

Extending the Demography of Sexuality with Digital Trace Data

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The problem

We lack estimates of sexuality at the level of granularity we might want

The problem

Because of stigma and selectivity, we can only measure **disclosure**, not underlying **prevalence**

The problem

ACS: same-sex couples, not sexual orientation

GSS & NSFG: too small for subnational estimates

Gallup: limited data, low response rate

England, Mishel, and Caudillo 2016

Hatzenbuehler, Flores, and Gates 2017

Schnabel 2018



Digital trace data: a solution?




Facebook



- large N—210 million in US
- detailed data about users



Digital trace data



[Home](#)

BASIC INFORMATION	
Birth Date	
Birth Year	
Gender	Male
Interested In	Men

Facebook ads



Facebook
users see
targeted ads,
like this one

Facebook ads

INCLUDE people who match at least ONE of the following ⓘ

[Demographics](#) > [Relationship](#) > [Interested In](#)

Men

Add demographics, interests or behaviors

| [Suggestions](#)

| [Browse](#)

Audience Size



Your audience selection is fairly broad.

Potential Reach: 25,000 people

Researchers have studied
health, migration, and gender

We extend the method to **sexuality**

Araujo et al 2017

Zagheni, Weber, and Gummadi 2017

Fatehkia, Kashyap, and Weber 2018

Overview of data

Interested in:

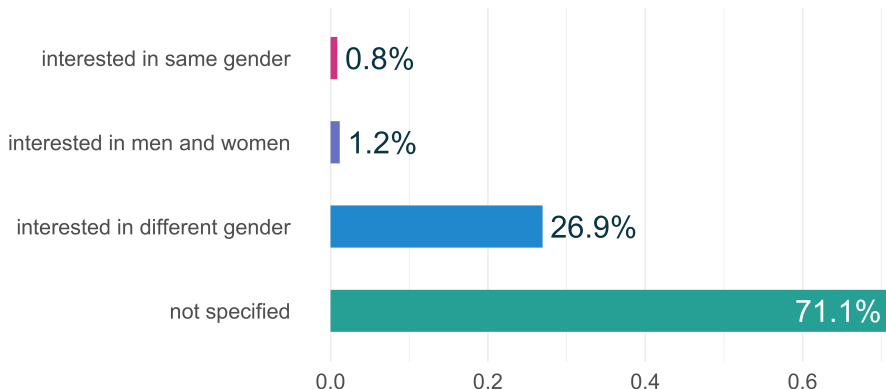
- men
- women
- men and women
- not specified

*cross-tabbed by
gender,
age,
location,
relationship status*

(collected Sept 2017)

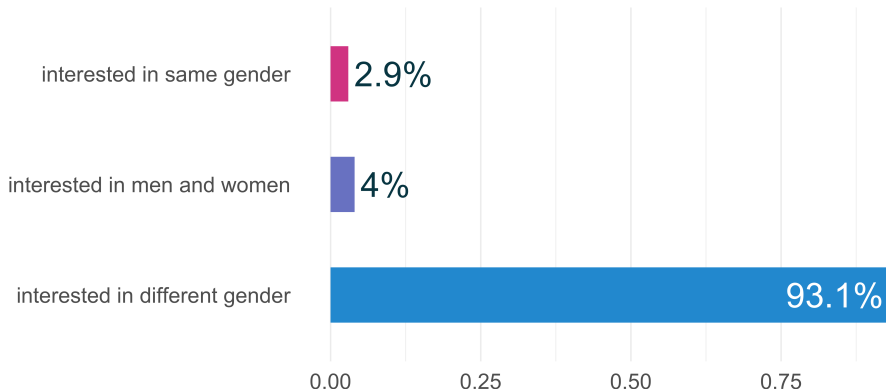
Overview of data

Sexuality



Overview of data

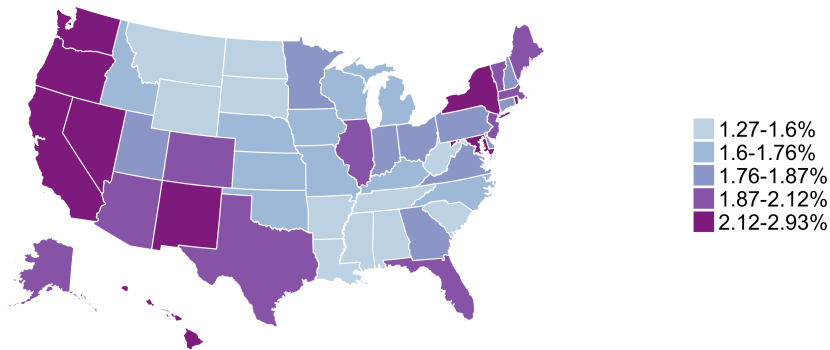
Sexuality



4.2 million Facebook users
disclose as LGB

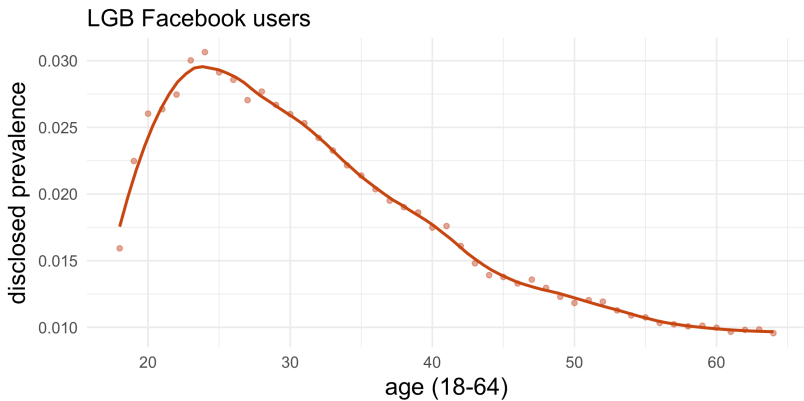
compared with **10 million** LGBT Americans,
estimated by Gallup 2016

Disclosed prevalence of LGB Facebook users

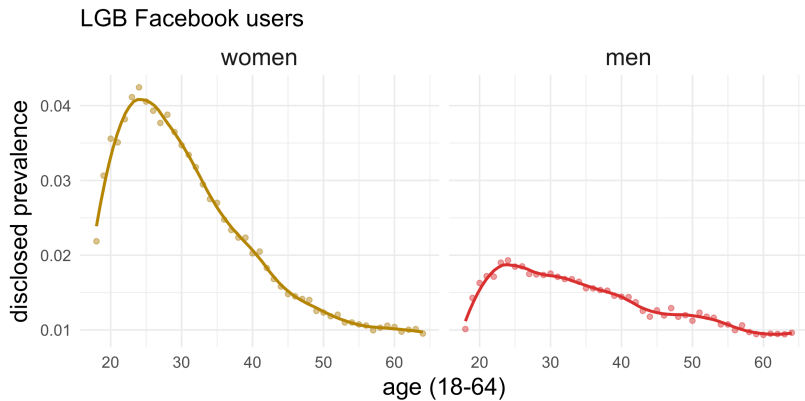


For what groups might
disclosure
be a good measure of
prevalence?

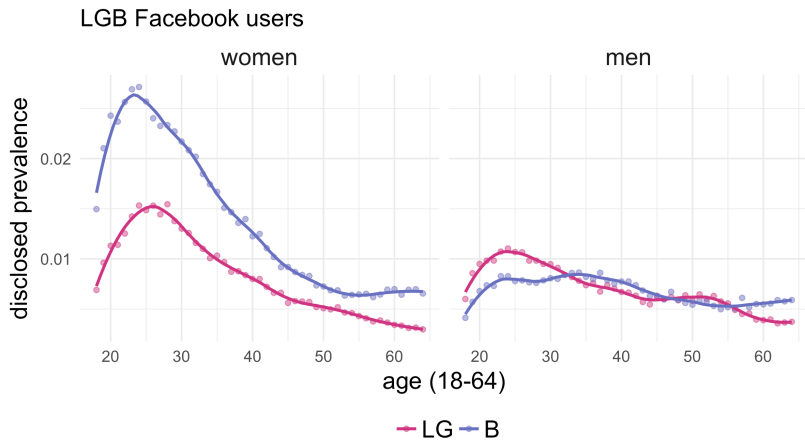
Disclosure by age



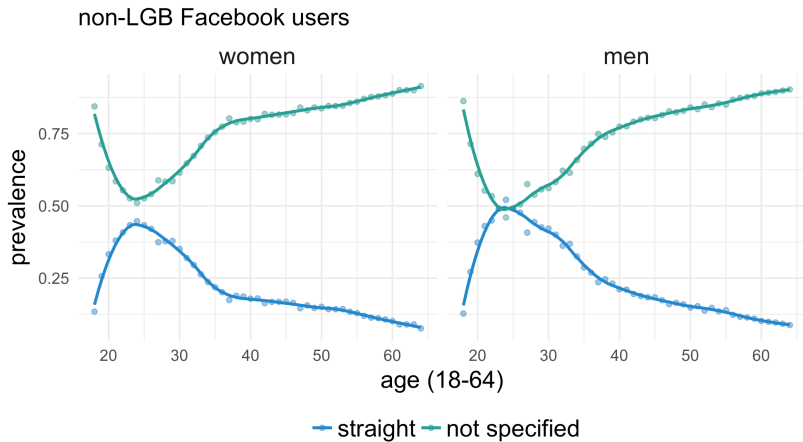
Disclosure by age



Disclosure by age



Disclosure by age



Conclusions

Particularly for younger ages,
Facebook disclosure is a good proxy for
prevalence

Points to differences in prevalence
by gender and sexual identity

Conclusions

Aggregate Facebook estimates, with their scale and granularity, are a good complement to existing data sources about sexuality

Thank you!

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CENTER FOR STUDIES IN
DEMOGRAPHY & ECOLOGY



Big Data to
Knowledge(BD2K)

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Appendix

Privacy and targeting: information settings



Your information

Close ^

About you

Your categories

Some of the ads you see are because advertisers are trying to reach people based on information they've provided on their profiles.

Manage whether we can show you ads intended to reach people based on these profile fields.



Relationship status



Employer



Job title



Education



Interested in



These settings only affect how we determine whether to show certain ads to you. They don't change which information is visible on your profile or who can see it. We may still add you to categories related to these fields (see **Your categories** above).

Privacy and targeting: inferred interests



Your interests

Close ^

Business and industry

News and entertainment

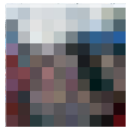
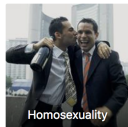
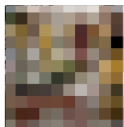
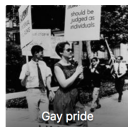
Hobbies and activities

Food and drink

Lifestyle and culture

More

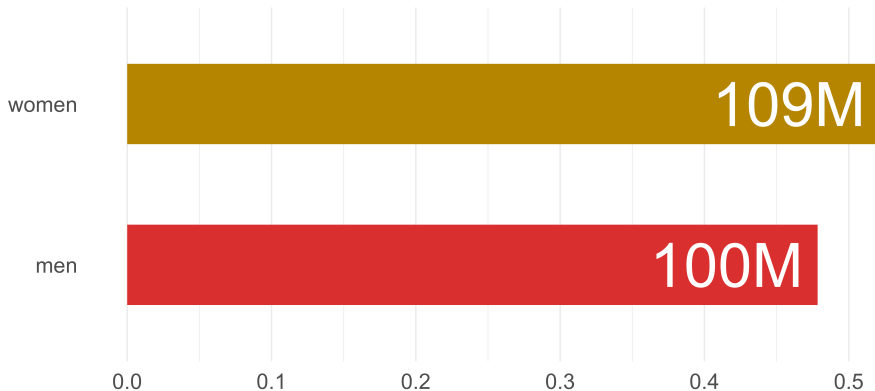
Choose an interest to preview examples of ads you might see on Facebook or remove it from your ad preferences.



See More

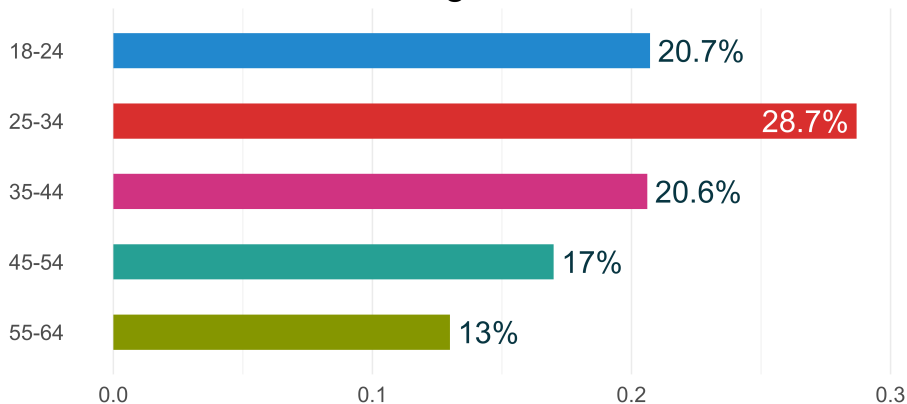
Overview of data

Gender



Overview of data

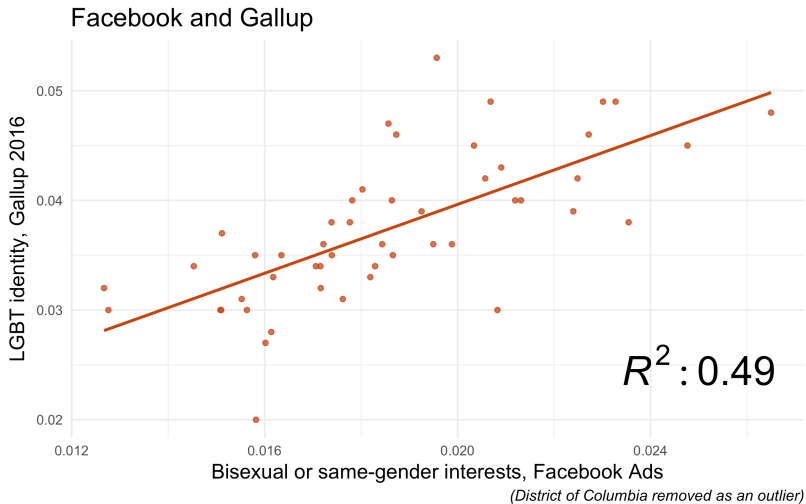
Age



How does Facebook compare to **Gallup** 2016?

(at state-level geography)

Validation



How does Facebook compare to
the **American Community Survey**?

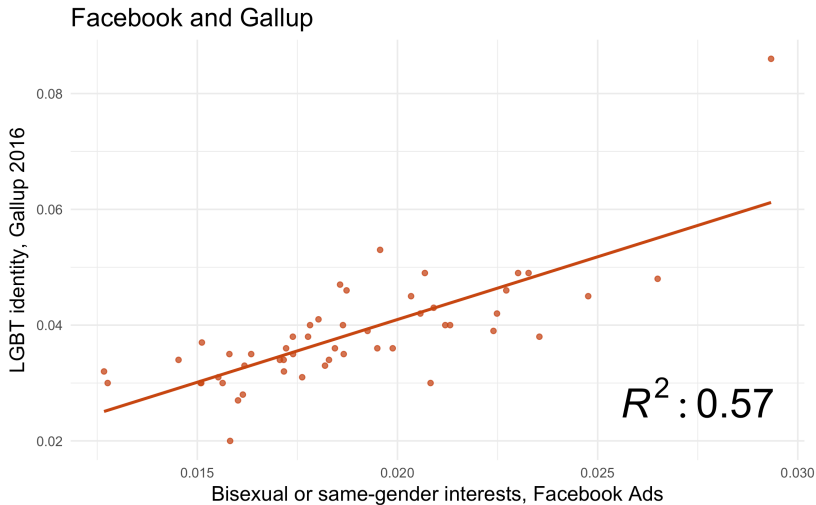
(at state-level geography)

Validation

Facebook and the American Community Survey

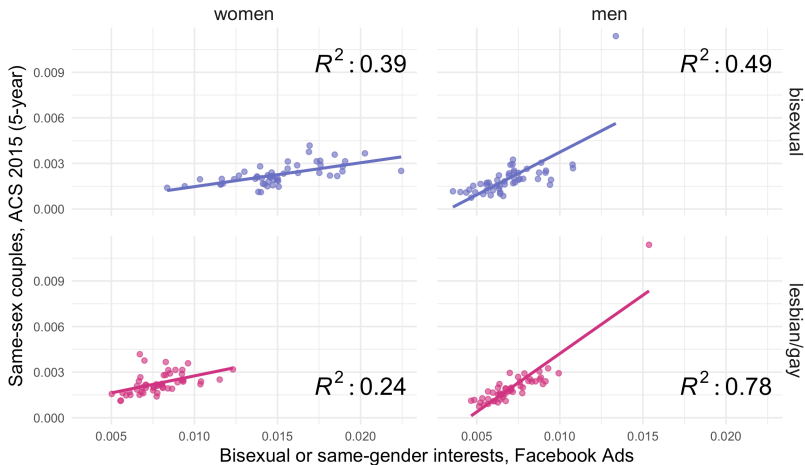


DC and Facebook estimates: Gallup

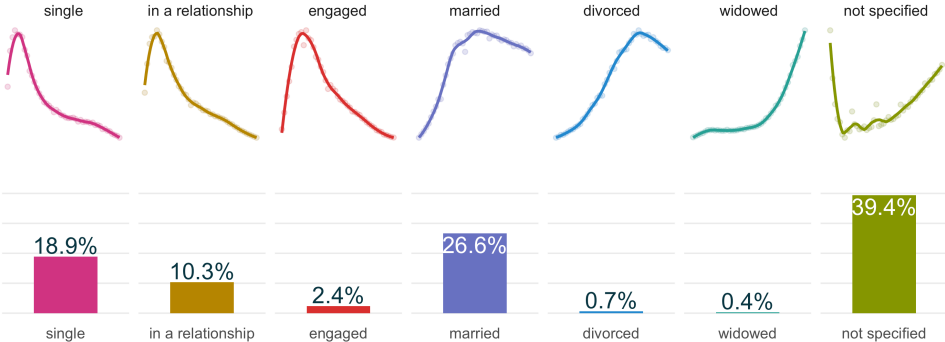


DC and Facebook estimates: ACS

Facebook and the American Community Survey



Relationship statuses



(all other categories: 1.4%)

Relationship statuses

Sexuality by relationship status

