Cross-Country Examination of People's Experience with Targeted Advertising on Social Media

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ABSTRACT

Social media effectively connects businesses with diverse audiences. However, research related to targeted advertising and social media is rarely done beyond Western contexts. Through an online survey with 412 participants in the United States and three South Asian countries (Bangladesh, India, and Pakistan), we found significant differences in participants' ad preferences, perceptions, and coping behaviors that correlate with individuals' country of origin, culture, religion, and other demographic factors. For instance, Indian and Pakistani participants preferred video ads to those in the US. Participants relying on themselves (horizontal individualism) also expressed more concerns about the security and privacy issues of targeted ads. Muslim participants were more likely to hide ads as a coping strategy than other religious groups. Our findings highlight that people's experiences with targeted advertising are rooted in their national, cultural, and religious backgrounds—an important lesson for the design of ad explanations and settings, user education, and platform governance.

CCS CONCEPTS

• **Security and privacy** → **Usability in security and privacy**.

KEYWORDS

Targeted Advertisement, Privacy, South Asia

1 INTRODUCTION

Social media platforms serve as one of the most effective channels for advertisers to reach audiences through targeted advertisements. With the global social media advertising market projected to reach $358 billion by 2026 [55], the user base on these platforms is continually expanding and diversifying. For instance, India has the second largest number of social media users in the world, exceeding the US, which currently ranks third [14]. In an online survey with 412 participants, we explored the experiences, attitudes, and behavior related to targeted ads on social media platforms in the US and three South Asian countries—India, Bangladesh, and Pakistan.[1] We selected the three South Asian countries because of their large social media user base and lack of representation in existing usable privacy and security research [25]. As prior work on these regions is mostly small-scale and qualitative [41, 48, 61], we fill the gap by conducting a larger-scale, cross-country study that allows replications of qualitative insights, quantitative comparisons between countries, as well as correlation analyses to identify factors that shape people's ad experiences. Informed by prior work on the influence of cultural dimensions [19, 46], religion [1, 41], and demographics [8, 12] on people's privacy considerations about targeted advertising [51, 64], we focus on these factors as possible explanations of cross-country variances. In doing so, we examine three main research questions:

RQ1 *Which types of ads do participants encounter on social media, and which types do they prefer?*

Participants most often encountered video ads (67%), followed by influencer ads (41%), text ads (38%), and soft-targeted ads (35%). Participants' preferences between these ad formats differed significantly by country, cultural dimensions, religion, and demographic factors such as age and technical background. For instance, participants from India and Pakistan showed a stronger preference for video ads compared to the US.

RQ2 *What are participants' perceived benefits and concerns related to ads on social media?*

Most participants saw the benefits of ads being relevant to their interests, helping them find new products, and supporting small

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[1] South Asia refers to the sub-Himalayan region of eight countries, including India, Pakistan, and Bangladesh [48].

businesses. Concerns related to security and privacy issues (e.g., fraudulent advertising and advertisers selling data to third parties) were more prominent than those related to ad quality and targeting of sensitive attributes.

RQ3 *How do participants manage the ads they encounter on social media?*

Most participants reported ignoring or scrolling past the ads, followed by hiding ads and turning off notifications on ad posts and comments. A consistent pattern across various ad management behaviors is that the more confident participants felt, the more likely they were to adopt the behavior. Additionally, differences across countries, cultural dimensions, religions, and other demographic factors were observed for some but not all behaviors. For instance, participants in Bangladesh reported hiding ads much more often than those in India. Participants in high vertical collectivist cultures and Muslim participants were also more likely to hide ads.

Our research contributes novel findings drawn from the underrepresented South Asian populations, showing that their ad experiences indeed differ from those of US participants in certain ways, but not always. Our research also contributes valuable lessons learned for future cross-country, cross-cultural studies, as we highlight religion as a possible underlying factor of cross-country variances and the necessity of differentiating individual versus country-level instruments for measuring cultural dimensions. Social media platforms could improve their users' ad-related experiences by providing the features they desire and boosting their confidence in self-protection.

2 RELATED WORK

2.1 User Perceptions and Attitudes

Prior work has documented user perceptions of targeted advertising as a double-edged sword [39, 59, 60]. Users might appreciate the relevance of the resulting content [38], like how ads help them discover new brands and support small businesses [51], or show empathy toward targeted advertising as a necessary business model [39]. Nevertheless, prior research has shown rich evidence of users' dislike of (targeted) advertising due to privacy concerns and perceptions of the ad ecosystem being creepy and invasive [17, 39, 59, 60, 65], especially when the targeting happens out of context or when companies infer sensitive attributes such as health and financial status [47]. Users' willingness to share information with advertisers is highly contextual [5, 9], shaped by factors such as data retention time, who has access to collected data, and scope of use [34]. Concerns also originate from discrimination and biases in ad targeting practices [44, 57], and material harms caused by advertising such as scams and malware [36, 51, 56]. Other work has investigated user perceptions of problematic online advertising or "bad ads" such as ads that are click-baiting, distasteful, pushy, or manipulative [67]. We draw from prior work such as [3, 51, 67] to measure a comprehensive coverage of perceived benefits and concerns in our survey, while also correlating such perceptions with individuals' own country of origin, cultural backgrounds, and religion.

2.2 Existing Mechanisms

Platforms commonly provide users with ad-related settings and controls so that users can configure which data to use for advertising purposes and the ads they see [23]. In addition, there are opt-out tools initiated by self-regulatory groups [13, 42] as well as ad blockers and anti-tracking tools available as browser extensions. A plethora of existing research, however, has established that these settings and controls are far from being usable and useful [20, 21, 37, 45, 50, 60]. Users struggle to find ad controls and doubt whether platforms actually honor their preferences expressed via ad controls [21, 22]. Recent efforts of improving ad controls include designing icons that convey their presence while minimizing users' misconceptions [24], making the entry point easier to find [30], and having more actionable interfaces [30]. Drawing on prior work [51], we aim to evaluate how users from diverse cultural backgrounds use ad settings, how confident they are in doing so, and what features they desire.

2.3 Demographic Differences

Discrimination and marginalization. Algorithmic discrimination in targeted advertising has attracted increasing attention [4, 31, 44, 54, 62]. Prior work has established examples of gender discrimination (e.g., ads that promote certain high-paying jobs significantly more to men than women) [12], racial discrimination (e.g., ads suggestive of arrest records appearing more often with searches of black-sounding names) [57], and ads targeting sensitive topics like health and religion despite regulations that ban such practices [8]. Users find ad discrimination problematic, especially when discrimination occurs based on explicit demographic targeting rather than online behavior [44]. There are also demographic disparities in exposure to harmful ad content. For instance, older adults and racial minorities in the US have been found to encounter problematic ads on Facebook more often than other groups [3].

Culture and religion. Culture refers to shared meanings, ideas, and values across community members [32]. One of the most cited cross-cultural studies is Hofstede's work, which categorized culture at the country level across four dimensions: power distance, uncertainty avoidance, individualism, and collectivism [26, 27]. Applying Hofstede's scale, prior research has found that people in countries with high scores of individualism and uncertainty avoidance have higher privacy concerns [35, 63]. Recent privacy research has also attempted to measure culture at the individual level [58] to capture nuanced social dynamics and acknowledge cultural diversity within a country [19]. Related to culture, religion has also been explored in privacy research, e.g., how privacy in Islam is tied to modesty and family honor beyond self [18], thus shaping Muslim women's online self-representation [1, 2, 33]. Culture, religion, familial structure, and demographic factors such as gender could also impact users' perceptions, management, and control of personal privacy and access to privacy-related knowledge [41]. However, there is limited prior work that quantifies cultural and religious differences in people's experiences with targeted ads on social media platforms.

3 METHODOLOGY

We conducted an online survey study with 412 participants to examine people's experiences with targeted ads on social media platforms

in these four countries. Table 1 in the Appendix shows the breakdown of participant demographics. Building on prior qualitative work on similar topics [51], a survey allows us to quantitatively draw comparisons at country, culture, and religion levels. The study was approved by the UIUC Institutional Review Board (IRB).

Survey Flow. We explained to participants the purpose of our study at the beginning of the survey, and we received their consent before proceeding. We also asked participants screening questions about social media usage, country of residence, and a commitment attention check question [16]. Participants who passed all screening questions would then be taken to the rest of the survey, starting with multiple choice and Likert-type questions about ad formats [51] (RQ1). Participants then chose the benefits [51] and concerns [67] they associated with targeted ads (RQ2). Next, we asked participants about various ad settings and management strategies users engage with, drawing from prior work [22, 51] (RQ3). We also collected participants' religion, cultural values, and demographics as important background variables for analyzing their ad experiences. The full questionnaire can be accessed online.[2]

Recruitment and data collection. We decided to partner with Qualtrics, a reputable panel provider also used in prior work [10, 49], for our recruitment. We targeted our survey to individuals 18 years or older whose country of origin and current residence is one of the following: Bangladesh, India, Pakistan, and the United States. To ensure sample diversity, we also implemented age and gender quotas for each country in line with the respective census data [11]. Participants were compensated the amount they agreed upon with Qualtrics before entering the survey. Qualtrics did not disclose the compensation amount to us. The median time taken to complete the survey was around 10 minutes. In total, we obtained 412 complete and high-quality responses across all countries (Bangladesh: 103; India: 105; Pakistan: 103; US: 101), after Qualtrics performed data cleaning and validation for us.

Data Analysis. We first calculated descriptive statistics for participants' responses to the three research questions. Next, to identify the role of country, religion, culture, and demographics, we used *regression* as our primary analysis method. For RQ1, We used linear mixed-effect regressions to account for the repeated measures of preference scores for various ad formats as a result of our data structure, also including a random intercept to account for random effects from individual participants. We also conducted Tukey's Honest Significant Difference (HSD) post-hoc test on the interactions between ad types and country/religion ($score = adtype : country + (1|Pcode)$ and $score = type : religion + (1|Pcode)$), which is a more efficient way of conducting multiple comparisons for mixed-effect regression models rather than switching the baseline multiple times. For RQ2, we conducted linear regressions, with the dependent variable being an aggregated mean score for perceived benefits and concerns respectively. For RQ3, we conducted logistic regressions for each type of behavior, with adoption (yes or no) as a binary dependent variable. We also conducted confirmatory factor analysis (CFA) to assess how well the individual item performs within each cultural dimension. The model fit indices for the cultural dimensions model are $RMSEA$=0.041 (with a 90% CI of [0.031, 0.050]), CFI=0.96,

TLI=0.96, suggesting a good model fit [28]. For the benefits and concerns, model fit indices are: RMSEA = 0.08 (with a 90% CI of [0.080, 0.095]), CFI = 0.89, TLI = 0.88, suggesting a reasonable model fit [28]. Regression tables can be accessed online [3]

4 RESULTS

4.1 RQ1: Experiences and Preferences Regarding Ad Formats

Overall, participants encountered video ads most (67%), followed by influencer ads (41%), text ads (38%), and soft-targeted ads (35%). We measured participants' preferences for various ad formats on a 5-point scale. Figure 1 in the Appendix presents ad format preferences in a box plot. Regression results further show significant correlations between participants' ad format preferences (p<.05) and the following independent variables: country, religion, four cultural dimensions (vertical collectivism, vertical individualism, horizontal collectivism, and uncertainty avoidance), age, and tech background.

South Asian participants preferred various ad formats. For video ads, we found that compared to the US, participants in India (β=0.89, p<.001) and Pakistan (β=0.66, p=.006) demonstrated a statistically significant stronger preference. Within the South Asian countries, Indian participants significantly preferred video ads over those in Bangladesh (β=0.62, p=.01). For influencer ads, participants in all three South Asian countries demonstrated a stronger preference (Bangladesh: β=0.65, p=.006; India: β=0.89, p<.001; Pakistan: β=0.73, p=.001) compared to US participants. Within the South Asian countries, no statistically significant difference in preference for influencer ad format was found. For text ads, we found little cross-country differences, with the exception that Indian participants showed significantly higher preference (β=0.67, p=.004) than US participants. For soft-targeted ads, we did not find any statistically significant difference in preference among the four countries. Interestingly, US participants ranked all four ad formats consistently lower, which could reflect their general fatigue and aversion towards ads in an already saturated market [63].

Four out of five cultural dimensions significantly influence ad format preferences. Participants' ad format preferences are significantly correlated to four out of five dimensions: vertical collectivism (β=0.229, p<.001), horizontal collectivism (β=0.175, p=.02), vertical individualism (β=0.131, p=.03), and uncertainty avoidance (β=0.203, p=.03). Participants who gave higher preference scores for various ad formats tended to align with cultural values of vertical collectivist (valuing compliance with authorities), horizontal collectivist (emphasizing sociability and interdependence), and uncertainty avoidance (preferring rules and structured circumstances) [52]. Notably, participants identifying with vertical individualist cultures — with a focus on improving their status or standing out [52] — also exhibit high ad preference scores.

Religion-based differences in ad preferences. Our analysis identified a significant correlation between religion and people's preferences for different ad formats. For instance, participants adhering to Hinduism displayed a statistically significant preference for video

ads compared to minority religious groups in South Asia such as Jains, Buddhists, and Sikhs (mean diff=1.18, $p<.001$) and atheists (mean diff=1.04, $p<.001$). Similarly, for influencer ads, we observed Hindus (mean diff=0.88, $p<.001$) and Muslims (mean diff=0.52, $p=.04$) showed a stronger preference compared to other minority religious groups.

Variances related to age and tech background. Lastly, participants' age and technical background also significantly correlated with their ad preferences. Middle-aged participants (25-44) gave significantly higher preference scores across all ad types ($\beta=0.33$, $p<.001$) compared to younger participants (18-24). Additionally, people without a technical background gave lower preference scores for all ad formats ($\beta=-0.22$, $p=.002$) compared to those with a technical background.

4.2 RQ2: Perceived Benefits and Concerns

4.2.1 Benefits. We asked participants about the perceived benefits and concerns regarding targeted ads on social media platforms on a 5-point scale. Examples of benefits include ads helping to explore new products, getting discounts, or being convenient. Figure 2 in the Appendix shows participants' ratings for various benefits. Regression results indicate a significant correlation ($p<.05$) between participants' perceived benefits of targeted ads and the following independent variables: country, religion, three cultural dimensions (vertical collectivism, horizontal collectivism, and uncertainty avoidance), technical experience, gender, and age.

Indian participants found ads most beneficial. They perceived significantly more benefits than their US counterparts ($\beta=-0.31$, $p=.02$); similar trends were also observed for Pakistan and Bangladesh, although the difference was not significant. Participants who perceived more benefits tended to identify with cultures of vertical collectivism ($\beta=0.22$, $p<.001$), horizontal collectivism ($\beta=0.21$, $p=.003$), and uncertainty avoidance ($\beta=0.18$, $p=.04$). Christian participants found ads less beneficial compared to Hindus and Muslims ($\beta=-0.297$, $p=.034$). We also observed gender, age, and tech background differences. Compared to women, men ($\beta=-0.21$, $p=.03$) found ads less beneficial. Those who lacked technical expertise ($\beta=-0.23$, $p=.03$) and people in the age group 65 and above ($\beta=-0.35$, $p=.03$) also found ads less beneficial than others.

4.2.2 Concerns. We measured participants' concerns related to targeted advertising along three categories informed by prior work [67]: ad quality, security and privacy, and ad targeting practices and resulting discrimination. Overall, participants were most concerned about the security and privacy issues around ads, followed by ads targeting personal attributes and, lastly, the quality of ads. Within ad quality, participants were most concerned about clickbait ads (mean: 3.47, sd: 1.25), i.e., ads designed to grab attention through sensationalist headlines or cheap gimmicks [67]. Privacy and security concerns consistently received a "somewhat agree" rating across all five items of the scale. Fraudulent advertising received the highest rating (mean: 3.64, sd: 1.25). For ads targeting personal attributes, participants were most concerned about Finance-related ads, such as credit cards, loans, and mortgage financing (mean: 3.74, sd: 1.09) Among the three regression models corresponding to each category of concerns, none of them had a good model fit, and none

of the independent variables showed a significant correlation with the dependent variable.

4.3 RQ3: Ad Management Behaviors

When interacting with ads on social media platforms, people employ various behaviors to manage ads. We asked participants about eight behaviors informed by [51]. In terms of the more popular behaviors, participants reported they would simply scroll past ads (48%); some also reported using the "hide ad" feature (41%) and turning off notifications of new posts or comments if they were from advertisers (36%). On the contrary, participants rarely explored settings that allowed them to adjust their ad preferences, 16% of all participants never engaged in any behaviors (more details in Figure 3 in Appendix). Participants also rated their confidence in using these ad management behaviors, as shown in Figure 4.

Logistic regression models for individual ad management behaviors show that higher self-reported confidence is significantly correlated with the adoption, a pattern that applies across all behaviors. Furthermore, significant cross-country and cultural differences were found for "hide ad" and "unfollow ads pages" — two out of the eight behaviors we measured. Bangladeshi (OR=4.21, $p<.001$) participants tended to hide ads, and Indian participants were more likely to unfollow ads page (OR=0.48, $p=.037$). Participants more closely aligned with vertical collectivism were less likely to hide ads (OR=0.63, $p<.001$), and participants more closely aligned with uncertainty avoidance (OR=0.58, $p=.01$) were less likely to unfollow ad pages. In terms of religion-level differences, Muslim participants were significantly more likely to hide ads (OR=4.06, $p<.001$).

Demographic differences were also found for various ad management behaviors. For example, participants in the 45-64 age group were less likely to unfollow ad pages (OR=0.41, $p=.038$) and turn off notifications (OR=0.37, $p=.013$). Participants in the 65+ age group were more likely to use ad settings (OR=2.25, $p=.059$). Men were less likely to unfollow ad pages than women (OR=0.50, $p=.009$). Participants with higher incomes were more likely to turn off locations when using social media apps (OR=2.10, $p=.056$) and speed up video ads (OR=2.56, $p<.001$). Participants without technical background were less likely to speed up video ads (OR=0.43, $p=.003$).

Lastly, we also asked participants about the features they desired and if they could design a magic tool to manage ads on social media platforms. 61% of all participants preferred a feature that allowed them to filter ads based on preference; 59% desired a blue tick mark for ads verified by the platform; 46% expected ads to appear at a specific user-selected time; 42% preferred ads to be displayed in a separate window within the social media app; 41% preferred to see ads exhibited following a ranking system, using metrics such as positive reviews.

5 DISCUSSION

5.1 Reflections on Country, Religion, and Cultural Variances

The main takeaway from our findings is that participants' preferences, attitudes, and behaviors related to targeted ads were significantly correlated with their country, religion, and cultural dimensions most of the time. We next unpack each factor and discuss lessons learned.

Cross-country differences exist, but not always. The United States remains the largest social media ad market globally, with over $200 bn in ad spending in 2023 [55]; in comparison, the ad markets in India ($4.8 bn), Bangladesh ($0.5 bn), and Pakistan ($0.3 bn) are smaller but fast-growing [29]. However, in our study, US participants demonstrated a general aversion to all ad formats, potentially due to saturation in the US social media advertising market [7]. In contrast, Indian participants were more receptive to or even in favor of all ad formats. US and Indian participants also contrasted in attitudes toward targeted ads, with Indian participants perceiving significantly greater benefits than US participants. For ad management strategies, *hide ad* was the only behavior with significant cross-country differences, with the highest adoption rate in Bangladesh, followed by Pakistan, India, and the US. These findings suggest that cross-country differences do exist in people's interactions with targeted ads on social media, and country-specific inquiries are necessary to elicit insights specific to the cultural and local context. Nonetheless, building on prior work on privacy personas [6, 15, 53], which shows how users act in different ways for privacy self-protections, our findings add more nuances by highlighting some common grounds and homogeneous patterns in users' behavioral aspects when coping with targeted advertising.

The role of religion. Throughout our findings, we observed high correlations between one's country and religion. The majority of our Indian participants reported practicing Hinduism, participants in Pakistan and Bangladesh were most often Muslims, and US participants mostly practiced Christianity. Participants practicing Hinduism preferred video ads more than other religious groups. Hindus and Muslims preferred influencer ads more than Christians. Christians found ads less beneficial compared to Hindus and Muslims, and Muslims preferred to hide ads more than other groups. The patterns of religion-based differences align with the country-related findings when we take the distribution of different religions in the respective country into account. These religious variations may be tied to the implicit role of religion in shaping societal norms [43], as religious values impact people's everyday lives, including seemingly mundane activities such as interacting with ads and managing them.

Nuances in culture dimensions. Participants' ad experiences were also significantly correlated with the cultural dimensions we measured. Participants' ad preference was significantly correlated with four out of five dimensions: vertical collectivism, horizontal collectivism, vertical individualism, and uncertainty avoidance. Vertical collectivism was also significantly correlated with several constructs for RQ2 and RQ3, such as perceived benefits, perceived concerns related to ad targeting practices, and the behavior of hiding ads. For other dimensions, horizontal individualism impacted participants' concerns related to security and privacy issues. Participants with high uncertainty avoidance were less likely to unfollow ad pages; a possible explanation from prior work [40] is that individuals aligning with uncertainty avoidance prefer advertisements with more information cues. Our findings also validate the recommendation by Anarky et al. [19], that the granularity of instruments that measure culture indeed has an effect on privacy-related constructs. Future research should keep this in mind when developing cross-cultural arguments in cross-country studies.

5.2 Implications

Desired features for managing ads. The most desired feature by our participants is a filter for irrelevant or repetitive ads. Major platforms have offered similar ad controls, such as Facebook's Ads Preferences page and Google's Ad Center — both including options for users to customize ad topics. However, these pre-existing features are riddled with discoverability and usability issues [20, 22]. Our findings corroborated this by showing that only 14% participants reported using the Ads Preferences/Ad Center feature. Additionally, more than half of participants (59%) wanted a blue verification tick mark as a visual cue for safe ads, in line with our finding that fraudulent ads were one of our participants' top concerns.

One-size-fits-all versus customized approaches. Prior privacy research has advocated for moving beyond the "one size fits all" approach and considering individual differences in concerns, preferences, and behaviors [66]. Our findings partially support the argument: while our participants differed in many of the constructs we measured, such as preference for ad formats and perceived benefits, other constructs did not yield significant individual differences—for example, there were little to no significant differences in terms of concerns about targeted ads between individual participants. A targeted approach that takes all possible individual differences into account is likely to be unrealistic and unsustainable. Our findings suggest a middle ground between one-size-fits-all versus full customization based on individual traits as platforms work to provide settings/controls, educate users, and implement policies. In doing so, it is important to identify any homogeneous patterns across users and evaluate the longitudinal effects of different governance approaches.

6 CONCLUSION

We surveyed 412 participants from the US and three South Asian countries: India, Bangladesh, and Pakistan to explore people's preferences for various ad formats (RQ1), perceived benefits and concerns of targeted ads (RQ2), and strategies used to manage them on social media platforms (RQ3). We found significant differences in participants' ad preferences, perceptions, and coping behaviors that correlate with individuals' country of origin, cultural dimensions, religion, and other demographic factors. For instance, Indian participants were most receptive to targeted ads. However, US participants generally showed aversion to all ad formats. We provide insights for future cross-country studies to consider factors such as cultural dimensions and religion, and we outline recommendations for social media platforms to enhance users' ad experiences, accounting for individual and country-level differences.
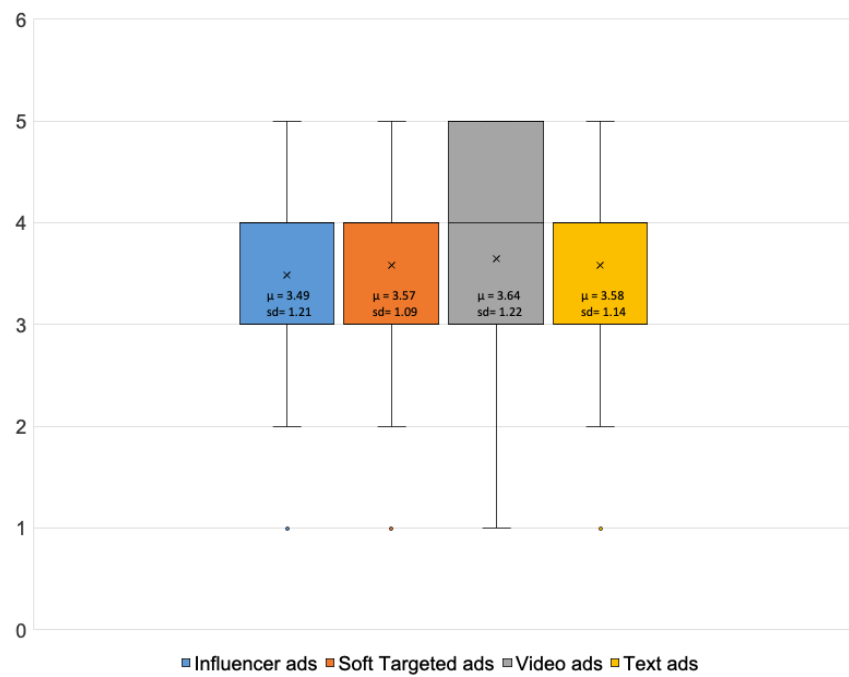
ACKNOWLEDGMENTS

A APPENDIX

Figure 1: Question: "How much do you prefer each type of ad format?" – 1: strongly dislike; 2: somewhat dislike; 3: neutral; 4: somewhat like; 5: strongly like. Video advertisements were most preferred, followed by text ads, soft targeted ads, and influencer ads.
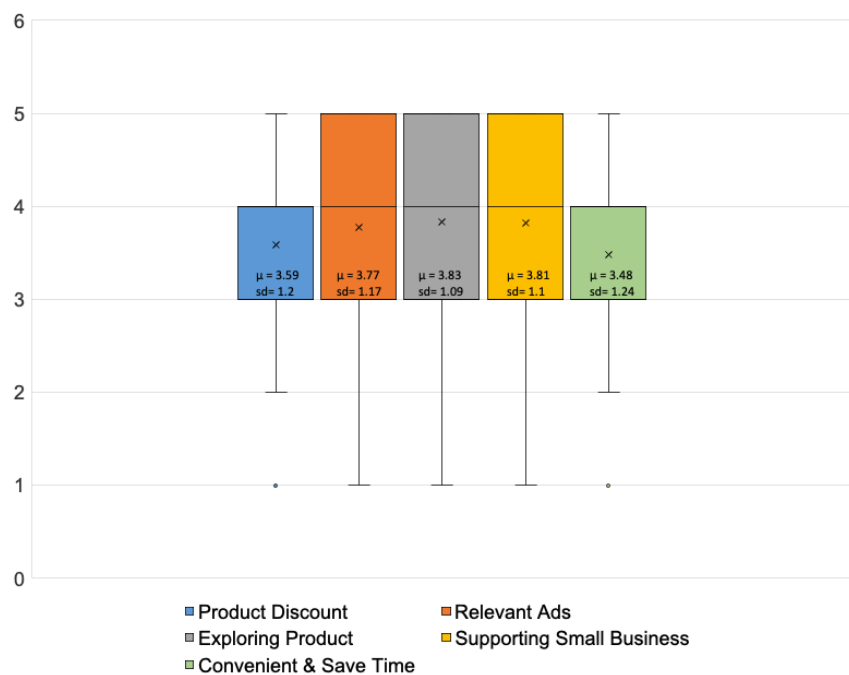
Figure 2: Question: "How much do you agree or disagree with the following statements about some possible benefits of seeing targeted ads on social media platforms?" – 1: strongly disagree; 2: somewhat disagree; 3: neutral; 4: somewhat agree; 5: strongly agree. Participants rated exploring different brands as the most important benefit, followed by ads supporting small businesses. They also found ads relevant to their interests beneficial.
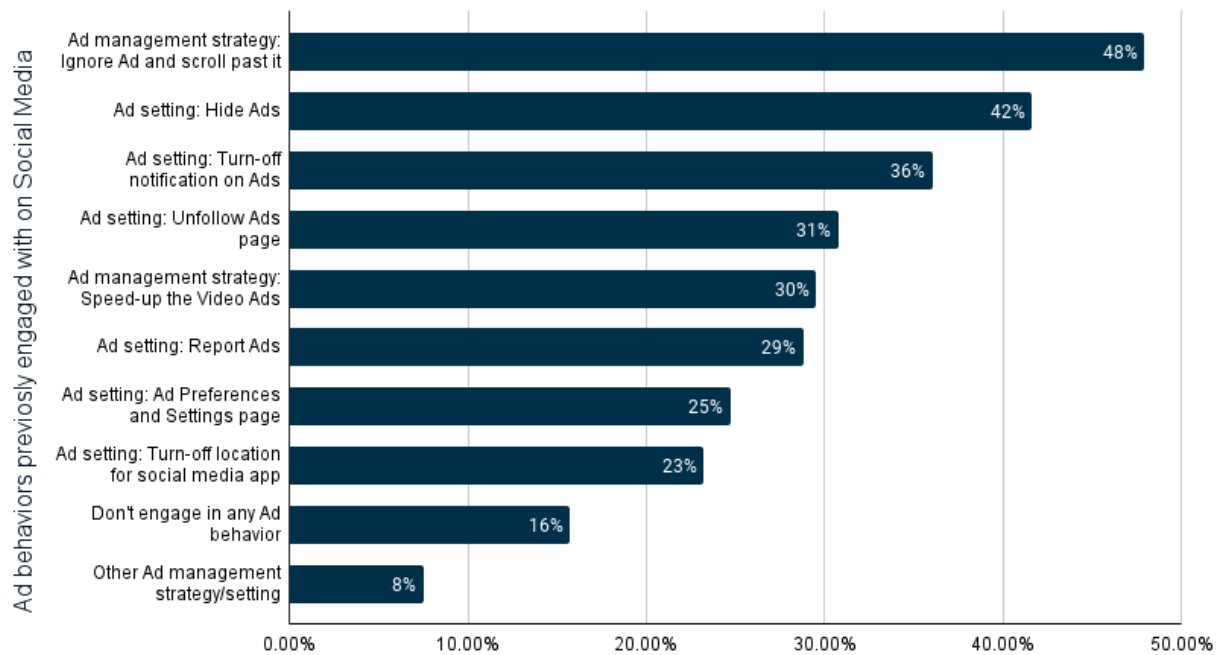
Figure 3: Question: "When seeing ads on social media platforms, which of the following behaviors did you previously engage with?" Out of the 8 Ad behaviors, participants most often engaged with Ignore Ad and scroll past it, closely followed by Hiding Ads, and Turning-off notification on Ads post.

Figure 4: Question: "How confident do you feel in engaging with various behaviors to manage ads on social media platforms?" – 1: not at all confident; 2: slightly confident; 3: moderately confident; 4: very confident; 5: extremely confident.

Table 1: Participants' demographics ($n = 412$)

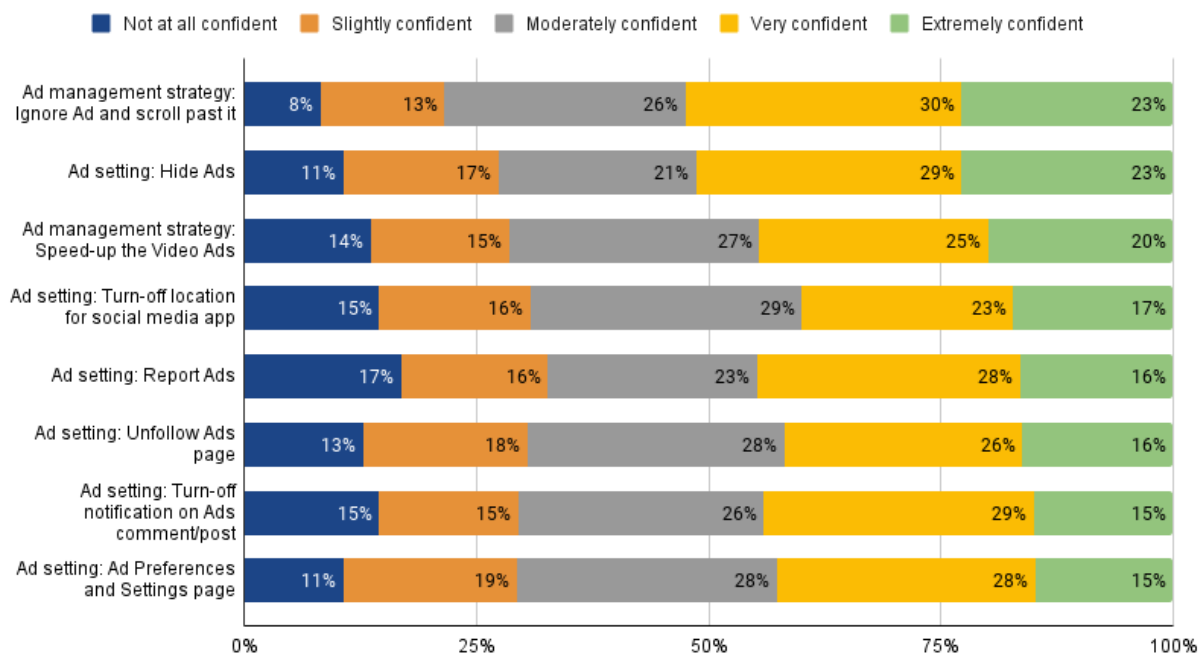|	Country			
	IN (105)	BD (103)	PAK (103)	US (101)
Gender				
Woman	49	43	47	41
Man	55	60	55	59
Non-binary	0	0	0	0
Prefer not to disclose	1	0	1	1
Prefer not to self-describe	0	0	0	0
Age				
18-24	26	31	27	5
25-34	31	36	38	12
35-44	28	15	16	23
45-54	4	11	9	12
55-64	1	4	8	32
65-74	14	6	4	13
75+	1	0	1	4
Education				
Less than a high school	1	4	0	3
High school or equivalent	7	14	5	28
Associate Degree	8	15	11	33
Bachelor Degree	30	35	40	26
Graduate or currently enrolled	9	3	4	1
Masters or professional degree	50	32	36	10
Doctorate degree	0	0	7	0
Income				
Low	33	59	35	44
Middle	50	28	41	36
High	22	16	27	21
Religion				
Hindu	76	9	0	0
Muslim	12	86	96	5
Christian	9	3	3	60
Jain	0	4	4	0
Sikh	20	5	0	0
Buddhist	12	0	0	6
No Religion	0	14	0	20
Prefer not to disclose	2	0	1	6
Others (Please describe)	0	0	2	9

REFERENCES

[1] Norah Abokhodair and Sarah Vieweg. 2016. Privacy & social media in the context of the Arab Gulf. In *Proceedings of the 2016 ACM Conference on Designing Interactive Systems*. Association for Computing Machinery, New York, NY, USA, 672–683.

[2] Tanisha Afnan, Yixin Zou, Maryam Mustafa, Mustafa Naseem, and Florian Schaub. 2022. Aunties, Strangers, and the FBIs: Online Privacy Concerns and Experiences of Muslim-American Women. In *Proceedings of the 18th Symposium on Usable Privacy and Security (SOUPS 2022)*. USENIX Association, Boston, MA, 387–406.

[3] Muhammad Ali, Angelica Goetzen, Alan Mislove, Elissa M Redmiles, and Piotr Sapiezynski. 2023. Problematic Advertising and its Disparate Exposure on Facebook. In *Proceedings of the 32nd USENIX Security Symposium (USENIX Security 23)*. USENIX Association, USA, 5665–5682.

[4] Joshua Asplund, Motahhare Eslami, Hari Sundaram, Christian Sandvig, and Karrie Karahalios. 2020. Auditing race and gender discrimination in online housing markets. In *Proceedings of the International AAAI Conference on Web and Social Media*, Vol. 14. Public Knowledge Project, Burnaby, B.C., Canada, 24–35.

[5] Brooke Auxier, Lee Rainie, Monica Anderson, Andrew Perrin, Madhu Kumar, and Erica Turner. 2019. *Americans and privacy: Concerned, confused and feeling lack of control over their personal information*. Technical Report. Pew Research Center. https://www.pewresearch.org/internet/2019/11/15/americans-and-privacy-concerned-confused-and-feeling-lack-of-control-over-their-personal-information/

[6] Tom Biselli, Enno Steinbrink, Franziska Herbert, Gina M Schmidbauer-Wolf, and Christian Reuter. 2022. On the challenges of developing a concise questionnaire to identify privacy personas. *Proceedings on Privacy Enhancing Technologies* 4, 2022 (2022), 645–669.

[7] Laura Frances Bright and Kelty Logan. 2018. Is my fear of missing out (FOMO) causing fatigue? Advertising, social media fatigue, and the implications for consumers and brands. *Internet Research* 28, 5 (2018), 1213–1227. https://doi.org/10.1108/IntR-03-2017-0112

[8] Juan Miguel Carrascosa, Jakub Mikians, Ruben Cuevas, Vijay Erramilli, and Nikolaos Laoutaris. 2015. I always feel like somebody's watching me: measuring online behavioural advertising. In *Proceedings of the 11th ACM Conference on Emerging Networking Experiments and Technologies*. Association for Computing Machinery, New York, NY, USA, 1–13.

[9] Farah Chanchary and Sonia Chiasson. 2015. User Perceptions of Sharing, Advertising, and Tracking.. In *Proceedings of the 11th Symposium On Usable Privacy and Security (SOUPS 2015)*. USENIX Association, Ottawa, 53–67.

[10] Hichang Cho and Anna Filippova. 2016. Networked privacy management in facebook: A mixed-methods and multinational study. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*. Association for Computing Machinery, New York, NY, USA, 503–514.

[11] CIA. 2023. CIA The World Factbook. https://www.cia.gov/the-world-factbook/

[12] Amit Datta, Anupam Datta, Jael Makagon, Deirdre K. Mulligan, and Michael Carl Tschantz. 2018. Discrimination in Online Advertising: A Multidisciplinary Inquiry. In *Proceedings of the 1st Conference on Fairness, Accountability and Transparency (Proceedings of Machine Learning Research, Vol. 81)*. PMLR, n.p., 20–34.

[13] Digital Advertising Alliance. 2023. Your AdChoices. https://optout.aboutads.info

[14] Stacy Jo Dixon. 2023. Statista: Number of social network users in selected countries in 2022 and 2027. https://www.statista.com/statistics/278341/number-of-social-network-users-in-selected-countries/

[15] Janna Lynn Dupree, Richard Devries, Daniel M Berry, and Edward Lank. 2016. Privacy personas: Clustering users via attitudes and behaviors toward security practices. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 5228–5239.

[16] Geisen Emily. 2023. Using attention checks in your surveys may harm data quality. https://www.qualtrics.com/blog/attention-checks-and-data-quality/

[17] Motahhare Eslami, Sneha R Krishna Kumaran, Christian Sandvig, and Karrie Karahalios. 2018. Communicating algorithmic process in online behavioral advertising. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–13.

[18] Maha Faisal and Asmaa Alsumait. 2011. Social network privacy and trust concerns. In *Proceedings of the 13th International Conference on Information Integration and Web-based Applications and Services*. Association for Computing Machinery, New York, NY, USA, 416–419.

[19] Reza Ghaiumy Anaraky, Yao Li, and Bart Knijnenburg. 2021. Difficulties of Measuring Culture in Privacy Studies. *Proceedings of the ACM on Human-Computer Interaction* 5 (2021), 1–26.

[20] Hana Habib and Lorrie Faith Cranor. 2022. Evaluating the usability of privacy choice mechanisms. In *Proceeding of the 18th Symposium on Usable Privacy and Security (SOUPS 2022)*. USENIX Association, Boston, MA, 273–289.

[21] Hana Habib, Sarah Pearman, Jiamin Wang, Yixin Zou, Alessandro Acquisti, Lorrie Faith Cranor, Norman Sadeh, and Florian Schaub. 2020. "It's a scavenger hunt": Usability of Websites' Opt-Out and Data Deletion Choices. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–12.

[22] Hana Habib, Sarah Pearman, Ellie Young, Ishika Saxena, Robert Zhang, and Lorrie FaIth Cranor. 2022. Identifying user needs for advertising controls on Facebook. *Proceedings of the ACM on Human-Computer Interaction* 6, CSCW2 (2022), 1–42.

[23] Hana Habib, Yixin Zou, Aditi Jannu, Neha Sridhar, Chelse Swoopes, Alessandro Acquisti, Lorrie Faith Cranor, Norman Sadeh, and Florian Schaub. 2019. An Empirical Analysis of Data Deletion and {Opt-Out} Choices on 150 Websites. In *Proceedings of the 15th Symposium on Usable Privacy and Security (SOUPS 2019)*. USENIX Association, Santa Clara, CA, 387–406.

[24] Hana Habib, Yixin Zou, Yaxing Yao, Alessandro Acquisti, Lorrie Cranor, Joel Reidenberg, Norman Sadeh, and Florian Schaub. 2021. Toggles, dollar signs, and triangles: How to (in) effectively convey privacy choices with icons and link texts. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–25.

[25] Ayako A. Hasegawa, Daisuke Inoue, and Mitsuaki Akiyama. 2023. How WEIRD is Usable Privacy and Security Research? (Extended Version). arXiv:2305.05004 [cs.CR]

[26] Geert Hofstede. 1984. *Culture's consequences: International differences in work-related values.* Vol. 5. SAGE Publications, London, England.

[27] Geert Hofstede. 2001. *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations.* SAGE Publications, London, England.

[28] Li-tze Hu and Peter M Bentler. 1999. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: A multidisciplinary journal* 6, 1 (1999), 1–55.

[29] Temitope Ifekoya. 2024. Statista: Digital Advertising. https://tinyurl.com/3nx3hpb8

[30] Jane Im, Ruiyi Wang, Weikun Lyu, Nick Cook, Hana Habib, Lorrie Faith Cranor, Nikola Banovic, and Florian Schaub. 2023. Less is Not More: Improving Findability and Actionability of Privacy Controls for Online Behavioral Advertising. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–33.

[31] Basileal Imana, Aleksandra Korolova, and John Heidemann. 2021. Auditing for discrimination in algorithms delivering job ads. In *Proceedings of the Web Conference 2021*. Association for Computing Machinery, New York, NY, USA, 3767–3778.

[32] Adam Kuper. 2000. *Culture: The anthropologists' account.* Harvard University Press, Cambridge, Massachusetts/ London, England.

[33] Rodda Leage and Ivana Chalmers. 2010. Degrees of caution: Arab girls unveil on Facebook. *Girl wide web* 2 (2010), 27–44.

[34] Pedro Giovanni Leon, Blase Ur, Yang Wang, Manya Sleeper, Rebecca Balebako, Richard Shay, Lujo Bauer, Mihai Christodorescu, and Lorrie Faith Cranor. 2013. What matters to users? Factors that affect users' willingness to share information with online advertisers. In *Proceedings of the 9th Symposium on Usable Privacy and Security*. Association for Computing Machinery, New York, NY, USA, 1–12.

[35] Yao Li, Eugenia Ha Rim Rho, and Alfred Kobsa. 2022. Cultural differences in the effects of contextual factors and privacy concerns on users' privacy decision on social networking sites. *Behaviour & Information Technology* 41, 3 (2022), 655–677.

[36] Zhou Li, Kehuan Zhang, Yinglian Xie, Fang Yu, and XiaoFeng Wang. 2012. Knowing your enemy: understanding and detecting malicious web advertising. In *Proceedings of the 2012 ACM conference on Computer and Communications Security*. Association for Computing Machinery, New York, NY, USA, 674–686.

[37] Arunesh Mathur, Jessica Vitak, Arvind Narayanan, and Marshini Chetty. 2018. Characterizing the Use of Browser-Based Blocking Extensions To Prevent Online Tracking. In *Proceeding of the 14th symposium on usable privacy and security (SOUPS 2018)*. USENIX Association, Baltimore, MD, 103–116.

[38] Aleksandar Matic, Martin Pielot, and Nuria Oliver. 2017. "OMG! How did it know that?" Reactions to Highly-Personalized Ads. In *Adjunct Publication of the 25th Conference on User Modeling, Adaptation and Personalization*. Association for Computing Machinery, New York, NY, USA, 41–46.

[39] Aleecia McDonald and Lorrie Faith Cranor. 2010. Beliefs and behaviors: Internet users' understanding of behavioral advertising. In *TPRC*. n.p., n.p., n.p. https://ssrn.com/abstract=1989092

[40] Stefan Müller and Katja Gelbrich. 2015. *Interkulturelles marketing*. Vahlen, Munich, Germany.

[41] Sheza Naveed, Hamza Naveed, Mobin Javed, and Maryam Mustafa. 2022. "Ask this from the person who has private stuff": Privacy Perceptions, Behaviours and Beliefs Beyond WEIRD. In *Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–17.

[42] Network Advertising Initiative. 2023. Network Advertising Initiative. https://optout.networkadvertising.org

[43] Helen Nissenbaum. 2004. Privacy as contextual integrity. *Wash. L. Rev.* 79 (2004), 119.

[44] Angelisa C Plane, Elissa M Redmiles, Michelle L Mazurek, and Michael Carl Tschantz. 2017. Exploring user perceptions of discrimination in online targeted advertising. In *Proceeding of the 26th USENIX Security Symposium (USENIX Security 2017)*. USENIX Association, Vancouver, BC, 935–951.

[45] Enric Pujol, Oliver Hohlfeld, and Anja Feldmann. 2015. Annoyed users: Ads and ad-block usage in the wild. In *Proceedings of the 2015 Internet Measurement Conference*. Association for Computing Machinery, New York, NY, USA, 93–106.

[46] Anju Punuru, Tyng-Wen Cheng, Isha Ghosh, Xinru Page, and Mainack Mondal. 2020. Cultural norms and interpersonal relationships: Comparing disclosure behaviors on twitter. In *Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing*. Association for Computing Machinery, New York, NY, USA, 371–375.

[47] Ashwini Rao, Florian Schaub, and Norman Sadeh. 2015. What do they know about me? Contents and Concerns of Online Behavioral Profiles. arXiv:1506.01675 [cs.CY]

[48] Nithya Sambasivan, Garen Checkley, Amna Batool, Nova Ahmed, David Nemer, Laura Sanely Gaytán-Lugo, Tara Matthews, Sunny Consolvo, and Elizabeth F Churchill. 2018. " Privacy is not for me, it's for those rich women": Performative Privacy Practices on Mobile Phones by Women in South Asia. In *Proceedings of the 14th Symposium on Usable Privacy and Security (SOUPS 2018)*. USENIX Association, Baltimore, MD, 127–142.

[49] Yukiko Sawaya, Mahmood Sharif, Nicolas Christin, Ayumu Kubota, Akihiro Nakarai, and Akira Yamada. 2017. Self-confidence trumps knowledge: A cross-cultural study of security behavior. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 2202–2214.

[50] Florian Schaub, Rebecca Balebako, Adam L Durity, and Lorrie Faith Cranor. 2015. A design space for effective privacy notices. In *Proceedings of the 11th Symposium on Usable Privacy and Security (SOUPS 2015)*. USENIX Association, Ottawa, 1–17.

[51] Tanusree Sharma, Smirity Kaushik, Yaman Yu, Syed Ishtiaque Ahmed, and Yang Wang. 2023. User Perceptions and Experiences of Targeted Ads on Social Media Platforms: Learning from Bangladesh and India. In *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–15.

[52] Sharon Shavitt, Carlos J. Torelli, and Hila Riemer. 2010. Horizontal and Vertical Individualism and Collectivism: Implications for Understanding Psychological Processes. In *Advances in Culture and Psychology: Volume 1*. Oxford University Press, New York, New York. https://doi.org/10.1093/acprof:oso/9780195380392.003.0007

[53] Kim Bartel Sheehan. 2002. Toward a typology of Internet users and online privacy concerns. *The Information Society* 18, 1 (2002), 21–32.

[54] Till Speicher, Muhammad Ali, Giridhari Venkatadri, Filipe Nunes Ribeiro, George Arvanitakis, Fabrício Benevenuto, Krishna P. Gummadi, Patrick Loiseau, and

Alan Mislove. 2018. Potential for Discrimination in Online Targeted Advertising. In *Proceedings of the 1st Conference on Fairness, Accountability and Transparency (Proceedings of Machine Learning Research, Vol. 81)*. PMLR, n.p., 5–19.

[55] Statista. 2023. Statista: Social media advertising and marketing worldwide. https://www.statista.com/topics/1538/social-media-marketing/#topicOverview

[56] Karthika Subramani, Xingzi Yuan, Omid Setayeshfar, Phani Vadrevu, Kyu Hyung Lee, and Roberto Perdisci. 2020. When push comes to ads: Measuring the rise of (malicious) push advertising. In *Proceedings of the ACM Internet Measurement Conference*. Association for Computing Machinery, New York, NY, USA, 724–737.

[57] Latanya Sweeney. 2013. Discrimination in online ad delivery. *Commun. ACM* 56, 5 (2013), 44–54.

[58] Harry C Triandis and Michele J Gelfand. 1998. Converging measurement of horizontal and vertical individualism and collectivism. *Journal of Personality and Social Psychology* 74, 1 (1998), 118.

[59] Joseph Turow, Michael X. Delli Carpini, Nora A. Draper, and Ryan Howard-Williams. 2012. *Americans Roundly Reject Tailored Political Advertising*. Technical Report. Annenberg School for Communication, University of Pennsylvania. http://repository.upenn.edu/asc_papers/398

[60] Blase Ur, Pedro Giovanni Leon, Lorrie Faith Cranor, Richard Shay, and Yang Wang. 2012. Smart, useful, scary, creepy: perceptions of online behavioral advertising. In *Proceedings of the 8th Symposium on Usable Privacy and Security (SOUPS 2012)*. Association for Computing Machinery, New York, NY, USA, 1–15.

[61] Aditya Vashistha, Richard Anderson, and Shrirang Mare. 2018. Examining security and privacy research in developing regions. In *Proceedings of the 1st ACM SIGCAS Conference on Computing and Sustainable Societies*. Association for Computing Machinery, New York, NY, USA, 1–14.

[62] Sandra Wachter. 2020. Affinity profiling and discrimination by association in online behavioral advertising. *Berkeley Tech. LJ* 35 (2020), 367.

[63] Y. Wang, G. Norice, and L.F. Cranor. 2011. Who Is Concerned about What? A Study of American, Chinese and Indian Users' Privacy Concerns on Social Network Sites. In *Trust and Trustworthy Computing. Trust 2011*, J.M. McCune, B. Balacheff, A. Perrig, A.R. Sadeghi, A. Sasse, and Y. Beres (Eds.). Lecture Notes in Computer Science, Vol. 6740. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-21599-5_11

[64] Y. Wang and S. Sun. 2010. Examining the role of beliefs and attitudes in online advertising: A comparison between the USA and Romania. *International Marketing Review* 27, 1 (2010), 87–107. https://doi.org/10.1108/02651331011020410

[65] Ben Weinshel, Miranda Wei, Mainack Mondal, Euirim Choi, Shawn Shan, Claire Dolin, Michelle L Mazurek, and Blase Ur. 2019. Oh, the places you've been! User reactions to longitudinal transparency about third-party web tracking and inferencing. In *Proceedings of the 2019 ACM SIGSAC Conference on Computer and Communications Security*. Association for Computing Machinery, New York, NY, USA, 149–166.

[66] Daricia Wilkinson, Moses Namara, Karla Badillo-Urquiola, Pamela J Wisniewski, Bart P Knijnenburg, Xinru Page, Eran Toch, and Jen Romano-Bergstrom. 2018. Moving Beyond a "one-size fits all" Exploring Individual Differences in Privacy. In *Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–8.

[67] Eric Zeng, Tadayoshi Kohno, and Franziska Roesner. 2021. What Makes a "Bad" Ad? User Perceptions of Problematic Online Advertising. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. Association for Computing Machinery, New York, NY, USA, 1–24.