identity
social role
reputation
expertise
trust
ownership
accountability
knowledge
crew
teams
populations
binary
cardinal
integer
real
squad
organizations
cohort
markets
communities
partners
groups



Social Computing



Definition of Social Computing [wiki]

- Any Computer-mediated communication and interaction
- In the weaker sense: **supporting any sort of social behavior**
 - blogs, email, instant messaging, wiki, social network services, social bookmarking
- In the stronger sense: **supporting “computations” that are carried out by a group of people**
 - collaborative filtering, online auctions, prediction markets, reputation systems, tagging, verification games



Emerging Issues

- **Theory** and models
- **Search, mining, and ranking** of existing information, e.g., spatial (relations) and temporal (time) domains
- Dealing with **partial** and **incomplete** information, e.g., collaborative filtering, ranking, tagging, etc.
- **Scalability** and algorithmic issues
- **Security** and **privacy** issues
- **Monetization** of social interactions



