

Ad Targeting and Privacy

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AD Targeting 101

Also known as “Behavioral targeting”

- the practice of using a user’s past web-browsing behavior to choose ads to display in the hopes that it will increase the effectiveness of the advertising.
- Done by nearly every ad-based online business in some way shape or form, but in particular, Google is king.

Facts relevant to privacy

- Requires data collection and storage and analysis on a large scale by the website.
- Data collection is often done in a way that is invisible to the user.
- Depending on privacy policies, collected data can be sold to advertisers in various forms.

Impact

- Considered to be the most effective way to reach target audiences for advertisers
- Sold by Google and other proponents as win-win-win for users, advertisers, and websites

Is Ad Targeting really win-win-lose?

Incentivizes large scale data collection of personal information about web-browsers

- The more personal, the more valuable.
- Competitive nature means aggressive expansion is a must

Startups – accept more risk in security practices.

Potential for ulterior motives to support business models

- Zuckerberg's Law
- Google plus/buzz

Places a lot of trust in the websites without much oversight.

Ad Targeting and Privacy: The EU

Overview

- *Privacy Regulation and Online Advertising* (Avi Goldfarb and Catherine E. Tucker, 2010)
- Presenting a statistical analysis of previously gathered historical advertising data (spanning 8 years)
- Use data to build a causal relationship between the enactment of EU privacy-enhancing legislation and the decline in advertising effectiveness.

Ad Targeting and Privacy: The EU (cont.)

Methodology

- Using a database gathered by marketing research firm on behalf of advertising clients
 - Collection of 3.3 million survey responses (9,596 campaigns with an average of 346 web users per) gathered from 2001-2008
 - 10 different countries represented, 894 campaigns being EU based, and 8,792 representing non-EU data.
 - 400 different types of products advertised on 40 different categories of websites.
- The original Experiments
 - Website visitors in the “target” group either saw “placebo” ads for non-profits (control group) or saw ads for the actual products (test group)
 - Users were then asked to fill out a 10-minute survey asking about “purchase intent” for target products.
 - Originally intended to draw conclusions about effectiveness of ads relative to not having ads

Ad Targeting and Privacy: The EU (cont.)

Statistical Analysis

- Data spans before and after EU privacy law enactment.
- Control for EU Ad apathy/sensitivity
 - Look at EU users who browse American websites.
- Control for timing of each country's laws
 - date of scheduled regulation and implementations deadlines in each country
- Control for developing countries that may not be quick to adopt new legislature.
- Concerns about unobservables:
 - Non-random campaigns (specific companies, specific ads)
 - Provide evidence that there is no significant difference between these ads and others (technology wise).
 - Respondents may not represent general population
 - Note that demographics of people seem representative of general population of internet users.

Ad Targeting and Privacy: The EU (cont.)

“Privacy and Electronic Communications Directive”, 2002

Relevant Provisions

- Web bugs can only be used when the user knows they are being used.
 - Interpreted as requiring consent in some proactive way, a very expensive endeavor.
- Cookies can be used so long as the user has “clear and precise information about purpose”
 - Interpreted as more strict than the US (privacy policy can take care of allowing cookies), but less strict than on web bugs.
- Clickstream data not explicitly restricted, but has been interpreted as potentially problematic
 - Static IP problem
 - Could inadvertently collect data regarding sensitive data (religion, medical issues, etc)
- Ambiguities mean different interpretations by different advertisers and websites.

Ad Targeting and Privacy: The EU (cont.)

Results

- Decrease in advertising effectiveness: on average 65% in Europe relative to the rest of the world.¹
- Impact was higher for “general content” websites like news, and online magazines.¹
- Effect much less on ads with multimedia components as well as large obtrusive ads.¹
- If this percentage drop-off were to hold and were to be applied to the US economy, US revenue for advertisement would fall from 8 billion dollars annually to 2.8 billion dollars (admittedly some fuzzy math here).¹

Ad Targeting and Privacy: The EU (cont.)

Analysis and implications

- Represents one important set of data on the impact of privacy law on advertising effectiveness
- Completely unclear as to whether it is indicative of a future correlation (a fact they celebrate)
- My opinion is that a number of factors that can't be represented by one study will impact this correlation
 - Conservatism in implementation by advertisers
 - Legal decisions (especially in US)
 - US user attitudes toward privacy.

Ad Targeting and Privacy: The US (cont.)

Self-regulation

- The current standard, online websites police themselves with regards to ad targeting.
- Based on principles provided by the Federal Trade Commission (FTC)
- Incentivized to do so
 - Avoid investigation by FTC/DOJ, avoid federal court for fraudulent practices.
 - Avoid stricter legislation from being passed.

Ad Targeting and Privacy: The US (cont.)

Self-Regulation – Digital Advertisers Alliance

- Alphabet soup of abbreviations, but Includes Google
- Establishes principles in ad targeting:
 - Eg. Education, transparency, data security, accountability, etc³
 - Establishes user-control principle, requiring ability for users to ‘opt-out’ of advertising.
 - Because it is centralized there are browser extensions that allow for opt-outs to work across websites.

Google internal regulations

- <http://www.google.com/intl/en/privacy/tools.html>
- Opt-out statistics from Google:
 - “Those who are opted-in see 10% fewer ads than opted-out users”
 - “Opted-in users are 40% more likely to click on ads than opted-out users”

Ad Targeting and Privacy: The US (cont.)

Opt-out: You will receive targeted ads unless you choose not to.

- Self Regulation Standard
- Defined per-website or per-ad network

Opt-in: You must explicitly agree to allow certain tracking.

- EU directive possibly implied this for “web bugs”¹
- US Legislation requires this for certain types of information sharing to 3rd parties.

Universal Opt-out: One and done opt-out. Across all websites.

- Privacy advocates are pushing for this
- Similar to the “Do Not Call” list.

Ad Targeting and Privacy: The US (cont.)

Privacy Bill of Rights Act of 2011

- Proposed by John McCain and John Kerry
- Response to FTC declaring self-regulation inadequate

Goals:

- Give FTC some regulatory power over the gathering, storage, and distribution of individual's "covered information"²
 - Covered Information includes: PII, UID, anything else collected regarding behavior.
- Strike a balance between privacy and promoting innovation

Ad Targeting and Privacy: The US (cont.)

Highlights of the bill:

- Notice and individual participation:
 - Provide clear notifications about data collection practices.
 - Notice of material changes to any data collection practices.
 - **Offer an opt-out mechanism for behavioral advertising involving third parties.**
 - **Opt-ins required for transfer of personally identifiable information to a third party (but not for other “covered information”)**
 - Exceptions for fraud prevention/detection, ISPs, security
- Security and accountability:
 - Process for handling complaints.
 - “Privacy by design”²
- Data Minimization
 - Collect only what you need – reasonableness clause.
 - Need contracts with 3rd parties
- Enforcement
 - FTC enforcement (audits, DOJ investigations)
 - Civil legal action by FTC, state attorney generals
 - Careful about limiting liabilities and pile-on legal actions.
- Safe Harbor
 - Allows companies to voluntarily join a non-governmental organization
 - Allows for centralization of resources for opt-outs

Ad Targeting and Privacy: The US (cont.)

Criticized by the ACLU and privacy groups as being too soft.

- Want universal opt-out lists

Supported by nearly all the technology companies

- Limited impact for most because of self-regulation

Technology neutral

- Politicians think this is good
- Some privacy advocates think it is weak.

Important as a first step

- Achieves its goal of establishing a framework
- Keeps it light relative to the economic interests of the country.

What does the future hold (aside from flying cars - guaranteed)?

Will Opt-outs be enough? or maybe too much?

- Unclear if current proposed legislation plus browser plugins will satisfy privacy advocates.
- Is there a “Tragedy of the Commons” effect that could destroy ad-based revenue here?

How do the trends of increased sharing and increased privacy concerns intersect?

- Seems feasible that differential privacy could solve some of these problems down the road.
- More likely a combination of legislation and innovation.

Questions?

Thank
you for
listening!

References

1: Goldfarb, Avi and Tucker, Catherine, Privacy Regulation and Online Advertising (August 4, 2010). Available at SSRN: <http://ssrn.com/abstract=1600259>

2: Commercial Privacy Bill of Rights:

[http://epic.org/privacy/consumer/Commercial Privacy Bill of Rights Text.pdf](http://epic.org/privacy/consumer/Commercial_Privacy_Bill_of_Rights_Text.pdf)

3: DAA Self-regulatory principles:

<http://www.aboutads.info/obaprinciples>