SOCIAL NETWORKING – Unsafe at Any Speed?

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Speaker Background

- Senior Principal – Solution Architect for CSRA, Inc.
- 8 years U.S. Navy, nuclear reactor operator, fast attack submarines
- Over 25 years experience: data management, IT process, technical management, information security
- B.S. Computer Science (1993)
- M.S. Network Security (2006)
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- Adjunct Faculty, George Mason University School of Business
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  - Networks & Security, Undergrad
- Doctorate in Information Assurance, expected 2018
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Social Network

- From Dictionary.com:
  - a network of friends, colleagues, and other personal contacts:
  - an online community of people with a common interest who use a website or other technologies to communicate with each other and share information, resources, etc.:
  - a website or online service that facilitates this communication.

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Social Network Variety

The Most Popular

- **facebook**
  - General Interest
    - 1.1B unique visitors/month
- **Twitter**
  - 240 characters per message
- **LinkedIn**
  - The social network for business
- **Pinterest**
  - Sharing images/videos
- **Google+**
  - Google's competition for Facebook
- **tumblr.**
  - Cross between Facebook and a blog. Sharing
- **Instagram**
  - Sharing images/videos
- **VK**
  - Europe's largest general social networking site
- **flickr**
  - Started as image hosting, added social networking
- **Vine**
  - Share 6 second video clips
- **Meetup**
  - Advertise local group meetings
- **TAGGED**
  - Focused on quickly meeting others with same interests
- **ask.fm**
  - Anonymously ask/answer questions
- **meetme**
  - Focus on finding new people to chat with online
- **classmates**
  - Focus on finding/connecting with former classmates

Source: http://www.ebizmba.com/articles/social-networking-websites

Plenty of Newer/Smaller Social Networks

…and hundreds more

What do we do?

So…How Do We Talk to People about Social Networks?

- Just Say NO ?
  - Some security experts recommend avoiding social networks
- However
  - LinkedIn for hiring/job searches/work-related communities
  - Facebook for staying connected with family/friends
  - Share photos, recipes, poetry, videos, 3D models, etc.
  - Many companies use social media as part of their marketing strategy
- So – how real is it to expect people to stay away from Facebook?
  - (remember…1.1 Billion unique visitors/month)
- So, just say Be Careful ?? We need more.

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Don’t Over Dramatize

- Talk about Risks
  - Be realistic about Impacts
  - If you can’t explain impacts, they won’t listen
- Talk about how to manage Risks
  - Simple guidance
  - Show how to manage security settings

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Possibly Hyped Risk Examples

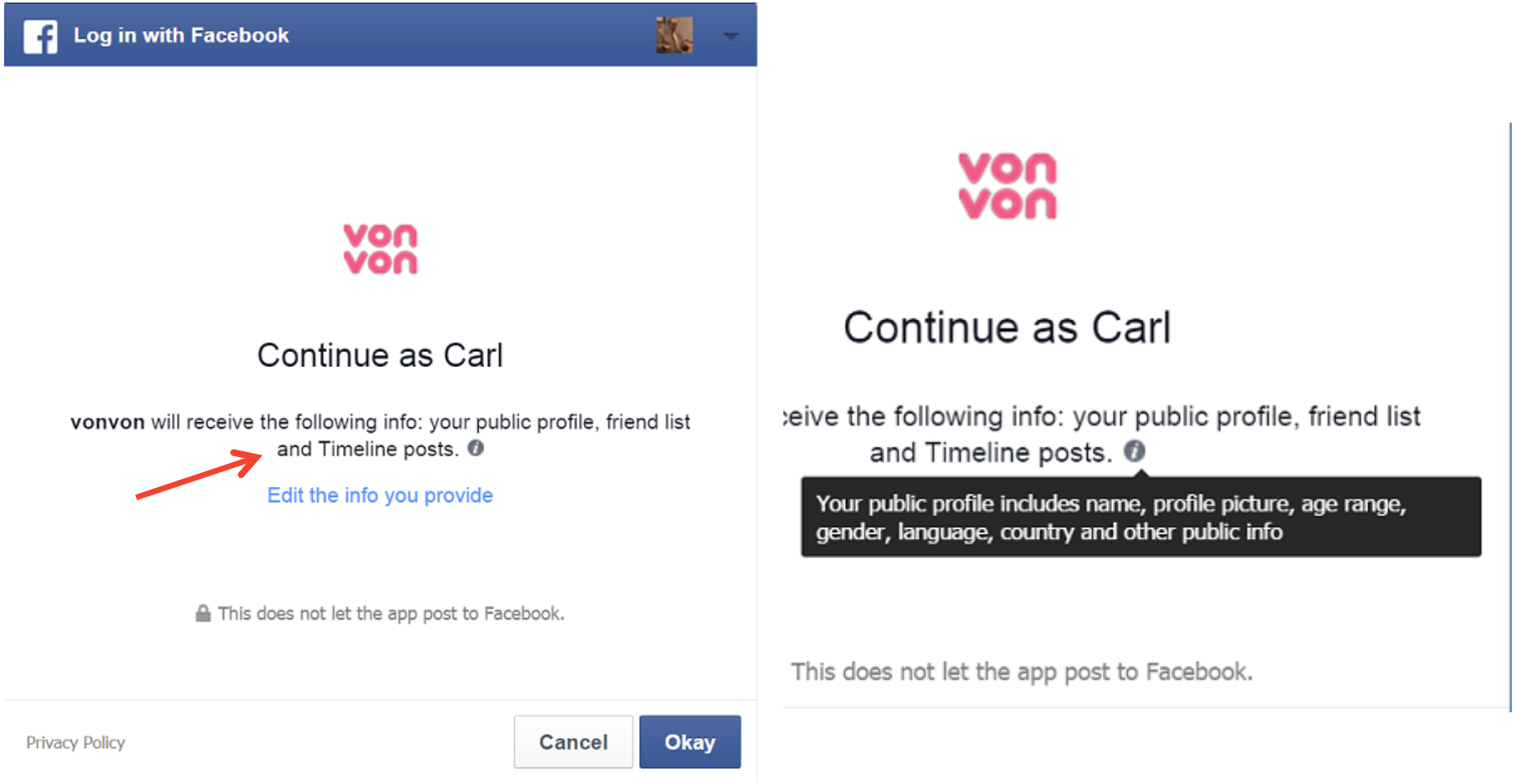
- How realistic is it to expect to be stalked via social networks by a stranger?
  - From 2012 DoJ report:
    - 1.5% of population 18 or older were victims of any type of stalking during the 12 month measurement window
    - 70% of them knew their stalker
- How likely is it to have your identity stolen through social networks?
  - Top sources of Identity Theft (no particular order)
    - Social Engineering, including
      - Phishing
      - Phone spoofing
    - Dumpster diving
    - Data breaches
    - Stealing credit card, wallet, purse
    - Skimming
    - Shoulder surfing


Real Risks!

Viral Quizzes (Facebook)

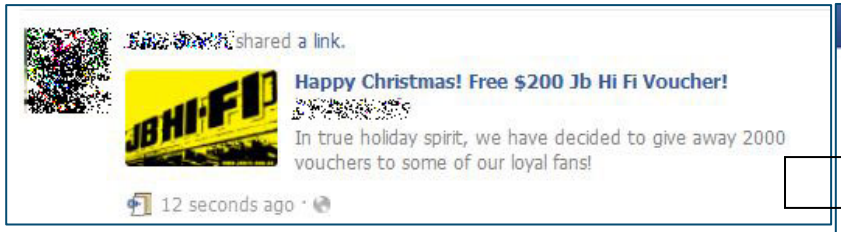
- Many different examples
  - What state do you belong in?
  - What Harry Potter character are you?
  - What Classic Rock Band are you?
- Quizzes are often hosted by 3rd party site
  - Collects answers, tied to your Facebook account
  - Answers shared (sold) to advertisers
  - Answers may include common password reset information
    - Name of first pet
    - Street where you grew up
    - First car (make/model)

Facebook Apps

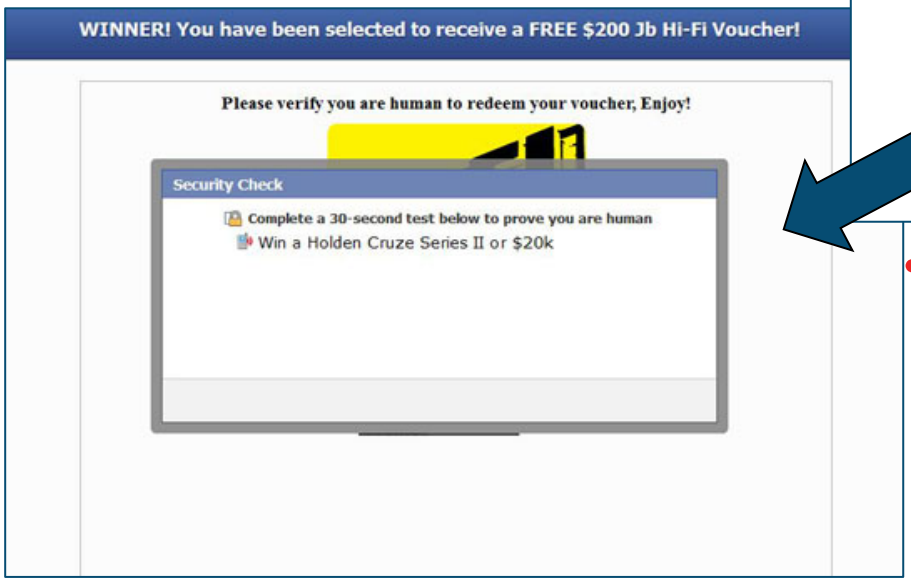


Install this ‘game’, and VonVon will be seeing all of your posts, even if only shared with friends…

Free Stuff! (Facebook)



- Shared from a friend, seems easy to get something for nothing

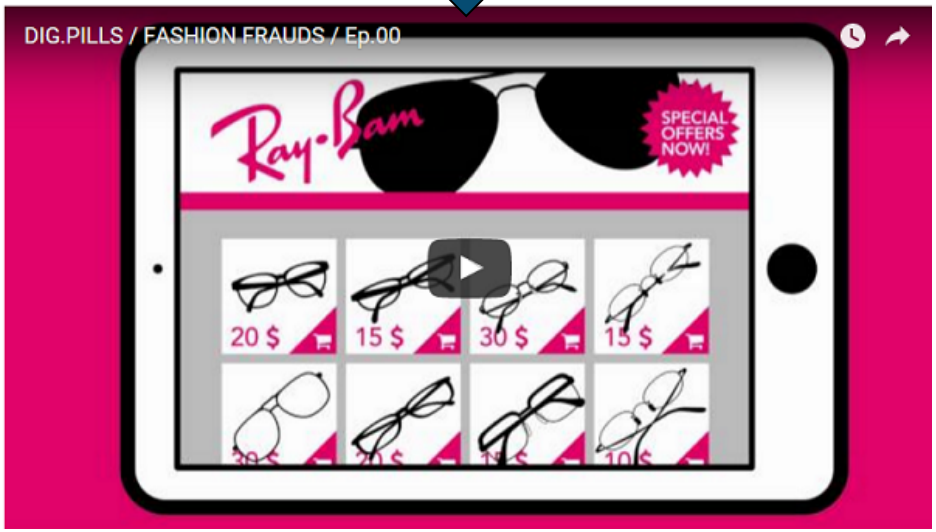


- When you click, you're sent to a survey site, asked questions to get personal information
  - Email, phone, address
  - At a minimum, set up for spam

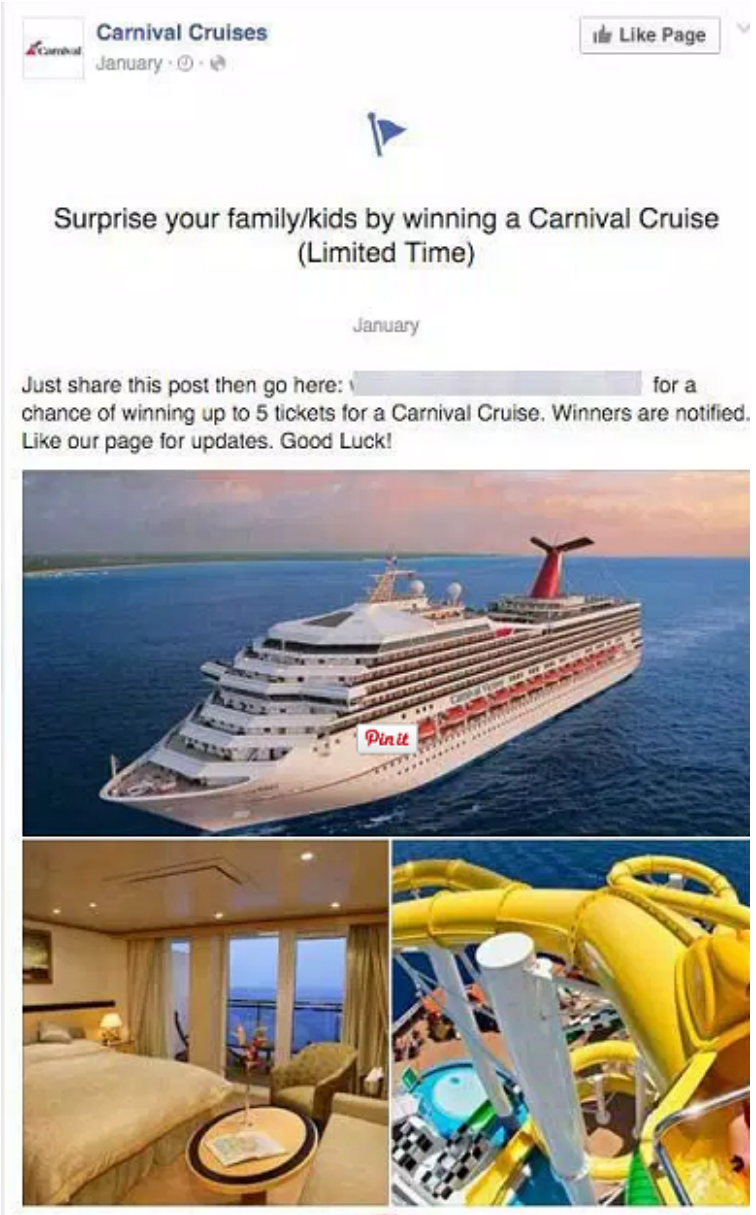
More free/low price stuff! (Facebook)

- ‘Free’ trip survey scam

- Knock-off products



(clicking the link does NOT take you to Ray-Ban)



Looking for services? Don't look here…

- Looking for a moving company
  - Used Facebook
  - Moving company took their stuff
  - Never showed up again

http://www.telegraph.co.uk/news/uknews/crime/11901286/Couple-lose-almost-everything-after-Facebook-removal-van-scam.html

Friend Requests (All)

- SOCIAL ENGINEERING
- Getting connect requests from people you don't know
  - No (or very few) mutual friends
  - No past connection to them
  - Setting you up for scams on Facebook
    - Later claim to be Facebook staff and…you've won a prize!
      - But you have to send $$ in order to collect
    - Collecting personal information via chat/messaging
      - Spam
      - Password reset questions
  - Information harvesting on LinkedIn and others
    - Asking for personal information
    - Asking for business-sensitive information

Robin Sage

Do you know this woman?

…she wants to be your friend

Robin Sage Experiment

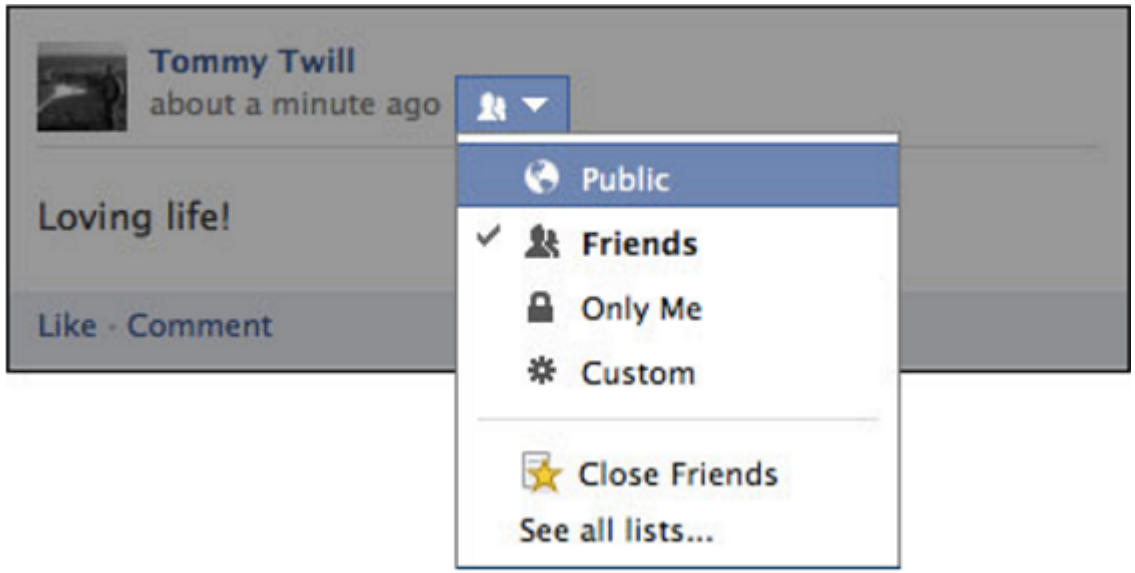
- December 2009 to January 2010
- Fake Facebook, Twitter, LinkedIn profiles, posing as a Cyber Threat Analyst
- Sent requests and established social network connections with over 300 security professionals
  - Men and women of all ages
  - NSA, DoD, and Global 500 companies
- Results
  - Deployed troops discussing locations and movement
  - Consulting opportunities from Lockheed Martin and Google
  - Given business sensitive documents for review
  - Able to determine answers to password change questions based on information provided in online conversations

Fake Recruiter Data Mining - 2015

- Company logo a generic graphic
- 24 recruiters, each with different specific cyber specialty
  - Recruiter pictures also generic, found elsewhere on internet
    - Reverse image searches of mirror-flipped photos
- Mapping infosec people's networks – not sure why


Advice for
Users

General Tips



- Always check who you are sharing things with
  - Most networks allow setting a default for all posts
  - Facebook restricts photos/videos to your original audience, even if someone re-shares
- When you share a photograph that you took, you also share the EXIF (location, date/time) data. Facebook automatically strips this, but not all social networks do that.

General Tips, continued

- Think about what you are sharing…don't overshare
  - 'Going on vacation for two weeks'
    - Will be out of touch
    - Can someone watch our house for us?
      - Do you know who all your friends are?
  - Personal, embarrassing information about yourself or your family/ friends

Facebook Burglary

Rare
(not unheard of)

- Don't get into 'flame' wars
  - People more willing to do via Facebook than face-to-face
  - Wear your armor…don't be goaded into angry replies
- Keep work and private life separate in social media
  - Separate Twitter accounts, one for work, one for personal
  - Keep personal out of LinkedIn

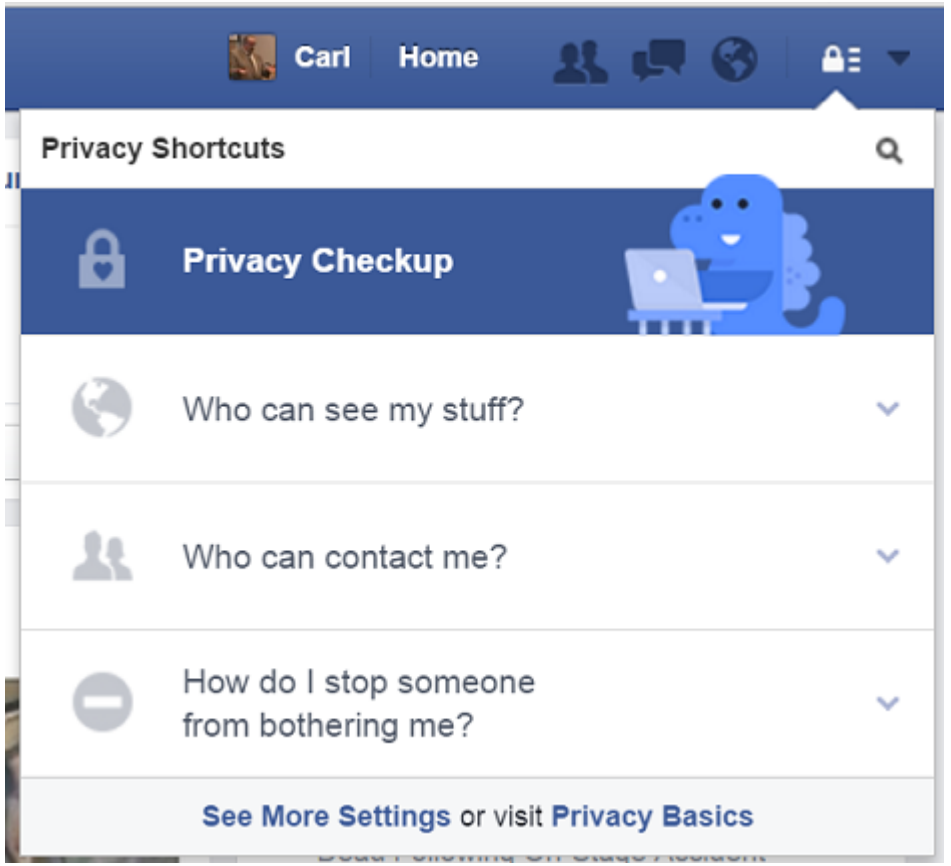
Careful where you Click!!

- Like Farming
  - Facebook photos that show dogs with signs around their neck
  - 'Teachers' holding signs asking you to Like and share to show their students how things go viral
  - A kid with a sign saying that 100,000 likes will cause his father to stop smoking
  - **Mostly harmless**, but used for gathering clicks (popularity) which is Facebook currency…they replace the original content with a scam-ad, but keep all the likes so that it gets prominent placement.

- Click Bait
  - If it looks too good to be true, and you don't know the original poster (a friend may have shared it).
  - Used for:
    - Downloading malware or sending you to a scam ad
    - Farming to raise popularity

Manage Security & Privacy - Facebook

– You can find the Privacy Checkup here…



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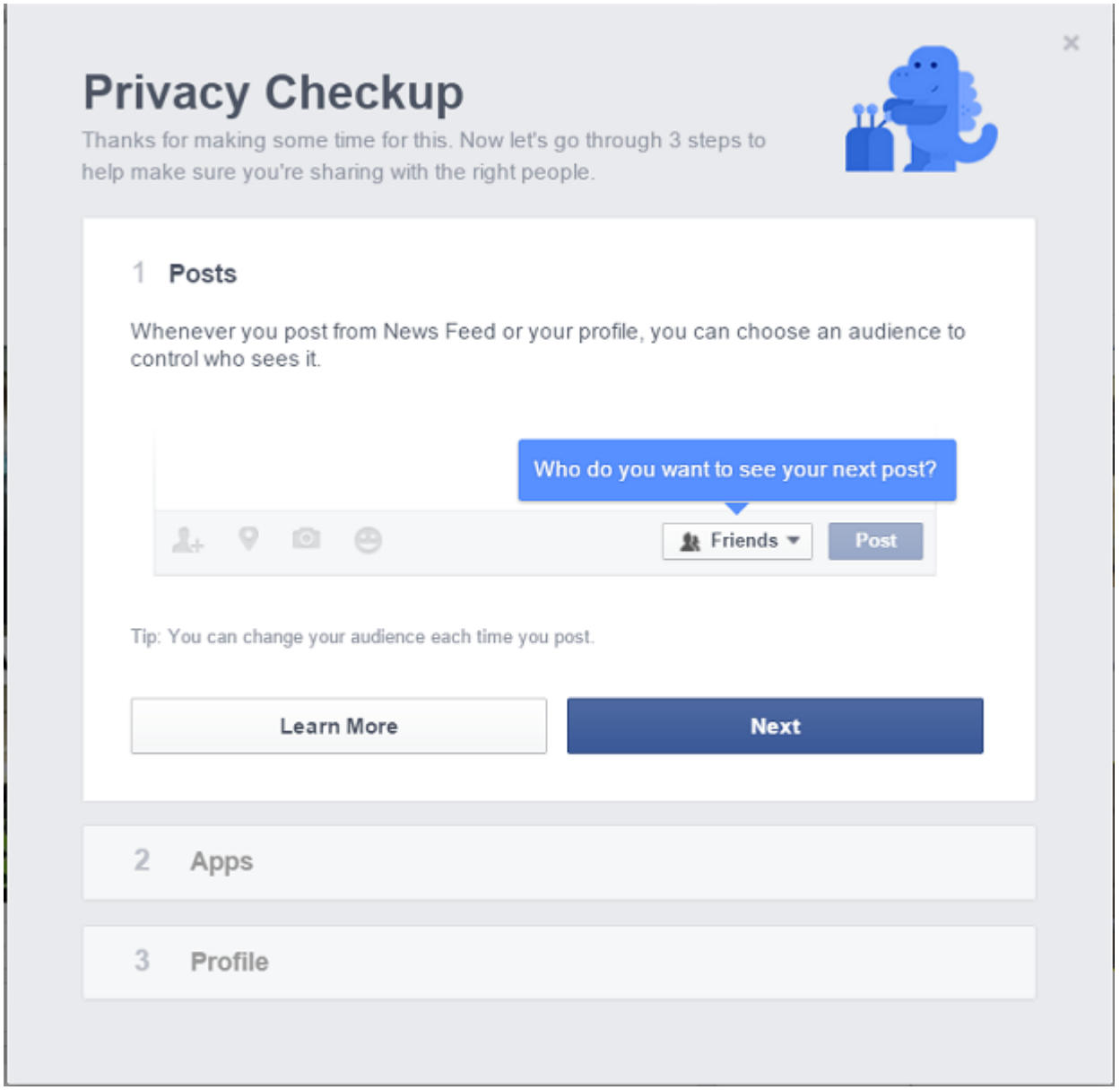

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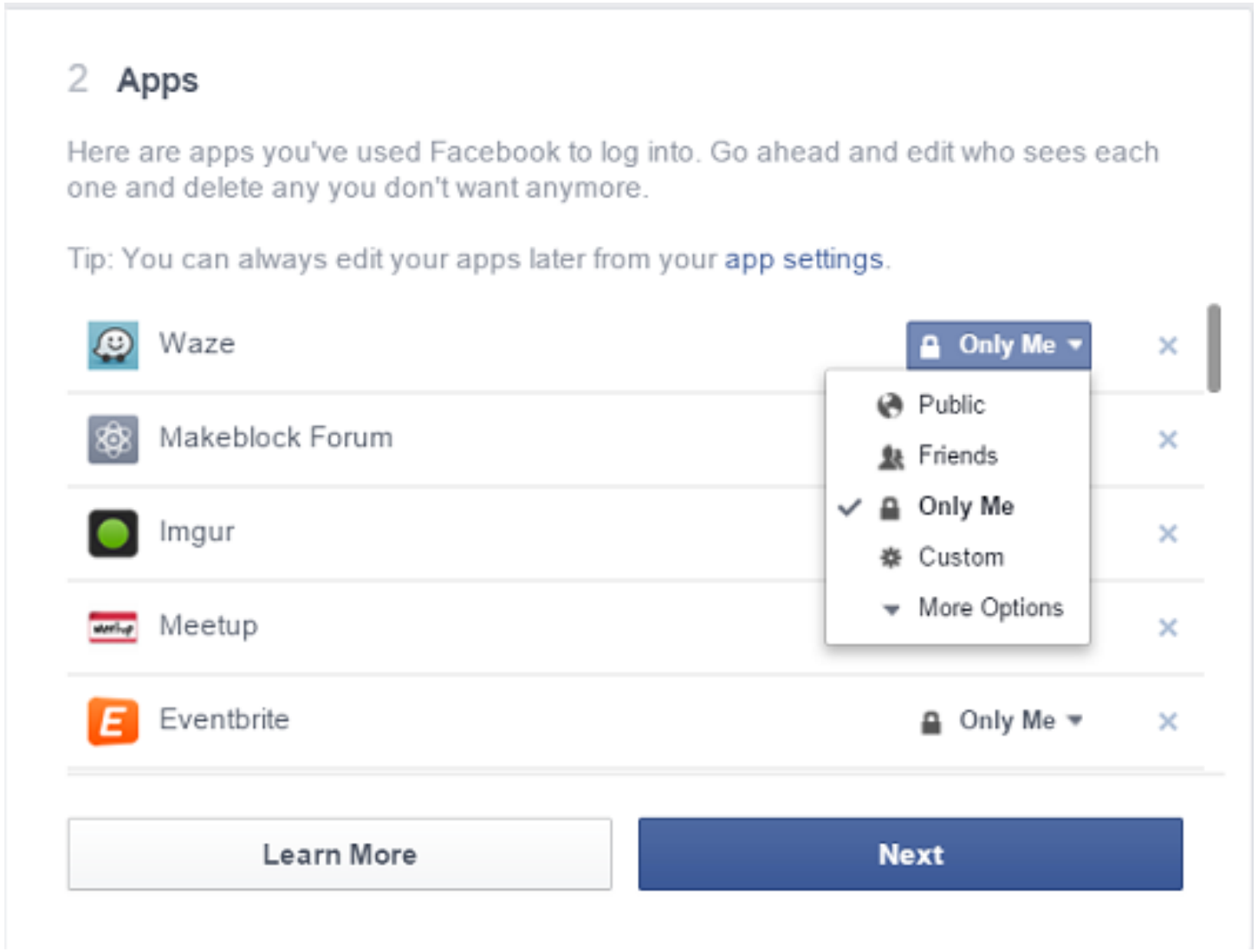

Biggest Risks for Companies

- Employees sharing too much information
- Loss of confidential/business sensitive information
- Increased exposure to litigation
- Loss of employee productivity
- Increased exposure to malware

Social Networking at Work

- Be mindful of agency/company policy for social networking
  - You are responsible for knowing policy
- Don't accidentally take on the role of agency spokesperson
- Are you allowed on social networks from work?
  - LinkedIn?
  - Facebook?
  - Yelp?
  - TripAdvisor?
  - None of them?
- Are you allowed to share work events on your social network?
  - Employees sharing bosses promotion before announced
  - Posting cellphone pictures/videos taken at the office
    - Some co-workers may not want their image on your social network
- Maybe point them to the policy?

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Thank You

Questions?