



Social Network Privacy

W2SP 2010:
WEB 2.0 SECURITY AND
PRIVACY 2010

Kurt Opsahl



Why is privacy important?

- “If one would give me six lines written by the hand of the most honest man, I would find something in them to have him hanged.”
 - Cardinal Richelieu, power behind throne
- “if we are observed in all matters, we are constantly under threat of correction, judgment, criticism, even plagiarism of our own uniqueness.”
 - Bruce Schneier, security expert



Privacy concerns in 1890

- “Instantaneous photographs and newspaper enterprise have invaded the sacred precincts of private and domestic life; and numerous mechanical devices threaten to make good the prediction that ‘what is whispered in the closet shall be proclaimed from the house-tops.’ ”
– Samuel D. Warren, Louis D. Brandeis



Freedom of Speech

- “Anonymity is a shield from the tyranny of the majority,” that “exemplifies the purpose” of the First Amendment: “to protect unpopular individuals from retaliation ... at the hand of an intolerant society.”
 - *McIntyre v. Ohio Elections Comm’n*, 514 U.S. 334, 357 (1995).



What is privacy?

- “Privacy is not about control over data nor is it a property of data. It’s about a collective understanding of a social situation’s boundaries and knowing how to operate within them. In other words, it’s about having control over a situation.”
 - danah boyd, social media researcher

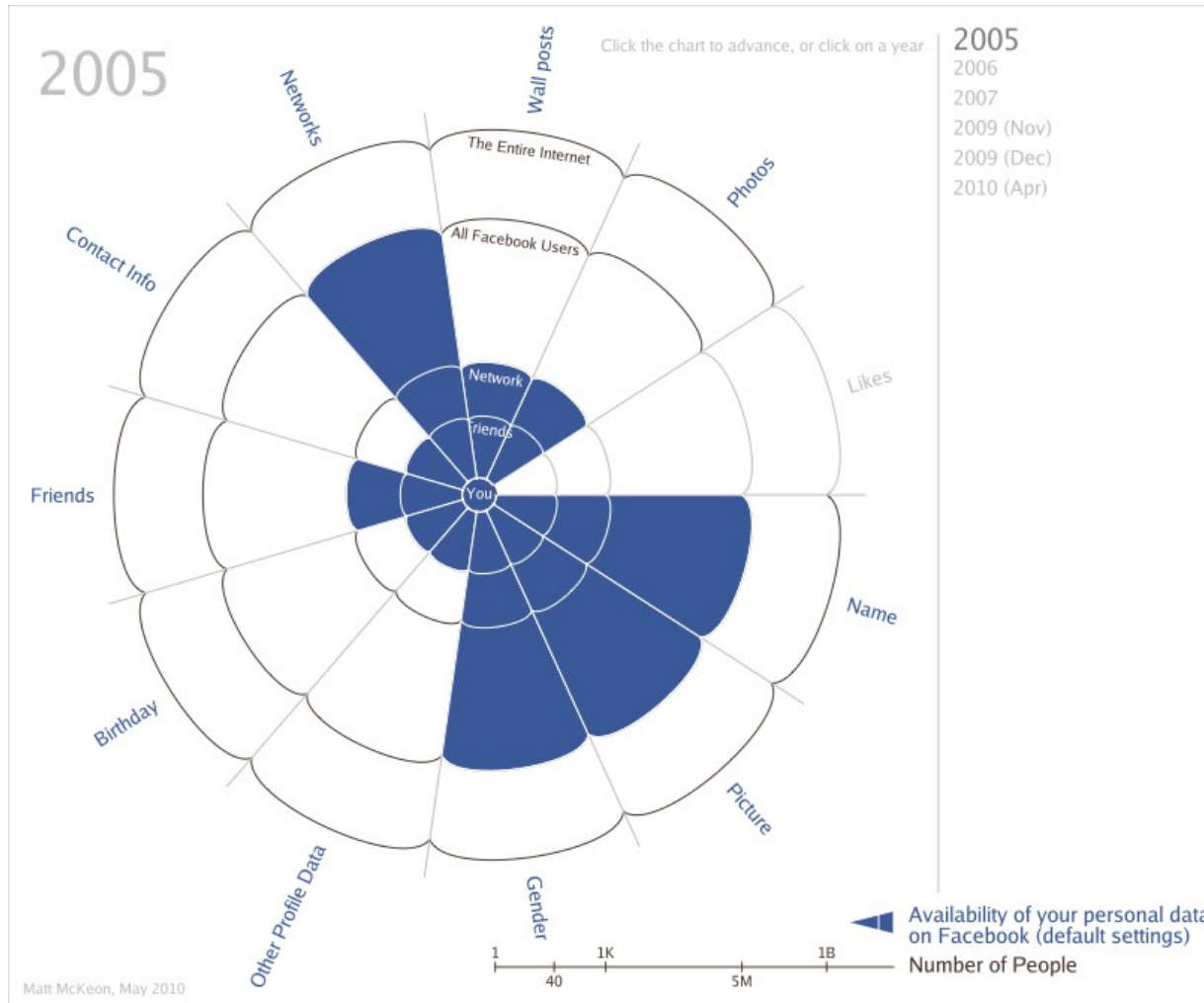


Users and privacy

- UC Berkeley study shows that
 - new generation's attitude about privacy in harmony with older Americans
 - Majority of internet users across all age groups say they care more about privacy on the internet than five years ago
 - 88% have refused to give information to sites because it was too personal
 - However, vast majority got questions about privacy wrong
- danah boyd researched non-technical users, comparing what they think settings are with reality.
 - “I have yet to find someone whose belief matched up with their reality”

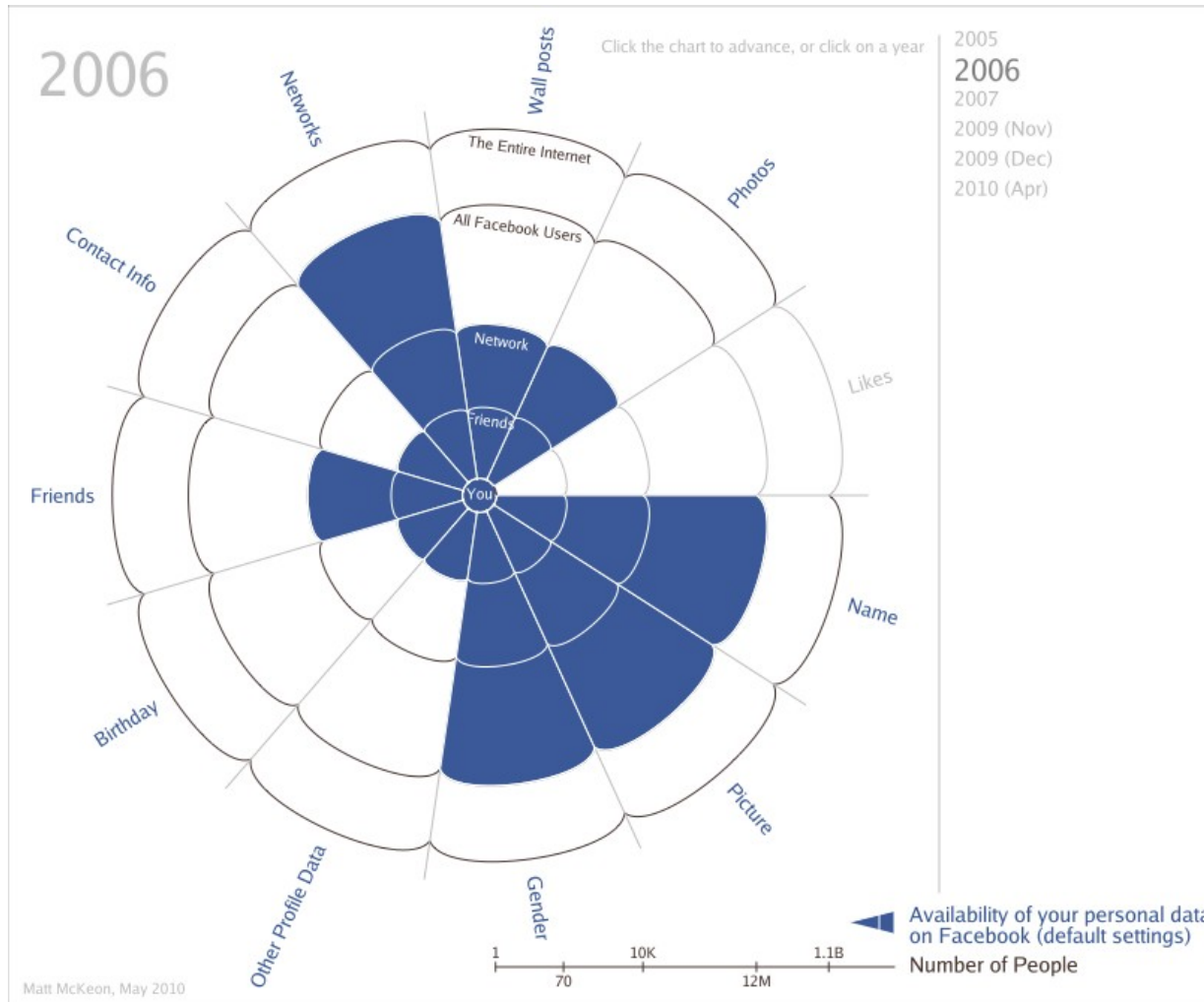


Facebook's Evolution: 2005



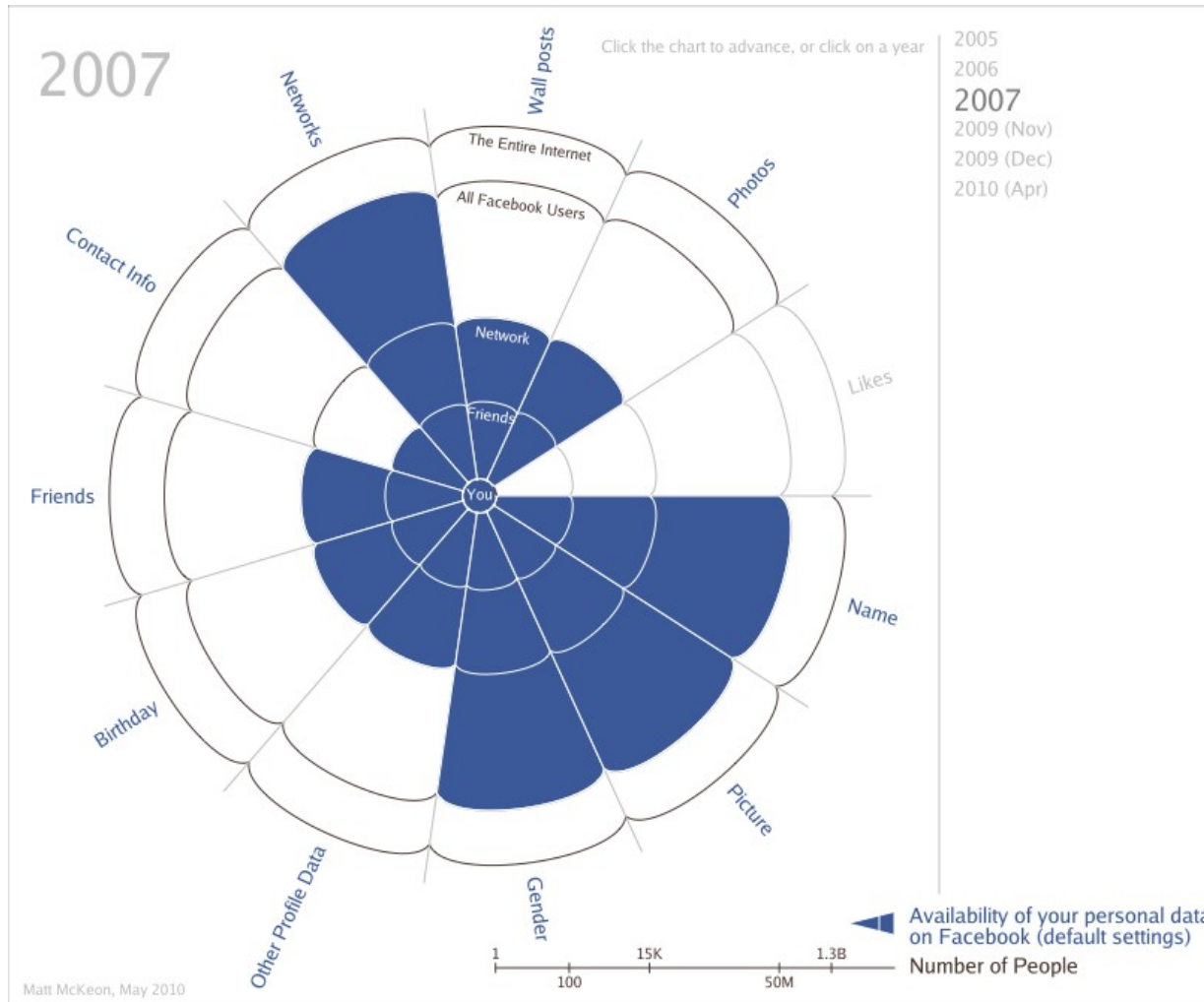


Facebook's Evolution: 2006



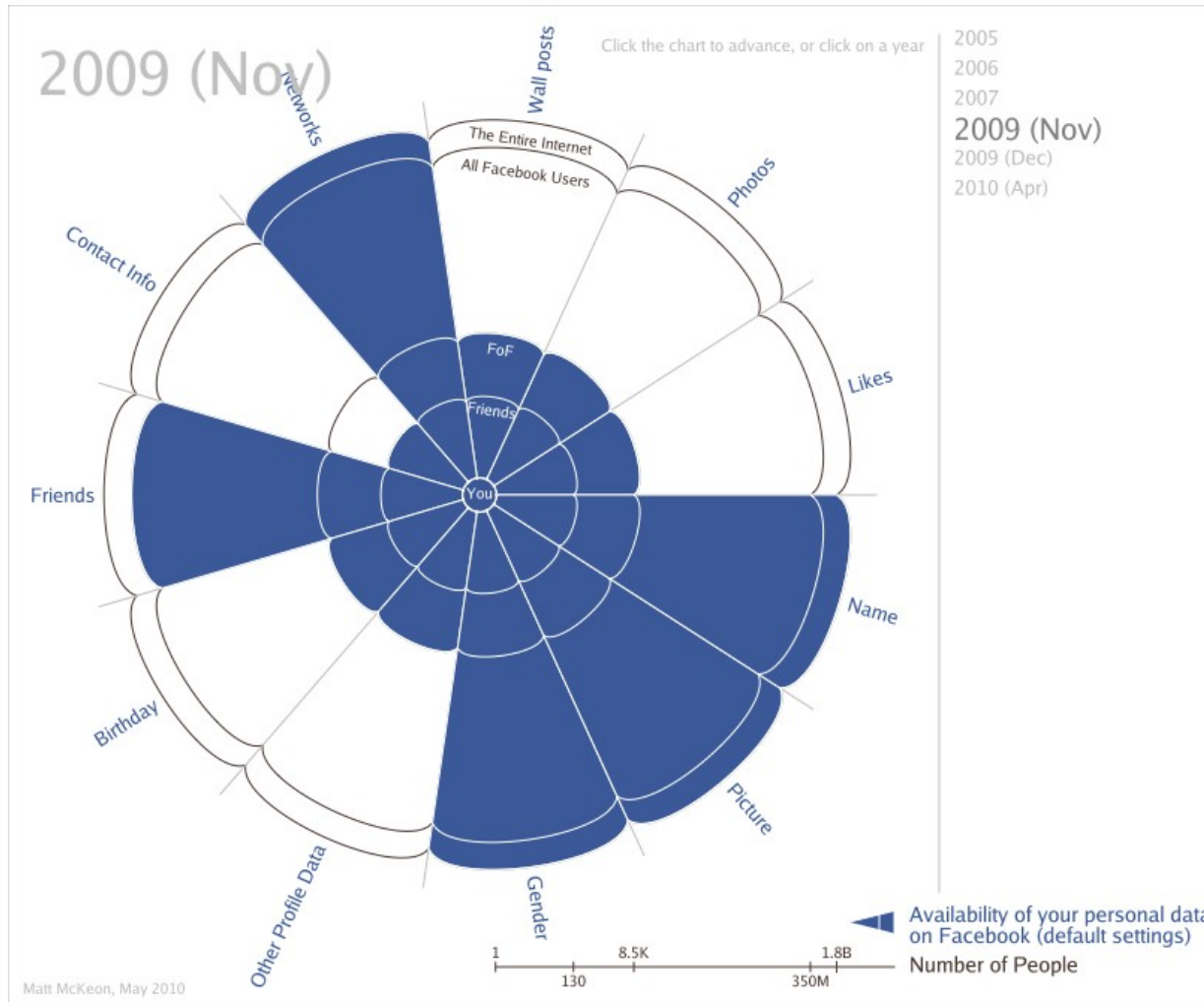


Facebook's Evolution: 2007



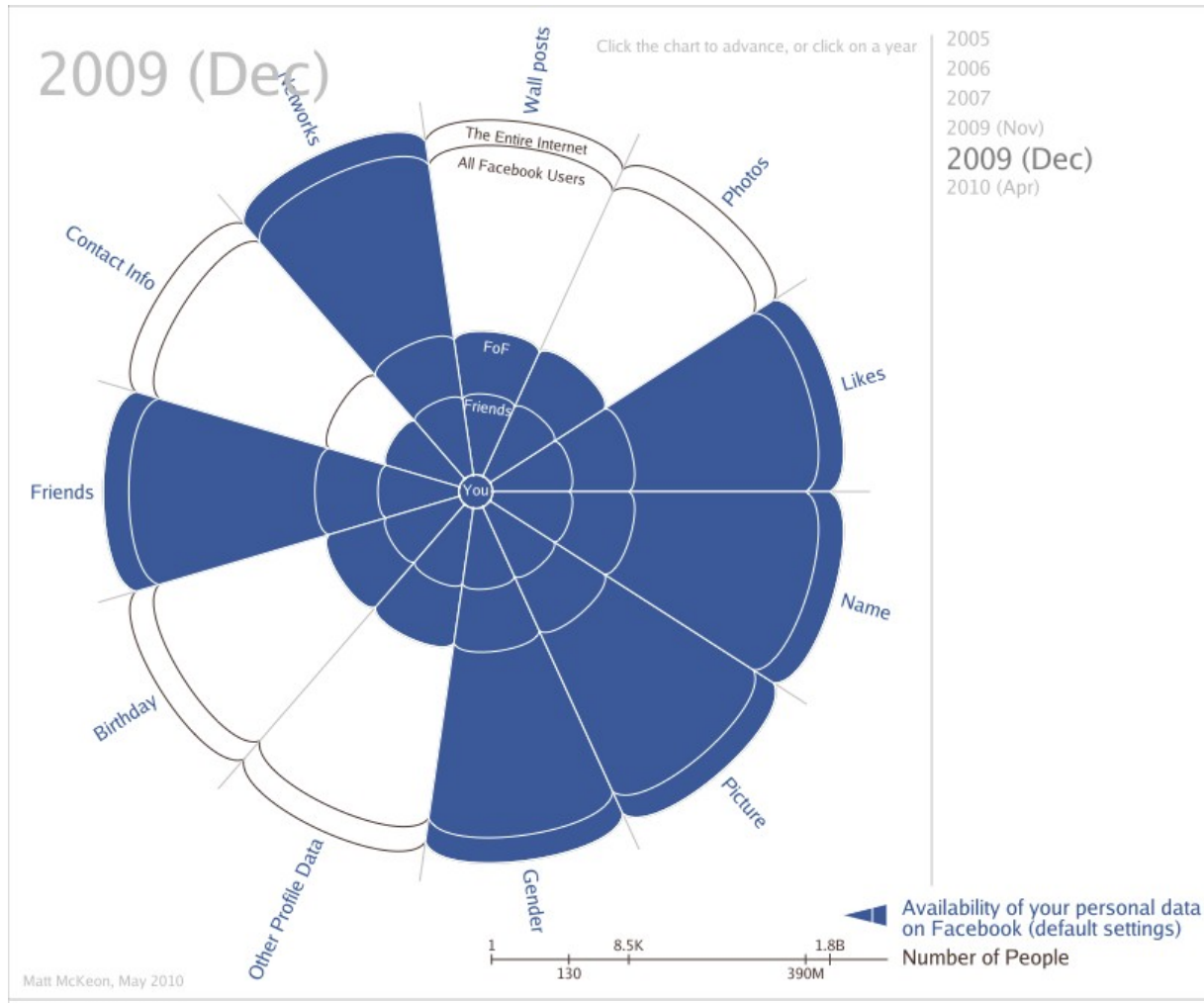


Facebook's Evolution: 2009



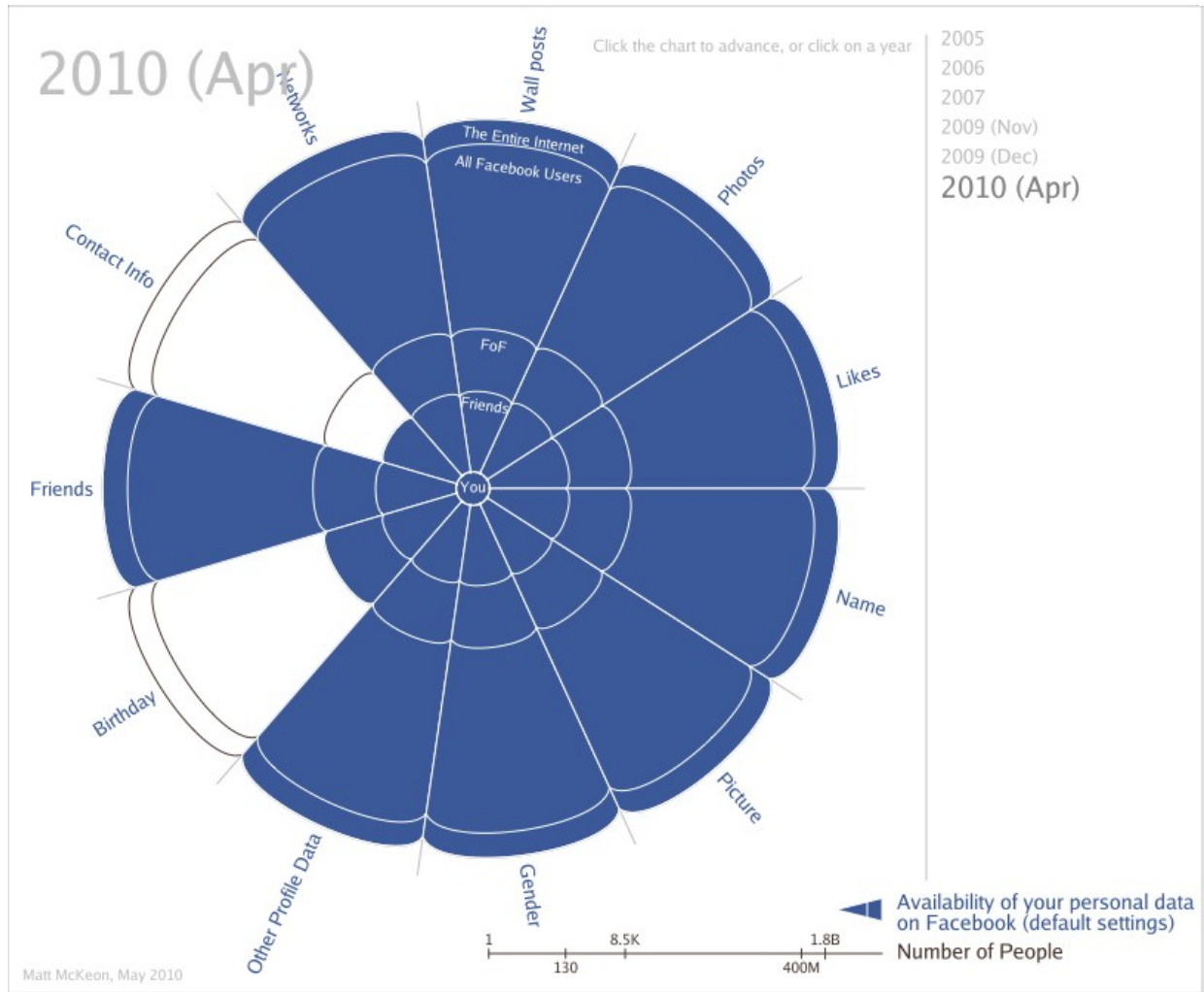


Facebook's Evolution: 2009





Facebook's Evolution: 2010





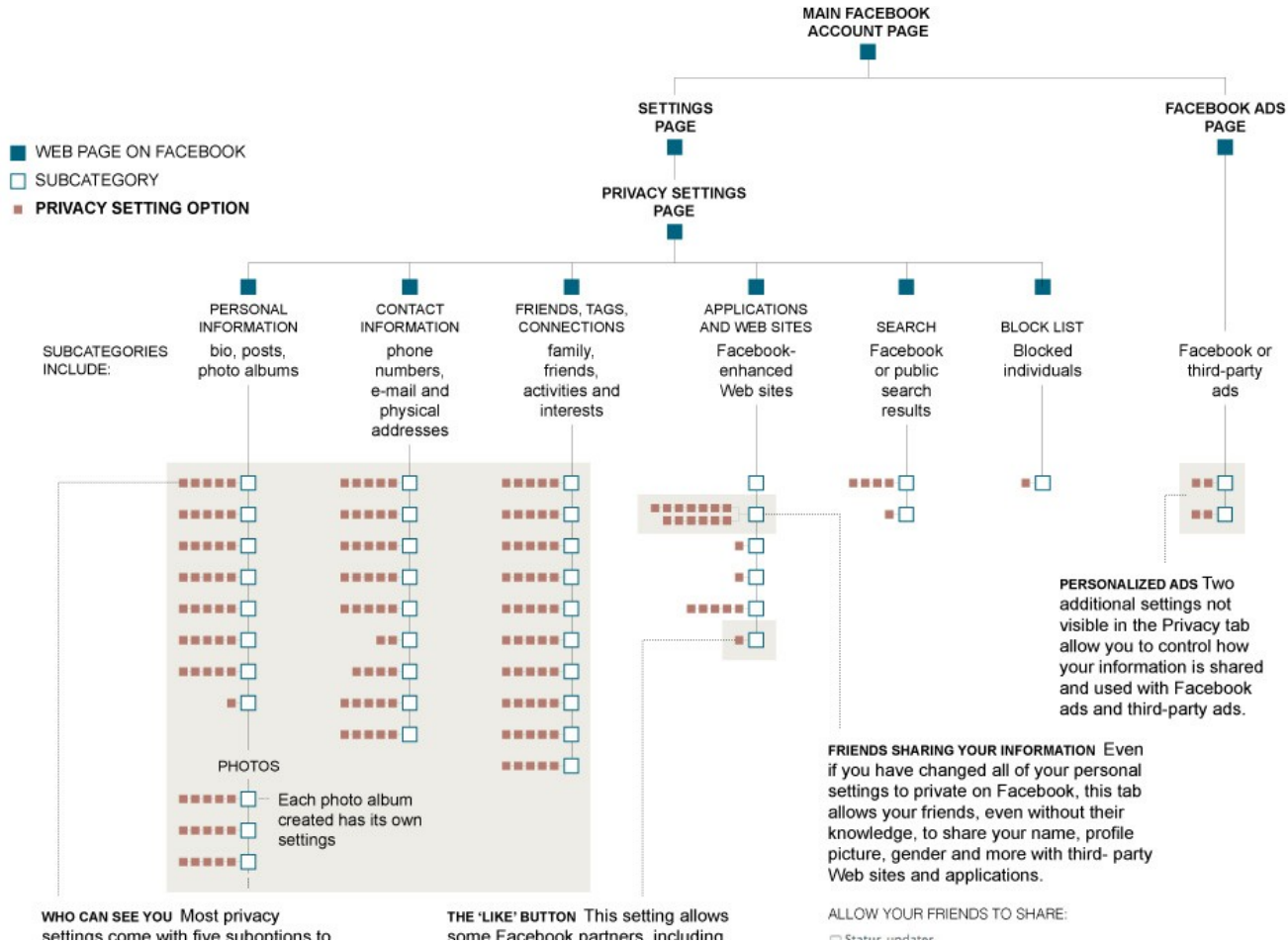
"On the Internet, nobody knows you're a dog."



How the hell does Facebook know I'm a dog?



Facebook's Privacy Settings





FB Public Information

- name, profile picture, current city, gender, networks, complete list of your friends, and your complete list of connections (formerly the list of pages that you were a “fan” of, but now including profile information like your hometown, education, work, activities, likes and interests, and, in some cases, your likes and recommendations from non-Facebook pages around the web).



Recently, Facebook has made a lot of your **PERSONAL** info **PUBLIC**, including:

- Your Name
- Your Profile Picture
- Your Gender and Birthday
- Your Hometown and Current City
- Your Friend List
- Your Networks
- Your Work and Education
- Your Likes and Interests

David Hubbell

Wall Info **Photos**

NOW PUBLIC

About Me

NOW PUBLIC

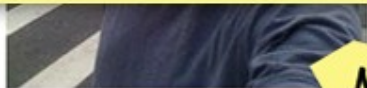
Basic Info

Sex: Male
 Birthday: July 4, 1980
 Current City: Oakland, CA
 Hometown: San Francisco

Facebook gives **EVERYONE ON THE INTERNET** access to your Basic Info...

... Even if you previously told Facebook to keep those details private...

... And there is **NO WAY** to make that info private except to delete it



View Photos of Me (68)

Edit My Profile

Work and Education

NOW PUBLIC

United States Postal Service (USPS)

NOW PUBLIC

College

University of the Pacific '05
Political Science

High School

International High School '01

If your friends use Facebook applications, those apps will then have access to personal information about you...

... **WITHOUT** asking your permission

And if you visit one of Facebook's "Instant Personalization Partner" websites, Facebook will reveal personal details about you...

... As soon as you visit that site...

... **WITHOUT** your permission

Likes and Interests

NOW PUBLIC

Activities

Community Groups

Oakland, CA

Friends

217 friends

NOW PUBLIC



Other

MoveOn.org



MoveOn.org
9



Public Information

- “Such information may, for example, be accessed by everyone on the Internet (including people not logged into Facebook), be indexed by third party search engines, and be imported, exported, distributed, and redistributed by us and others without privacy limitations.”
 - Facebook Privacy Policy, April 2010



Out of Context



██████████ staying in LA tonight and **playing hooky** from work tomorrow...going to disney land/california adventure whooo!!!

4 minutes ago Costa Mesa, California



██████████ Ok, don't tell anyone, but Steve & I are **playing hooky** tomorrow. Shhhh.... (join us at the 10:30 showing of Iron Man 2)...

1 hour ago Vero Beach, Florida



██████████ is **EXCITED** about tomorrow. Joey and I are **playing hooky** and going to have breakfast with the grandparents then off to fishing!!

2 hours ago Simpsonville, South Carolina



Not limited to Facebook

TheTonyHenson Playing hookey tomorrow! Just decided that with my wifey. We are going boating by ourselves. & me and @kimhenson may Christian the boat. ;)

about 23 hours ago via Twitter for BlackBerry®

CamArruda okay it's official: playing hookey tomorrow. well hookey with a doctor's note. but senior skip day still! haha.

about 23 hours ago via web

Chicco1919 Playing hookey tomorrow

6:22 PM May 16th via mobile web

ambranykol Playing hookey (hookie, hooky?) from church today to stay home with my recovering baby. Feels nice to sleep in.

12:01 PM May 16th via web

PeakAccounting Playing Hookey Can Help! A Surprising Secret To Small Business ... <http://bit.ly/d6FG7h>

8:15 AM May 16th via twitterfeed

joydoss Lazy Sunday. Playing hookey from church. Guess I will read all the twitter preachers today - sorta like bedside baptist.

7:21 AM May 16th via UberTwitter



Google Buzz

- Buzz was built “right into Gmail, so you don’t have to peck out an entirely new set of friends from scratch... Buzz brings this network to the surface by automatically setting you up to follow the people you email with and chat with the most.”
- Email context != social network context



Privacy and Security

- Password reset questions
 - What is the name of the company of your first job?
 - What is the name of the High School you graduated from?
 - What is the title and artist of your favorite song?
 - What is the title and author of your favorite book?
 - What is the name of the first undergraduate college you attended?
 - What was your high school mascot?
 - What year did you graduate from High School?
- Spearphishing



Hacks we need

- Contextual controls (Diaspora*?)
- Easy to use privacy interfaces
- More third party privacy protecting apps
 - e.g. reclaimprivacy.org

QuickTime[®] and a decompressor are needed to see this picture.



A modest proposal:



- Right to Informed Decision-Making
- Right to Control
- Right to Leave

<http://eff.org/r.2kx>



The Right to Informed Decision-Making

- Users should have the right to a clear user interface that allows them to make informed choices about who sees their data and how it is used.



The Right to Informed Decision-Making

- Users should be able to see readily who is entitled to access any particular piece of information about them, including other people, government officials, websites, applications, advertisers and advertising networks and services.
- Whenever possible, a social network service should give users notice when the government or a private party uses legal or administrative processes to seek information about them, so that users have a meaningful opportunity to respond.



The Right to Control

- Social network services must ensure that users retain control over the use and disclosure of their data. A social network service should take only a limited license to use data for the purpose for which it was originally given to the provider. When the service wants to make a secondary use of the data, it must obtain explicit opt-in permission from the user. The right to control includes users' right to decide whether their friends may authorize the service to disclose their personal information to third-party websites and applications.



The Right to Control

- Social network services must ask their users' permission before making any change that could share new data about users, share users' data with new categories of people, or use that data in a new way. Changes like this should be "opt-in" by default, not "opt-out," meaning that users' data is not shared unless a user makes an informed decision to share it. If a social network service is adding some functionality that its users really want, then it should not have to resort to unclear or misleading interfaces to get people to use it.



The Right to Leave

- Users give, and users should have the right to take away.
- One of the most basic ways that users can protect their privacy is by leaving a social network service that does not sufficiently protect it. Therefore, a user should have the right to delete data or her entire account from a social network service. And we mean really delete. It is not enough for a service to disable access to data while continuing to store or use it. It should be permanently eliminated from the service's servers.



The Right to Leave

- Furthermore, if users decide to leave a social network service, they should be able to easily, efficiently and freely take their uploaded information away from that service and move it to a different one in a usable format. This concept, known as "data portability" or "data liberation," is fundamental to promote competition and ensure that users truly maintains control over their information, even if they sever their relationship with a particular service.



Acknowledgements

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Thank You!

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