Raise the Curtains: The Effect of Awareness about Targeting on Consumers’ Attitudes and Purchase Intentions

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Targeted Advertising
Targeting happens behind the scenes
Raise The Curtains

offline sources
Current Tools For Awareness

FTC recommendation to the ad industry: Provide notice to consumers (FTC report, 2009)

Leon et al., 2012:
53% believe that more ads would pop up
45% believe the ‘AdChoices’ tagline was selling ad space
Contrasting Evidence From Literature

Awareness may increase purchase intentions
• Explanations help increase trust in recommendation systems (Herlocker et. al., 1999; Chen & Pu 2005)
• There may be a placebo effect (Cosley 2003, OkCupid, 2015)
• Targeted Ads act as social labels (Summers et. al., 2016)

Awareness may decrease purchase intentions
• Personalization can be creepy (Malheiros, 2012)
• Surveys suggest consumers do not like targeting (Turow et. al. 2009, 2012; Pew Research, 2016)
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Our Hypothesis

Opinions towards targeting

Awareness that the ad is targeted

Attitudes & Purchase intentions
Our Studies

• Study 1: Exploratory study
  – Build a scale to measure opinions about targeting
  – What are the different opinions people have towards targeting? How prevalent are each of those opinions?

• Study 2: Validation study
  – Is the scale reliable?

• Study 3: Evaluation study
  – How does awareness about targeting impact attitudes and purchase intentions towards advertised product?
  – Does this effect depend on opinions about targeting?
Study 1: Exploratory Study

• Participants recruited from Mechanical Turk
• Shown hypothetical scenarios involving targeted ads
• Asked how they would feel if they experienced this scenario (open-ended)
Re-marketed Ad Scenario

Imagine that you are looking to buy a new pair of shoes online. You look into a few different websites that sell shoes. You find a pair of shoes that you like, on a website that you’ve never visited before. You spend some time looking at this particular pair of shoes and then move on to doing something else. You haven’t decided whether or not you want to purchase this particular pair of shoes.

A few days later, you are reading an article on the New York Times website. You notice that the advertisement next to the article is for the same pair of shoes that you were looking at the other day.

You realize that your browsing history had been tracked and that it was being used to display an advertisement that has been specifically targeted to you.
Study 1: Results

• Sample size N=111
• Coding of open-ended responses
  – 2 independent coders
  – Cohen’s kappa > 0.70
How would you feel if you experienced this scenario?

Opinions about targeting

- Neutral: 37%
- Positive: 10%
- Mixed emotions: 10%
- Slightly annoyed: 53%
- Weird/Strange: 53%
- Dislike: 53%
- Angry/Upset: 53%
- Violated: 53%
# A scale to measure for opinions about targeting

<table>
<thead>
<tr>
<th>Statement</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would feel ok about this type of advertising</td>
<td>Neutral</td>
</tr>
<tr>
<td>I would feel indifferent about this type of advertising</td>
<td>Neutral</td>
</tr>
<tr>
<td>I would not be bothered by this type of advertising</td>
<td>Neutral</td>
</tr>
<tr>
<td>I would think this is clever advertising</td>
<td>Positive</td>
</tr>
<tr>
<td>I would be interested in products shown in this type of advertising</td>
<td>Positive</td>
</tr>
<tr>
<td>I would feel this type of advertising can be helpful to me</td>
<td>Positive</td>
</tr>
<tr>
<td>I would have mixed feelings (good and bad) about this type of advertising</td>
<td>Mixed</td>
</tr>
<tr>
<td>This type of advertising would make me feel worried but I can also see the benefit to me</td>
<td>Mixed</td>
</tr>
<tr>
<td>I would be annoyed by this type of advertising</td>
<td>Negative</td>
</tr>
<tr>
<td>I would feel creeped out by this type of advertising</td>
<td>Negative</td>
</tr>
<tr>
<td>I would not like this type of advertising</td>
<td>Negative</td>
</tr>
<tr>
<td>This type of advertising would make me feel like my privacy has been invaded</td>
<td>Negative</td>
</tr>
<tr>
<td>I would feel upset about this type of advertising</td>
<td>Negative</td>
</tr>
<tr>
<td>This type of advertising would make me feel violated and manipulated</td>
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Study 2: Validation Study

• Study 2a: 14-items scale
  – Consolidate scale
  – Exploratory factor analysis

• Study 2b: 6-items scale
  – Confirmatory factor analysis
  – Convergent and divergent validity
  – Test-retest reliability
## Final Scale for Opinions about Targeted Ads

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Study 3: Evaluation Study

• Phase 1:
  – Participants recruited from Mechanical Turk
  – Measured opinions about targeting using our 6-item scale

• Phase 2:
  – Same participants invited to a new study after a two weeks
  – Randomized into one of two conditions:
    • Awareness vs. No Awareness
  – Measured attitudes and purchase intentions towards product
Shopping Task

- Light bulbs
- Laundry detergent
- Notebooks
- Air purifiers
- Dish scrubbers
- Water bottles
Advertisement Evaluation Task

Awareness Condition:
Our software will customize an advertisement for you based on your responses from the shopping task you completed earlier.
Measures

• Attitudes: How much do you like this product?
• Purchase intentions: How likely are you to buy this product?
Attitudes Towards Product

- Mean Value
- p-value > 0.05
- p-value > 0.05
- p-value = 0.045

- Awareness
- No Awareness

- All Participants
- Positive and Neutral Opinions
- Negative Opinions
Purchase Intentions Towards Product

- All Participants
- Positive and Neutral Opinions
- Negative Opinions

Mean Values

- Awareness
- No Awareness

p-value > 0.10  p-value > 0.10  p-value = 0.074
Why is this important?

• Revenue from online advertising was $19.6 billion in the first quarter of 2017 (IAB Report, 2016)

• Several people have negative opinions about targeted advertising
  – Our research:
    • 53% had negative opinions (Exploratory Study)
  – Other researchers:
    • 66% do not want targeted ads (Turow et al., 2009)
    • 55% do not want targeted ads (McDonald & Cranor 2010)
Conclusion

• The self-regulated ad industry is **not incentivized** to make consumers aware about which ads are targeted to them

• Are FTC recommendations enough?

• We need regulations to help consumers make informed decisions
Thank You

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