

# When and Why Do People Want Ad Targeting Explanations? Evidence from a Four-Week, Mixed-Methods Field Study

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# Background

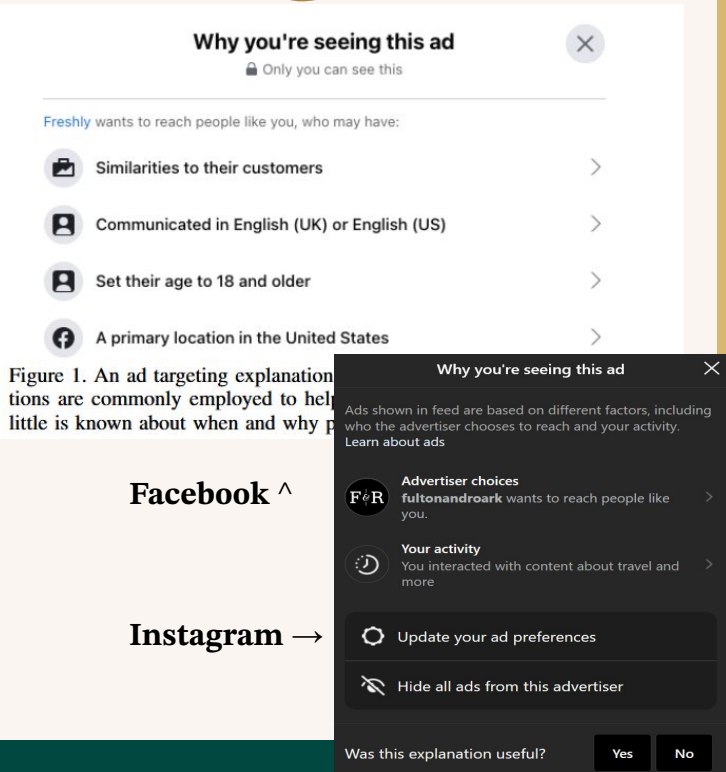


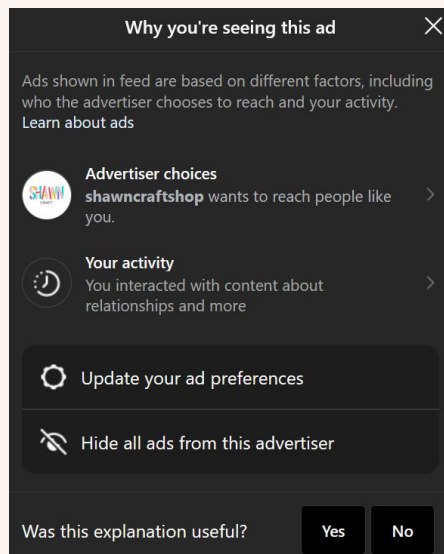
Figure 1. An ad targeting explanation interface. Little is known about when and why people use such explanations.

- Online Behavioral Advertising (OBA)
  - Target advertising based on interests
  - Supposed to benefit everyone:
    - Advertisers
    - Online Platforms
    - Platform Users
  - But the People dislike OBA because data is collected covertly without informed consent
- Some advertising platforms (Facebook, Google, Twitter, etc.) provide explanations for their ads
  - As seen on left
  - People find current explanations are:
    - Stealthy (not aware of their existence)
    - Insufficient
    - Creepy, worrying

Are modern explanations enough to alleviate OBA hatred?

If not, how can they be better?

# Introduction



- Previous work finds that:
  - OBA public perception depends on context in which it is used
    - While reading the news > while medical treatment searching
  - Most users don't want targeted advertising as it is
    - OBA = having someone looking over your shoulder
  - High desire for greater transparency → would boost people's views of OBA
    - Users prefer interpretable and clear explanations

This paper aims to answer two different key questions:

1. When do people want ad targeting explanations?
  - a. Too many explanations leads to an alert-fatigue-like effect
2. Why do people want ad targeting explanations?
  - a. Improve quality of explanations

→ When and why are people curious about the ads they get?

# Techniques, Methodology

## Ad Questionnaire

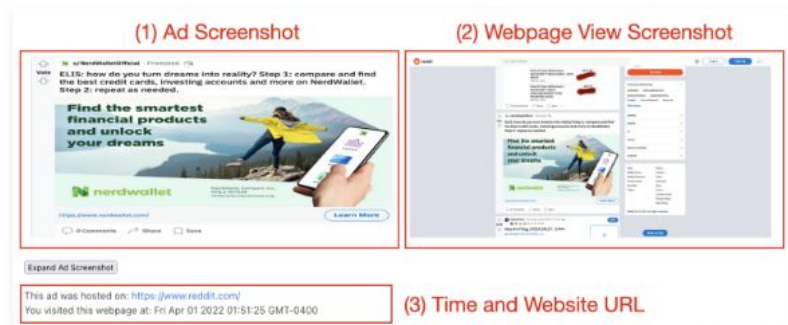


Figure 2. Screenshot of an ESM prompt for a sampled online ad and its associated webpage view.

1. When do people want ad targeting explanations?
  - a. Experience Sampling Method (ESM)
  - b. 4 week field study of 60 participants
  - c. Browser extension to keep track of ads
  - d. Daily surveys:
    - i. Asking questions like:
      1. Feeling about ad?
      2. Do they want an explanation?
    - ii. Skipped surveys for ads participants did not remember
    - iii. Within 2 hours of seeing ad
2. Why do people want ad targeting explanations?
  - a. 60-minute exit interviews with 36 of the 60 participants
  - b. Expand on reasons why they did or did not want explanations for certain ads

# Evaluation

TABLE 1. NON-STANDARDIZED COEFFICIENTS OF THE MIXED-EFFECTS LOGISTIC REGRESSIONS MODELING DESIRE FOR AD TARGETING EXPLANATIONS AGAINST CONTEXTUAL, PERCEPTUAL, USER-LEVEL, AND COMBINED FACTORS. SUBJECTIVE PERCEPTIONS WERE THE MOST PREDICTIVE OF PARTICIPANTS' DESIRE FOR EXPLANATIONS.

Model	M (SD) / Distribution	Context	User	Perception	Combined
(Pseudo) r square/conditional r square		0.56	0.49	0.69	0.72
Intercept		-1.26	-1.13***	0.28	-0.02
<b>Contextual Factors</b>					
Ad Topic					
Apparel	8.57%	0 r			0 r
B2B Products	8.52%	0.71***			0.86**
Cell & Internet Service	2.33%	-0.83*			-0.41
Dating	0.19%	2.53**			1.54
Finance & Investment Purch	4.33%	0.71**			0.54
Household Products	4.89%	0.28			0.59*
Humanitarian	1.11%	0.99*			0.90
Med Services & Rx	1.48%	1.27***			0.63
Miscellaneous	1.76%	1.06**			0.40
Public Relations	0.45%	1.36*			1.61*
Youtube Merch	2.35%	-1.10*			-0.31
Browsing Activity					
Pure Browsing	67.80%	0 r			0 r
Communications	5.76%	0.09			-0.06
Fact Finding	15.10%	-0.31*			-0.22
Information Gathering	8.12%	-0.48**			-0.25
Maintaining Systems	0.40%	0.57			0.58
Transactions	2.82%	-0.57			-0.10
Location					
Home	87.93%	0 r			0 r
Public	1.51%	0.33			-0.24
Work	0.46%	0.23			0.07
Time (hour)	13.20 (5.13)	-0.03			-0.01
Is Weekend	25.05%	0.004			0.07
<b>User Factors</b>					
Extraversion	5.85 (2.14)	0.07			0.01
Agreeableness	6.84 (1.66)	-0.22			-0.21
Conscientiousness	8.23 (1.75)	0.37			0.48
Neuroticism	5.88 (2.41)	0.38			0.25
Openness	7.33 (1.76)	0.33			0.05
UI/UC	16.56 (7.69)	-0.53*			-0.42
SciBIS	58.47 (7.79)	-0.16			0.06
<b>Perceptual Factors</b>					
Valence	3.05 (0.74)			0.38***	0.39***
Arousal	2.09 (1.06)			0.31***	0.33***
Dominance	2.79 (0.94)			0.09	0.08
Unexpectedness	2.15 (1.30)			1.20***	1.20***
Creepiness	1.62 (0.95)			0.43***	0.44***
Perceived Ad Targeting					
Browsing Info.	67.70%			0.05	0.11
Demographic Info.	37.80%			0.39***	0.43**
Location Info.	40.34%			0.12	0.17
Personal ID Info.	16.16%			0.06	0.06
Computer Info.	19.90%			-0.32	-0.27
Unwillingness to Share	40.32%			-0.20	-0.26

Significance: \* p<.05; \*\* p<.01; \*\*\* p<.001; r: reference

- Users wanted explanations for ~30% of ~4,200 total ads
- Users want to see ads to:
  - Confirm/reinforce their understanding on how their information is collected and shared
  - Learn advertiser motives
  - Reassure themselves after emotional reactions to specific ad content
  - Understand seemingly inaccurate ads
  - Understand intriguing ad patterns they noticed
- Users wanted ad explanations when:
  - The ad was unexpected/inaccurate
  - The ad was offensive
  - The ad was creepy regarding how it could know what it knows
  - They noticed patterns between multiple ads

# Evaluation

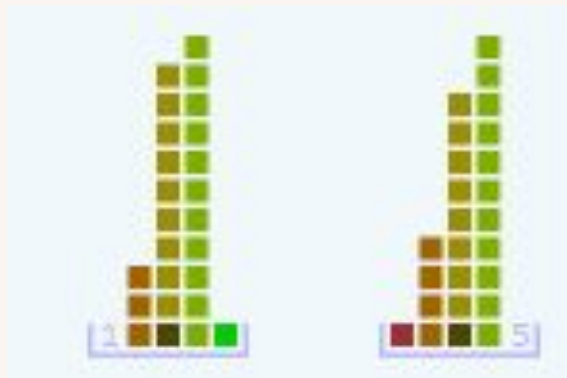
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- Users did not want to see ads when:
  - They knew why they got the ad
  - They are familiar with the ad pattern/trend that they receive
  - They were indifferent towards the specific ad
  - *They felt powerless to make a change*
- Conclude that one-size-fits-all approaches for ad targeting explanations are not going to fly with users
  - Reasons for wanting to see ads are too strongly subjective and not easily measurable
- Suggest:
  - Clearer data flow and source in explanations
  - Advertiser motivations included
  - User data collection controls

# Feedback

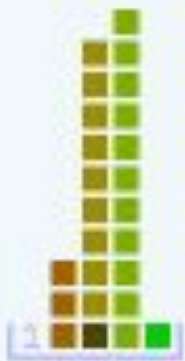


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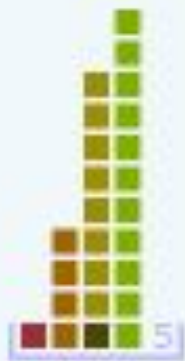
**Paper Interest**

- The paper concluding that “one-size-fits-all” is bad is somewhat obvious and not actionable
- People liked the combination of qualitative and quantitative analysis
- Could improve upon concrete design implications for future ad transparency explanations
- People of course mentioned getting more data (more participants, more browsers)
  - Someone actually proposed less questions as they could have been overwhelming

## Ad Targeting

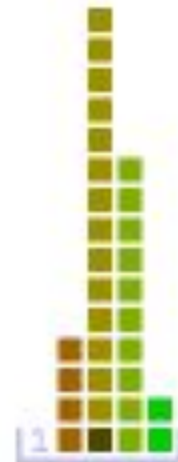


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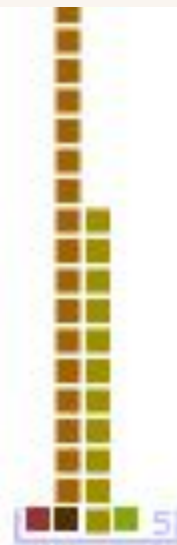


Paper Interest

## Collaborative Ad Transparency



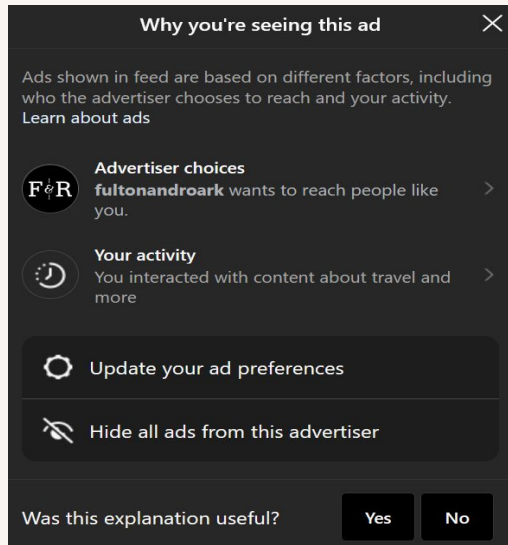
Paper Quality



Paper Interest



# discuss now.



- Are there really any design takeaways for future ad transparency explanations that we can get from this paper?
- How do you feel about the way current ad explanations are? Do you even notice them?
- Would people who give consent to have their advertisement data collected for a study biased, as they might be users who care less about privacy?
- Any other thoughts on ad transparency explanations? Is this even an important research direction?