

Choosing the Right Audience: how people manage who can see their Facebook content

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How much do people understand about the collection and use of their personal data?

How much do they need to understand?

What controls are needed?

Privacy

“The claim of individuals, groups, or institutions to determine for themselves **when, how, and to what extent** information about them is communicated to others”.

Alan Westin, *Privacy and Freedom*, 1968.

Facebook is an interesting example for at least three reasons:

- 1) Size: number of users, and amount of content
- 2) Evolution of features, privacy settings and audience controls
- 3) Facebook Platform

Potential Concerns

FB as the
keeper of the
data

Advertisers

Third party
apps

Interpersonal

Government, law
enforcement



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Do users' privacy settings match their sharing intentions?

[Madejski, Johnson, and Bellovin, *SESOC 2012*]

Do users' privacy settings match their sharing intentions?

1/ Survey on attitudes and behaviors

2/ Collect sharing intentions

3/ [app] Identify potential inconsistencies between intentions and actual settings

4/ Collect feedback on the potential inconsistencies



Mark Zuckerberg Like

- Wall
- Info
- f8 Live
- Photos
- Boxes
- Video
- >>

Filters



Mark Zuckerberg Had a good chat yesterday with John Battelle and Tim O'Reilly at the Web 2.0 Summit.



Web 2.0 Summit 2010: Mark Zuckerberg, "A Conversation with Mark Zuckerberg"

www.youtube.com

Mark Zuckerberg (Facebook), Tim O'Reilly (O'Reilly Media, Inc.), John Battelle (Federated Media Publishing), "A Conversation with Mark Zuckerberg"

November 17 at 6:13pm · View Feedback (9,099) · Share



Mark Zuckerberg Keith Urban stops by Facebook HQ .



October 28 at 4:15pm · View Feedback (12,553) · Share



Mark Zuckerberg Some photos from my trip to Newark, NJ to meet students and participate in a couple events.



Mark's Visit to Newark, NJ

After announcing his \$100 million challenge grant, Mark tours Newark with Mayor Booker and Governor Christie.

By: Startup: Education

Photos: 19

September 27 at 2:36am · View Feedback (6,009) · Share

Add to My Page's Favorites

Suggest to Friends

I'm trying to make the world a more open place by helping people connect and share.

2 Friends Like This



Kerry Hokett



Jesse Vere Mahorney

1,982,955 People Like This



Create an

Nauseating Pants

betabrand.



Need pants ugly holiday no further: Nauseating only at Bet

\$50 off Bonobos

cim.meebo



"Best Mens Magazine. first purcha stylish men


Entertain Business

fullsail.edu



Facebook Privacy Controls: May 2010

Sharing on Facebook

	Everyone	Friends of Friends	Friends Only
Everyone			
Friends of Friends			
Friends Only			
Recommended			
Custom 			
My status, photos, and posts	*		
Family and relationships	*		
Photos and videos I'm tagged in		*	
Religious and political views		*	
Can comment on posts			*
Email addresses and IM			*
Phone numbers and address			*

Step 2: Collect Intentions

	Stranger	Friend	Network Member	Friend of friend
Work	show apathetic hide	show apathetic hide	show apathetic hide	show apathetic hide
School	show apathetic hide	show apathetic hide	show apathetic hide	show apathetic hide
Alcohol	show apathetic hide	show apathetic hide	show apathetic hide	show apathetic hide
Political	show apathetic hide	show apathetic hide	show apathetic hide	show apathetic hide

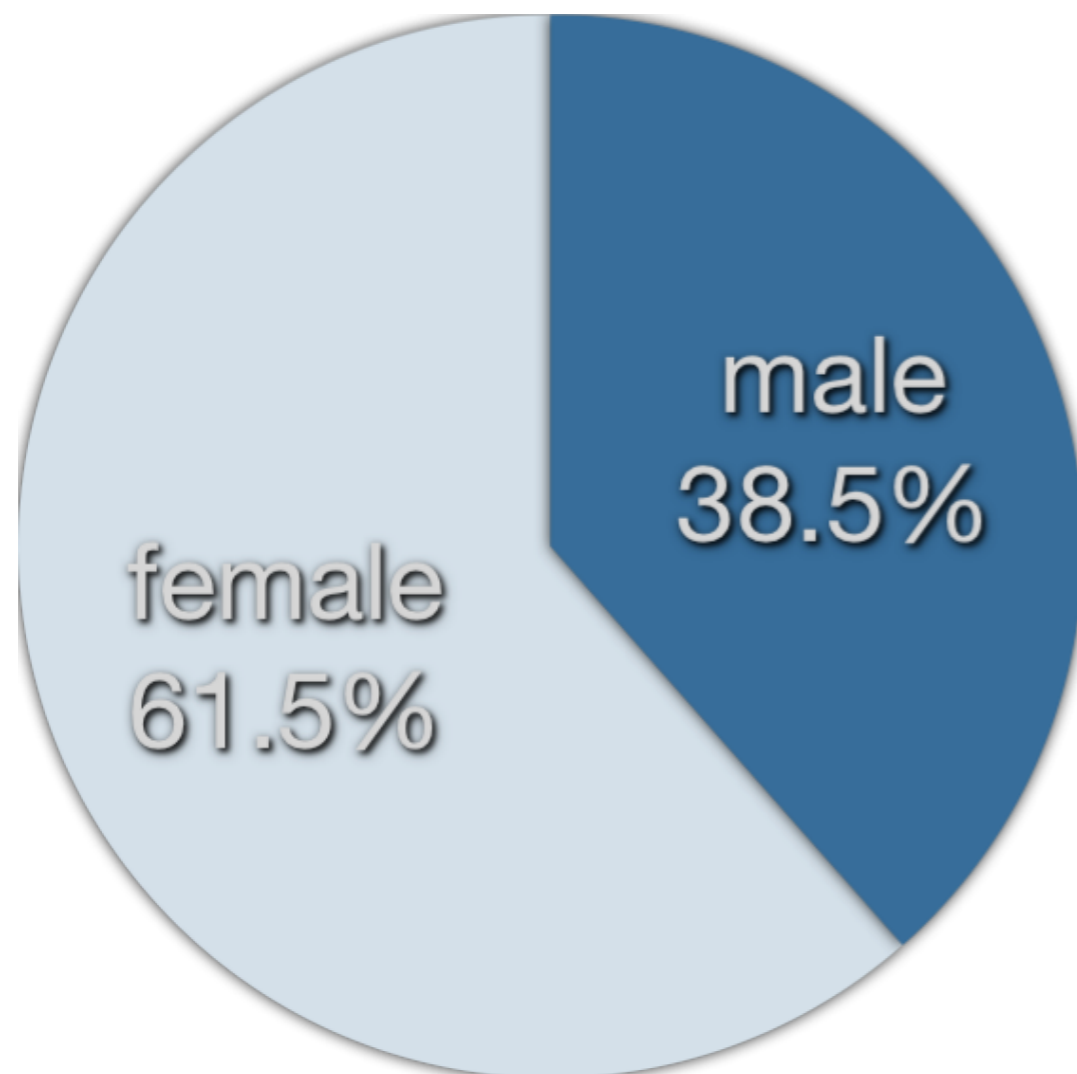
Intention: hide

My boss is such a jerk!

What is your response to this work post that is visible to strangers?

1. The information is misclassified.
2. I will not modify my settings.
3. I will modify my settings.

Sample: 65 undergrads



Friends

mean = 601

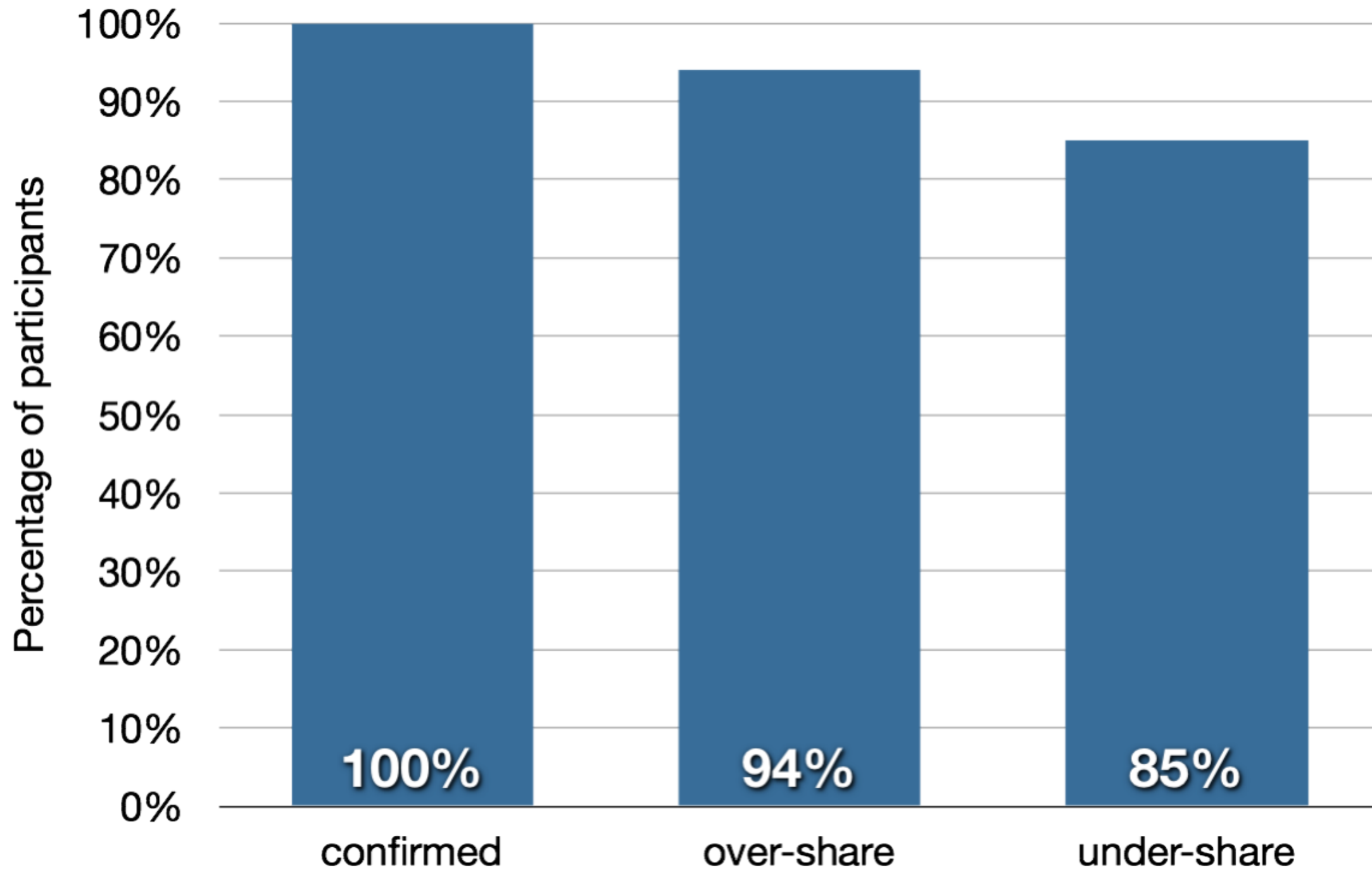
range = [160, 1894]

Facebook reports

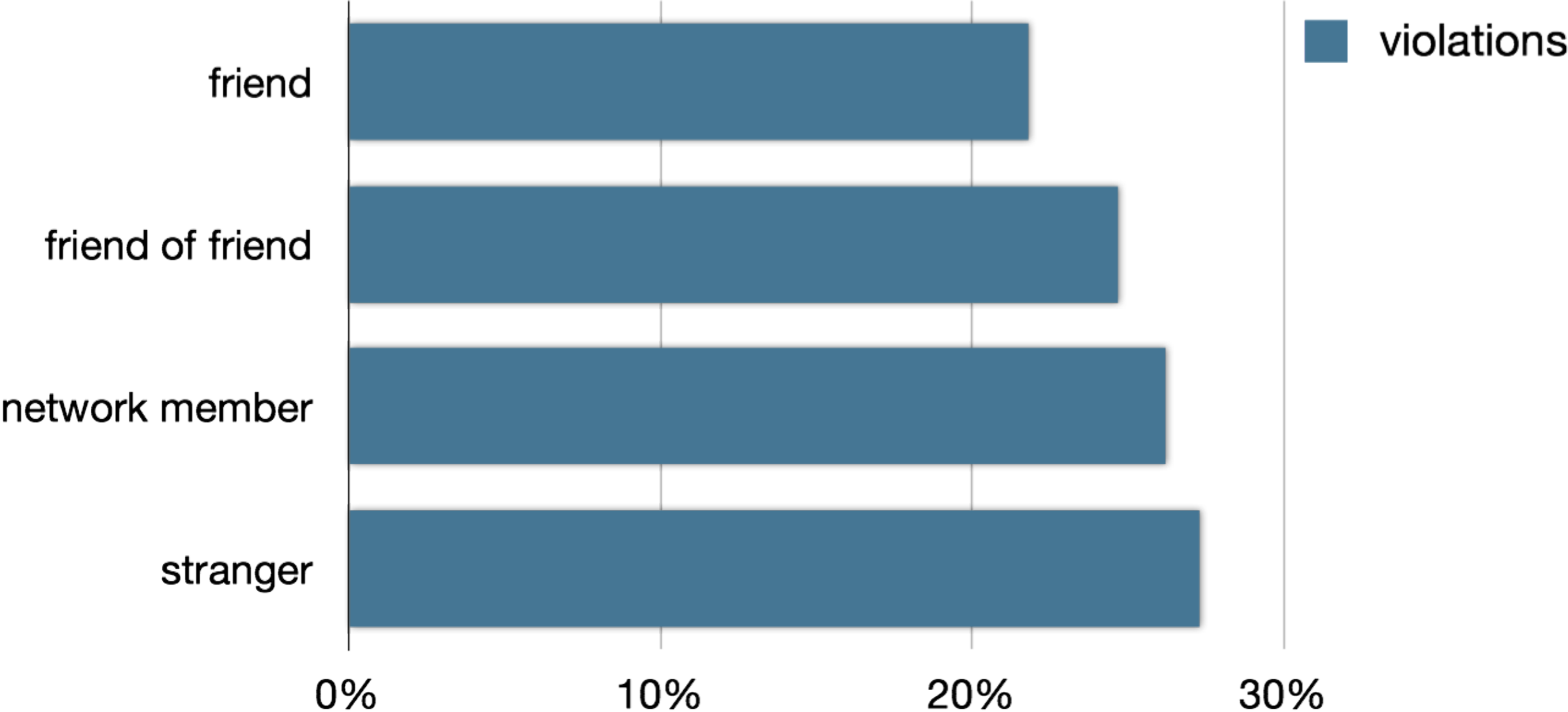
mean = 130

[iStrategyLabs, 2010]

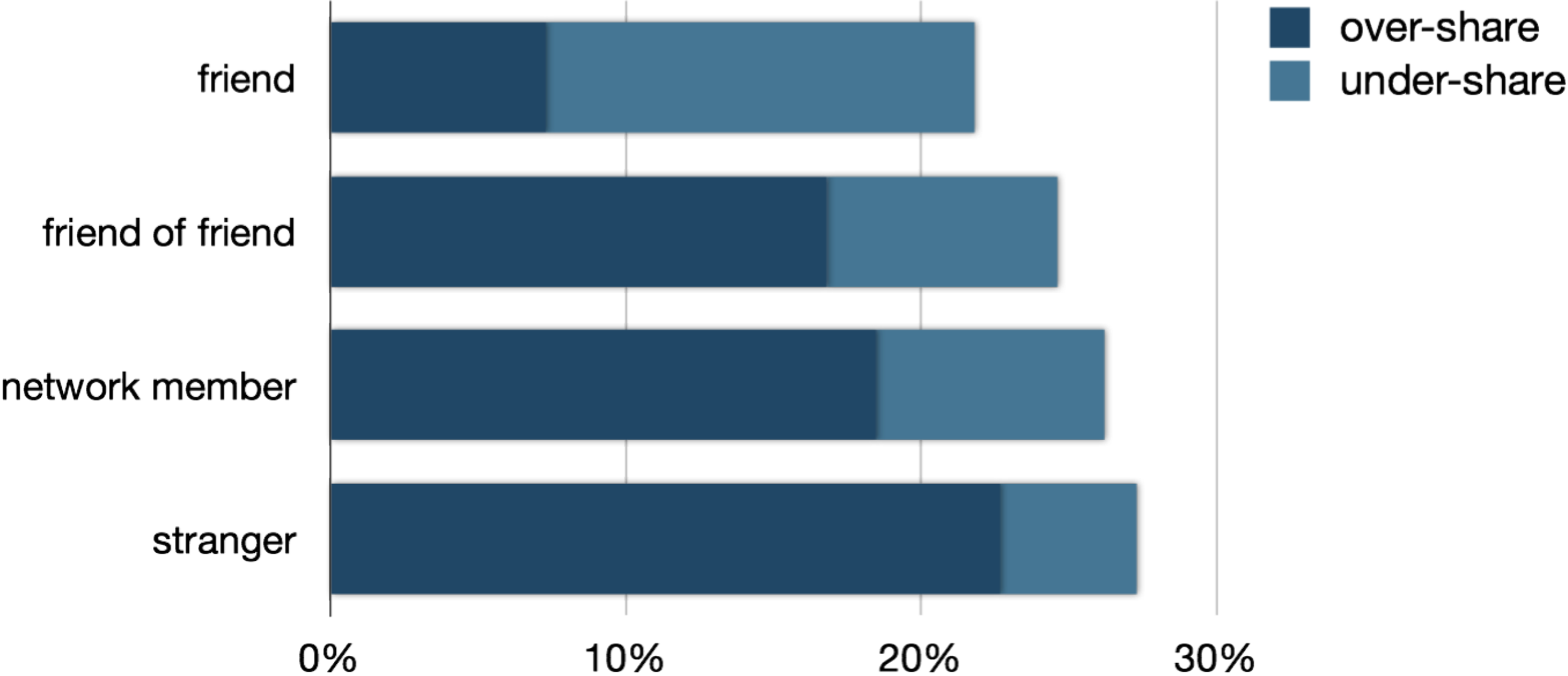
Confirmed Violations



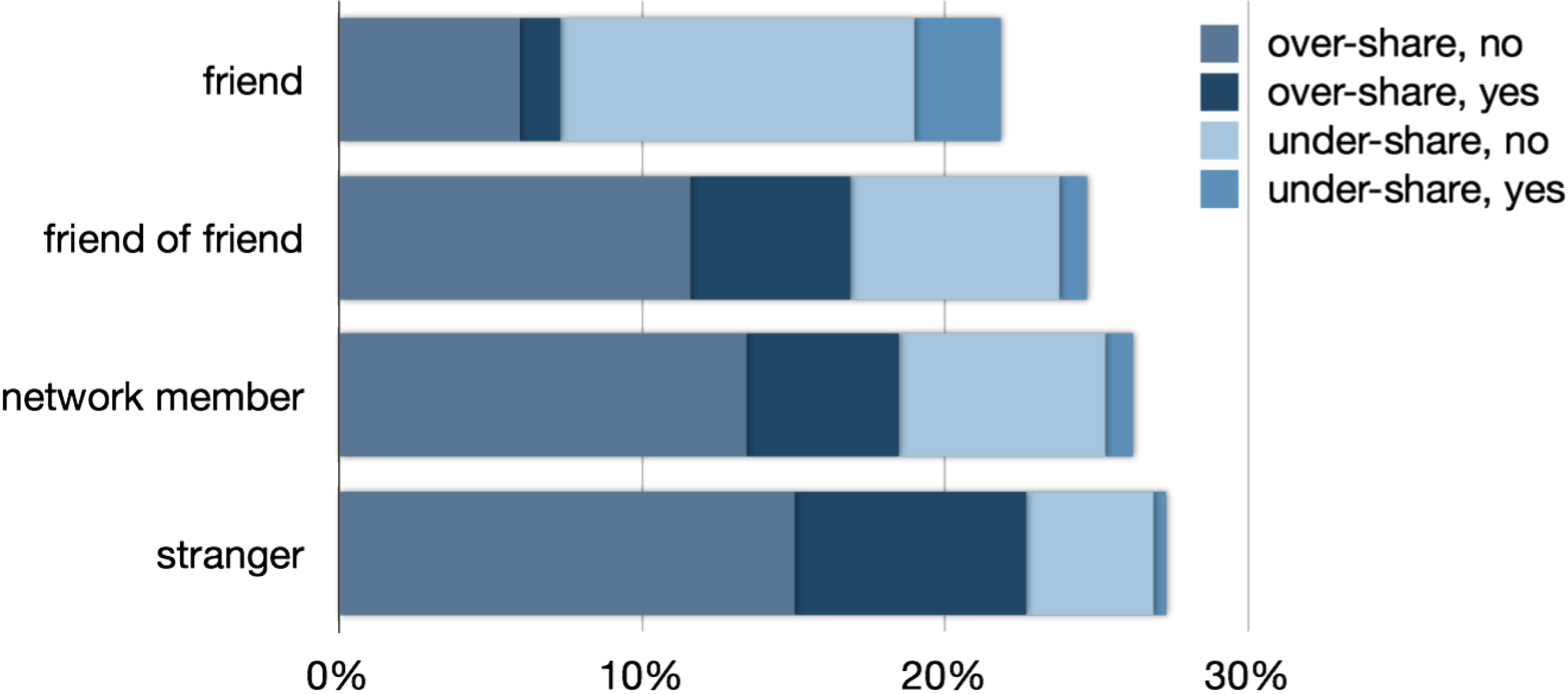
Breakdown of Confirmed Violations (out of 1191)



Breakdown of Confirmed Violations (out of 1191)



Breakdown of Confirmed Violations (out of 1191)



Possible Explanations

- Only some violations are worth addressing
- The user doesn't care
- The user would correct it but they don't know how
- The user already knows that a privacy control to correct for it does not exist

What are Facebook users'
interpersonal privacy concerns?

How do they mitigate their concerns?

Method

- Designed a survey to address to collect attitudes and behaviors
- Implemented the survey as a Facebook app

Survey Structure

- 1/ Friend network composition
- 2/ Have you ever ...
 - posted a photo then deleted it?
 - removed a Friend from your network?
- 3/ Concern with specific scenarios
- 4/ Gauge sharing concerns about specific friends or pieces of content

Rate your level of concern

Your employer will see an inappropriate photo or comment on your profile.

- stranger
- a prospective employer
- your employer
- thieves
- law enforcement
- your university
- sexual predators
- political parties

[Young and Quan-Haase, CT 2009]

You posted, “In SF for Usenix”

A friend commented, “Me too! See you at the reception.”

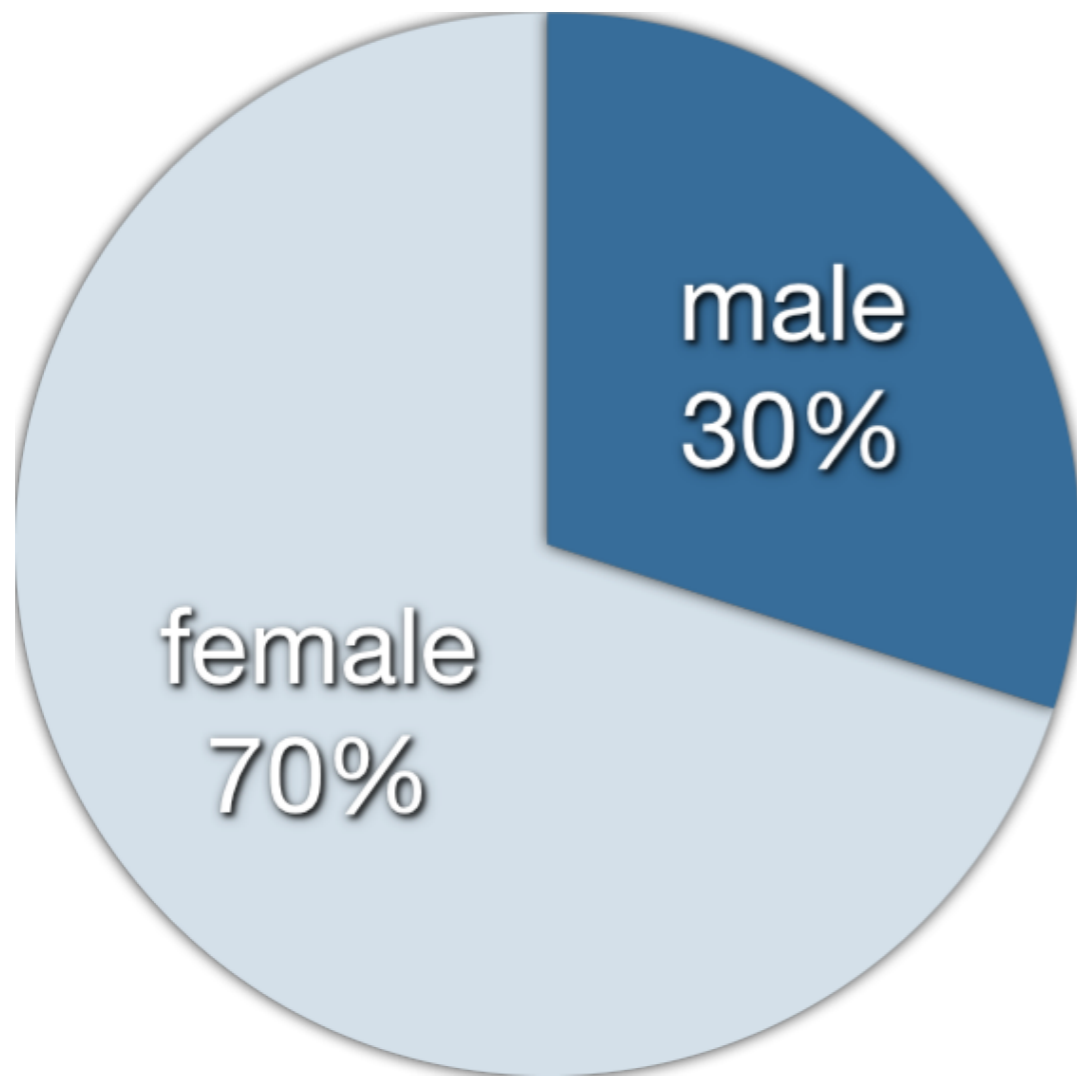
A friend commented, “Play hooky, let’s go to the MOMA!”

How would you feel if **a stranger** saw this?



How do you feel about **Rachel Smith** viewing all the information you have posted to Facebook?

Sample



$n = 260$

Age 18-62

$(\mu = 33.8, \sigma = 10.6)$

<https://www.researchmatch.org/>

Findings

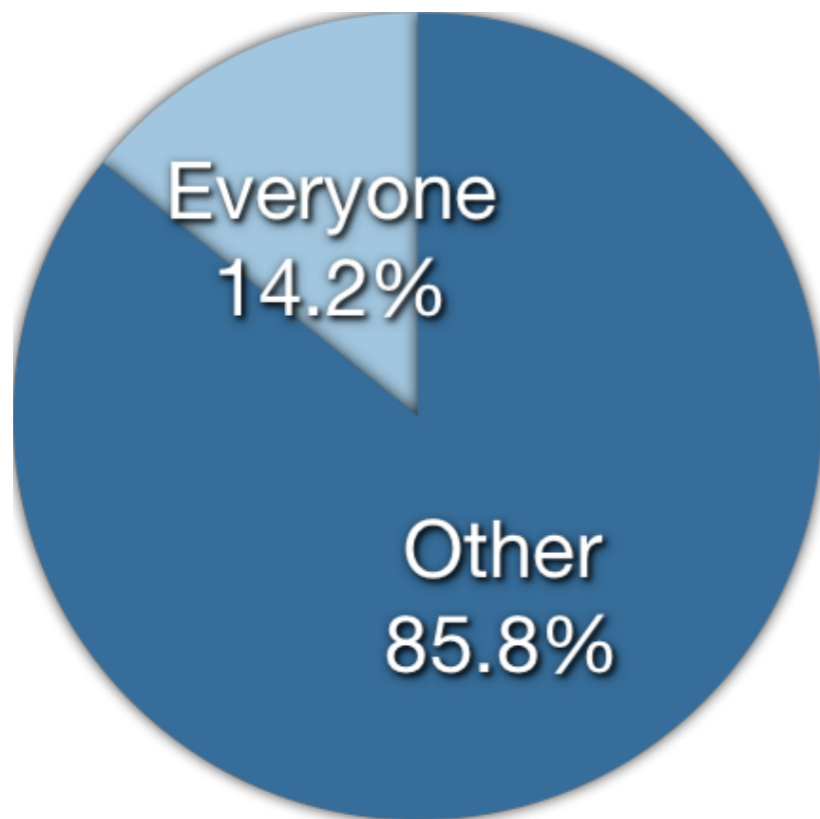
Widespread concern about outsiders

Combined responses to:

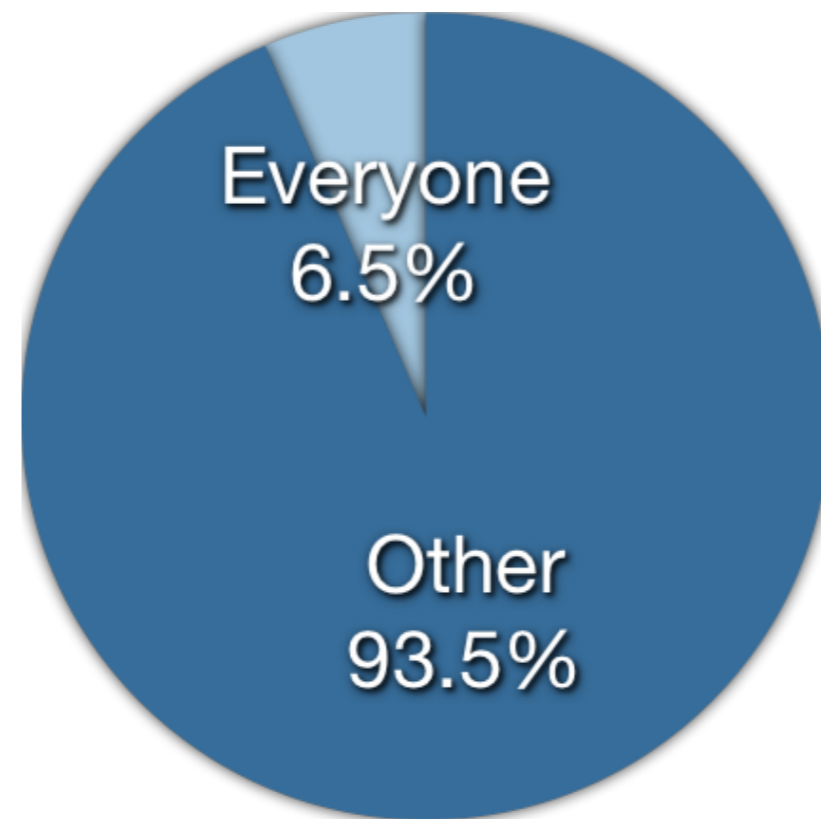
- Scenarios
- Non-Friends seeing specific posts

**89% of participants had concerns
about outsiders accessing their posts.**

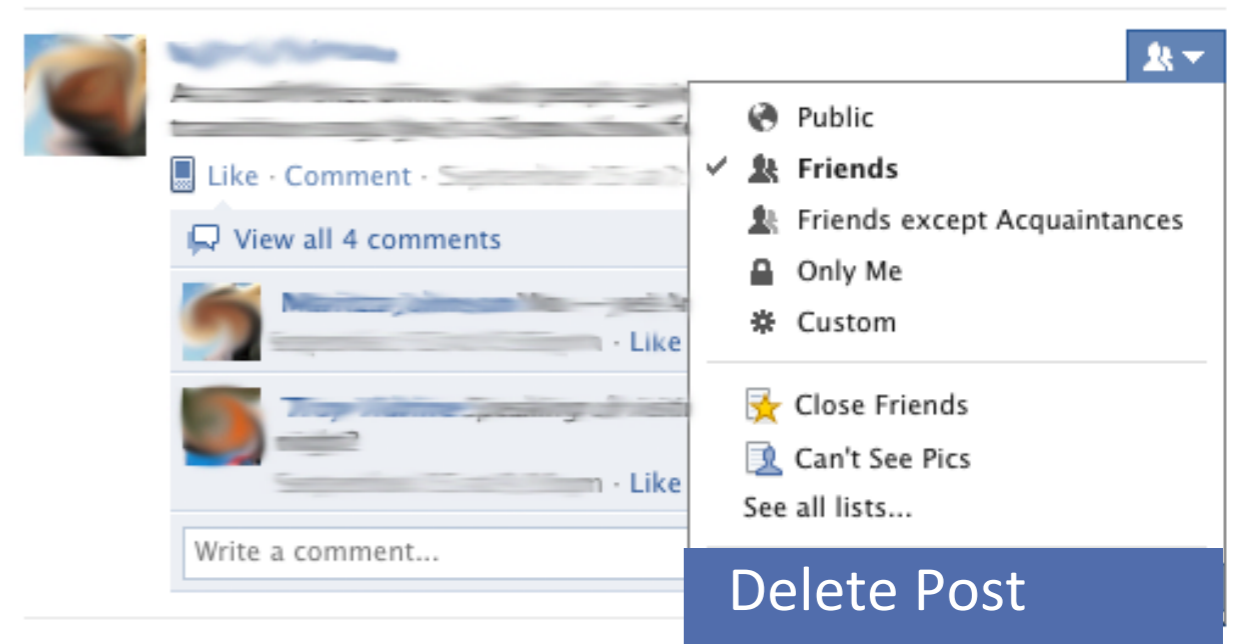
Most users effectively manage the stranger threat.



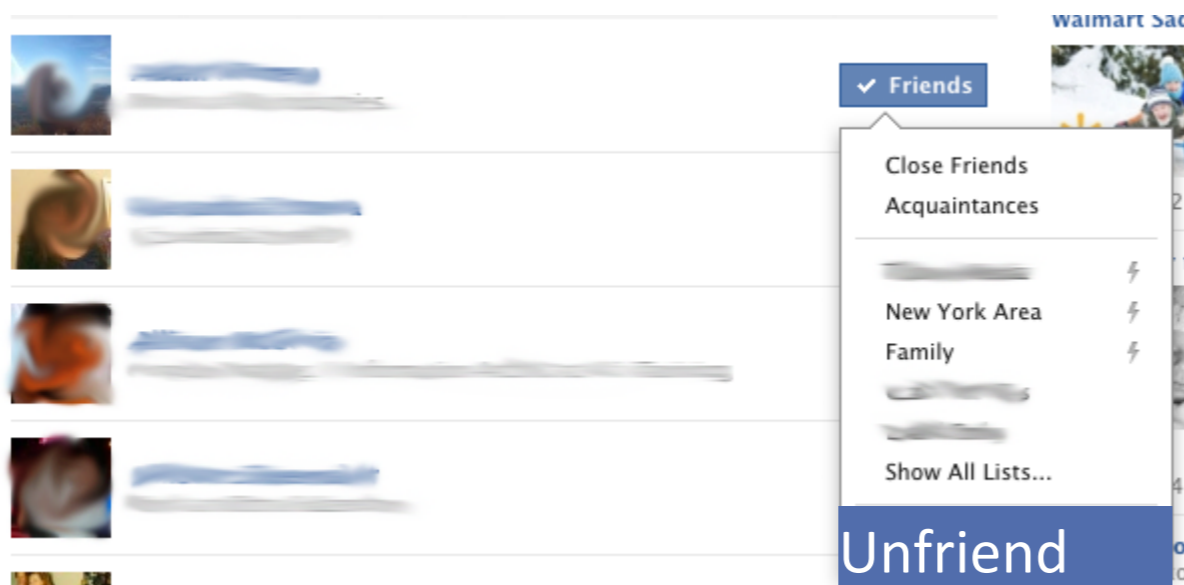
Wall



Photos



People find ways to mitigate their concerns



Findings

People experience difficulty managing fine-grained audience controls.

People use some audience controls.

Privacy concerns are individualized.

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A Silver Lining?

1/ Increasing popularity of social networking and small group messaging apps

2/ Facebook and others iterating to improve the user interfaces



Maritza Johnson
Edit Profile

- News Feed
- Ads Manager
- Messages 3
- Events

GROUPS

- SOUPS 2014 - Car...
- User Experience ... 20+
- New Groups
- Create Group

FRIENDS

Update Status | Add Photos/Video | Create Photo Album

Excited to be in Crete for iSocial!

Friends **Post**

Who should see this?

- Public**
Anyone on or off Facebook
- Friends**
Your friends on Facebook
- More Options

Rishi Saha added 6 new
Giants with Lisa Foster at
3 hrs ·

Go Giants!!!! And great thanks to



A Field Trial of Privacy Nudges

Wang, Leon, Acquisti, Cranor, Forget, and Sadeh

CHI 2014





Search for people, places and things



Charlie

Home

Find Friends



Charlie Deets
Edit Profile

Update Status

Add Photos/Video

Paddy Underwood and 2 others

Welcome

News Feed

Messages

Events

Find Friends

FRIENDS

Close Friends

Acquaintances

Family

Privacy Checkup

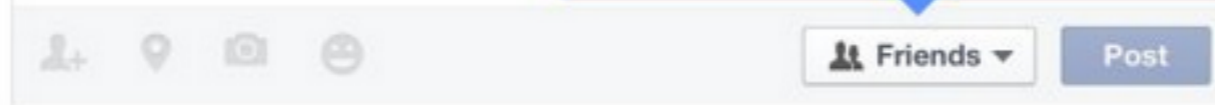
Three quick steps help make sure you're sharing with the right people



1 Your Posts

This controls who can see what you share when you post from the top of News Feed or your profile. Your current setting is **Friends**.

Who would you like to see your next post?



Changing this here will set the audience for your future posts, but you can change it whenever you post and we'll remember your choice for next time.

Learn More

Next Step

See All

Add Friend

Add Friend

Add Friend

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