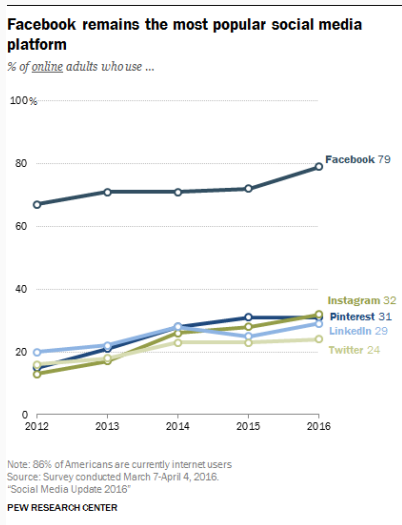Introduction:

Demographic estimates from the Facebook Marketing API

Connor Gilroy

2017-10-15

Facebook is the social network par excellence. As of 2016, **79%** of US internet users are on Facebook.

Facebook remains the most popular social media platform

% of online adults who use ...

Facebook 79
Instagram 32
Pinterest 31
LinkedIn 29
Twitter 24

Note: 86% of Americans are currently internet users
Source: Survey conducted March 7-April 4, 2016.
"Social Media Update 2016"
PEW RESEARCH CENTER

Facebook Ads are a locus of concern about discrimination, about "fake news", and so on.

Facebook, After 'Fail' Over Ads Targeting Racists, Makes Changes

By **SAPNA MAHESHWARI** and **MIKE ISAAC**   SEPT. 20, 2017

Sheryl Sandberg, Facebook's chief operating officer, said the company had never anticipated that its ad-targeting technology could be used to court users who described themselves as "Jew haters" or used other hate speech. Laurent Gillieron/Keystone, via Associated Press

RELATED COVERAGE

How Facebook Is Changing Your Internet SEPT. 17, 2017

Google and Facebook Face Criticism for Ads Targeting Racist Sentiments SEPT. 15, 2017

3

Using Facebook Ads is cutting edge:

- Emilio's paper with Ingmar Weber and Krishna Gummadi using it to study stocks of international migrants just came out this month. (paper, news)
- J. Nathan Matias and others did an audit this summer of who had access to the 'Pride' reaction. (article, GitHub)

The Ads Manager

The ability to target ads by demographics and interests is at the core of both the potential of and the concerns about Facebook Ads.

Even when large proportions of users don't provide a piece of information, you can still see clear geographic patterns.

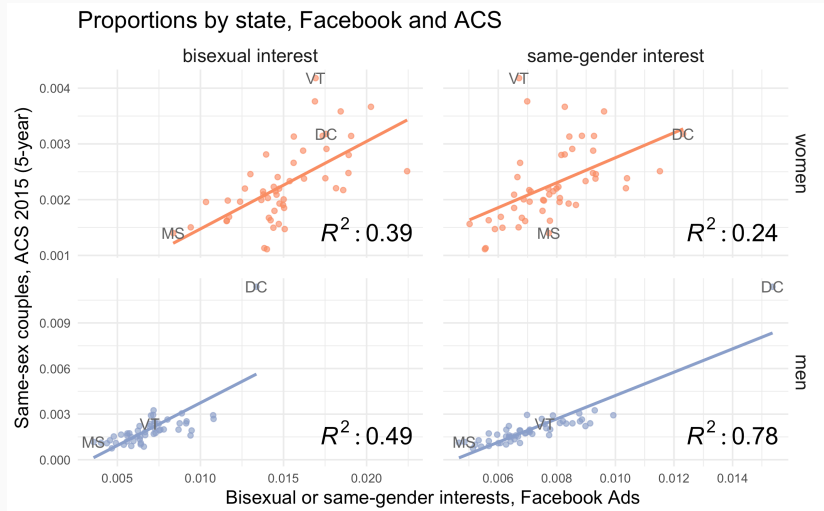Proportion of Facebook users with bisexual or same-gender interests
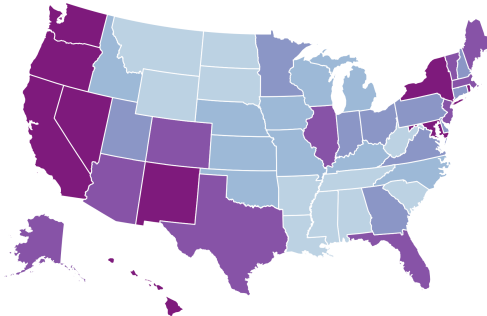
The, it is possible to compare those patterns to existing data sources, which have their own sets of biases and limitations.

Proportions by state, Facebook and ACS

Authentication:

Two components: an *access token* and an *ads account.*

Requesting information:

You specify the audience you want to reach using a *targeting spec* in a JSON format; you then get an estimate of how many users that specification will reach.

The Marketing API:

`https://developers.facebook.com/docs/marketing-apis`

Access:

`https://developers.facebook.com/docs/marketing-api/access`

Targeting:

`https://developers.facebook.com/docs/marketing-api/buying-api/targeting`

Matheus Araujo has written `pySocialWatcher`, a Python module for collecting social data from the Marketing API:

`https://github.com/maraujo/pySocialWatcher`

It relies on the `requests` package, Python's version of `httr`.

Facebook also provides a Python SDK for the Marketing API, which is an interface/abstraction to the API:

`https://github.com/facebook/facebook-python-ads-sdk`

`SocialMediaLab` and `Rfacebook` are packages that provide access to public Facebook pages and other aspects of Facebook's Graph API.

To use these, you can generate a standard OAuth access token from your app ID and app secret, much like you would do with Twitter.