How Public Is My Private Life?
Privacy in Online Dating

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Outline

- Background and Motivation
- Study Design
- Results
- Takeaways
Online Dating

*online services that facilitate romantic connections*

- Create a profile
- View others’ profiles
- Filter for important characteristics
- Exchange messages
Privacy Issues in Online Dating

how online dating users’ expectations of privacy may be violated

- Leaks due to technical vulnerabilities
- Online dating companies selling users’ data
Privacy Issues in Online Dating

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-Online dating companies selling users’ data
Privacy Issues in Online Dating

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-Leaks due to technical vulnerabilities
-Online dating companies selling users’ data
-Screenshots of Rio Olympians’ profiles published online
Privacy Issues in Online Dating

how online dating users’ expectations of privacy may be violated by other users

- Leaks due to technical vulnerabilities
- Online dating companies selling users’ data
- Screenshots of Rio Olympians’ profiles published online
- Personal experiences, news articles, blog posts, etc.
Privacy Issues in Online Dating

how online dating users' expectations of privacy may be violated

-Leaks due to technical vulnerabilities
-Online dating companies selling users' data
-OKCupid leak
-Screenshots of Rio Olympians' profiles published online
-Personal experiences, news articles, blog posts, etc.
Related Work

- How people present themselves in online dating [MMG2012, HTE2007]
  - Privacy has come up, but wasn’t the focus [GEL2010]
  - Many focus on specific communities, like Grindr [BBA2014]
- Privacy in related contexts
  - Other online services: Facebook [AG2006, JEB2012], Twitter [MTKC2010], and Snapchat [RGK2014]
  - Context has a significant impact what and how much people disclose [BHA+2013, JAL2011]
  - Location privacy preferences [TL2013]
- See paper for additional related works
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Study goals

- Understand goals, expectations, strategies for managing privacy
- Understand how people interact with other users’ potentially private information
- Surface privacy challenges in online dating
Methods *

● **Surveys**
  ○ 97 participants (recruited via social media and snowball sampling)
  ○ 35 men, 61 women, 1 unspecified
  ○ 62 under 30 years old; 35 over 30 years old
  ○ 83 straight; 6 bisexual; 4 gay or lesbian; 4 unspecified

● **Follow-up Interviews**
  ○ 14 participants
  ○ 7 men, 7 women

● **Tinder profile analysis**
  ○ 400 profiles in Seattle and Atlanta
  ○ 100 men seeking women, 100 women seeking men in each city

* All approved by our university’s IRB
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Survey
Interview
Tinder Profile Analysis
Alice meets Barbra on Tinder

*(Cooper) (Streisand)*

*Fictitious example. Tinder screenshots Photoshopped to include celebrities’ images found online*
Account Setup

“Discovery”

Messaging, etc.
If Alice wants to use Tinder, he must have a Facebook account.
Granting Permissions to Facebook

Account Setup

“Discovery”

Matching, Messaging, Etc.
How does Alice choose what information to include or leave out of his profile?
Goals:
- **Filter** for compatible matches
- **Increase chances** for a match
- **Reciprocate** when others share information
- Convey **values, hobbies, sense of humor, personality**

[Survey + Interviews]

Content in Profiles

<table>
<thead>
<tr>
<th>Feature</th>
<th># of Survey Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face</td>
<td>96</td>
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<tr>
<td>First Name</td>
<td>62</td>
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<tr>
<td>Last Name</td>
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<td>Job</td>
<td>45</td>
</tr>
<tr>
<td>School</td>
<td>42</td>
</tr>
<tr>
<td>Sexual History</td>
<td>38</td>
</tr>
</tbody>
</table>

“If they don’t have anything, I kind of skip over them because clearly they didn’t put any effort into it.” [Interview]

Added educational history to her profile after being accused of being a bot. [Interview]
Who will Alice see, and who will see Alice?
Anticipating and controlling a profile’s audience is difficult.

“I feel very uncomfortable when I see my coworkers’ profiles, so I make sure to not use proximity-driven apps at work.” [Survey]

“I spent a whole day . . . to find as many [people who work nearby] as I could and block them . . . I missed somebody, inevitably.” [Interview]

33 saw a coworker’s profile
48 recognized someone in public or met them coincidentally
81 saw someone they knew offline [Survey]
Account Setup

“Discovery”

Viewing First Profile in Queue

Matching, Messaging, Etc.
Malory won’t know that Alice has swiped left and Alice will never know whether Malory swipes left or right.
Viewing Next Profile in Queue

Account Setup  
“Discovery”  
Matching, Messaging, Etc.
Viewing Detailed Profile

Barbra, 43
Singer/songwriter

7 miles away
If You Don’t Bring Me Flowers then we’re not going on a 2nd date.

24 Common Connections
Barbra’s Instagram username is displayed if Alice taps a photo.
72 think it is common to look people up
4 did not look people up because it’s an invasion of privacy [Survey]

“Based off of what my friends do, I kind of expect people to really go in and try to figure things out. They’re kind of like spies” [Interview]

“I try not to do anything like that unless I’m planning to meet someone, and even then I’m probably restricting myself to google” [Survey]

Users with linked Instagram are more findable
Education, employment, and having (or using) a unique name increases findability
[Tinder Profile Analysis]
Account Setup

“Discovery”

“Swiping Right”

Matching, Messaging, Etc.
Exchanging Messages on Tinder

You matched with Barbra on 3/2/17

Hi
Account Setup

“Discovery”

Matching, Messaging, Etc.

Setting up dates

Exchanging phone numbers

Connecting on other social media

Meeting friends/family
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Summary

Privacy issues arise when ...
- Choosing profile content
- Determining audience
- Looking people up

More in the paper!
- Perceived and experienced risks
  - Users’ Threat Models
- Disclosure
- Searchability
- Taking and sharing screenshots
- Suggestions for design

- Privacy in this space is complicated
- Mismatches in expectations
- Tradeoffs between privacy and other user goals
- Interactions with non-dating apps can unexpectedly leak information
- No one-size-fits-all solution
Thank you!

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