RESEARCH ARTICLE

P&I Policy & Internet | PSO | WILEY

Invisible transparency: How different types of ad disclaimers on Facebook affect whether and how digital political advertising is perceived

Pablo Jost[1] | Simon Kruschinski[1] | Michael Sülflow[1] |
Jörg Haßler[2] | Marcus Maurer[1]

[1]Department of Communication, Johannes Gutenberg-University, Mainz, Germany

[2]Department of Media and Communication, LMU Munich, Munich, Germany

Correspondence
Pablo Jost, Department of Communication, University of Mainz, Jakob-Welder-Weg 12, 55199 Mainz, Germany.
Email: pjost@uni-mainz.de

Abstract

One central measure set out in the regulation of digital political advertising (DPA) concentrates on transparency disclaimers to make users aware that the respective content was bought and targeted at them with a specific intention by an advertiser. However, we lack scientific evidence about if and how users perceive transparency disclaimers of DPA on social media. This article aims to provide first empirical answers to these questions by drawing on a two-part eye-tracking study with 177 participants that compares the effect of different prominent ad disclaimers (i.e., versions previously [V1] and currently [V2] used by Facebook as well as a self-designed [V3] disclaimer version) on the perception of DPA. We show that most users do not fixate on the ad disclaimers regardless of their prominence, nor does the prominence of the disclaimers affect the perceived intrusiveness and acceptance of the DPA. However, the recall and ad recognition were significantly lower for the less prominent ad disclaimers used by Facebook compared to our self-designed more prominent version, pointing to the shortcomings of the platform's current transparency rules. Altogether, our study allows a more

---

substantiated discussion about how DPA is recognized and evaluated by users, which contributes to the debate about incorporating regulations for DPA.

INTRODUCTION

Social networking platforms particularly offer political campaigns to employ personalized advertising strategies, such as the targeting of selected audiences with matching content, known from digital business marketing (Kruschinski & Bene, 2022). For this digital political advertising (DPA), Facebook [Meta] has become one of the central channels because it allows political parties to draw on the platform's algorithmic advertising system which compiles and analyses unprecedented amounts of user data (e.g., social demographics, interests, behavior) to infer receptive audiences for their messages (Andreou et al., 2019). Thus, they can complement the use of organic communication on public Facebook pages by creating sophisticated advertising campaigns (Facebook *advertisements*).

The use of DPA on Facebook has been the focus of public debates since it is opaque and driven by citizens' data (European Commission, 2020). Concerns are that it can be misused by political actors to target contradictory issues to specific audiences, or drive negative and populist narratives to susceptible voters, ultimately reinforcing existing political divides and help shaping a disruptive public sphere (Crain & Nadler, 2019).

In addition, DPA invades users' privacy by exploiting recipients' personal characteristics, including sensitive attributes such as political views or sexual orientation often without their knowledge or consent (Dobber et al., 2019). This is especially due to the fact that DPA is designed to look like other organic content that appears on Facebook so that users have difficulty in recognizing that they are seeing an advertisement which was bought and targeted at them with a specific intention by an advertiser. As a result, citizens' ability to make informed decisions is harmed as they are not optimally equipped to interpret or contextualize the DPA and discern their persuasive intent (Boerman et al., 2017; Le Pochat et al., 2022).

Enabling users to recognize the paid nature of a message is important as it plays a role for the processing and evaluation of its content. Since DPA disclaimers reveal that the message is distributed to a specific user with a persuasive intention by the sender they should increase users' suspicions about the message creator's motives, and decrease users' attitudes or behavior towards it, while activating persuasion knowledge (Kruikemeier et al., 2016). These cognitive processes underpin the importance of transparency in political advertising, since without the disclaimers recipients are unable to recognize the type of bias inherent in the advertisement. This would ultimately lead to viewers not being able to use their "cognitive defenses" against persuasive ad messages and will be overly receptive to its content (Knowles & Linn, 2004). As Moran (2017) argues, this constitutes a violation of the viewers' right to know when they are being subjected to biased persuasive content.

Helping citizens to understand if a message on Facebook is targeted at voters with a persuasive intention by paying money, is especially important when it comes to negative, divisive or manipulative content: Tailored at susceptible recipients, the covert paid messages might contribute to the purposeful undermining and destabilization of targeted voters' trust in political institutions and democratic processes (Crain & Nadler, 2019). For

instance, the Republicans used DPA to accuse the Democrats of mail-in ballot vote fraud (Crain & Nadler, 2019). In Germany, too, the right-wing populist Alternative for Germany used DPA in the 2021 federal election to tailor accusations of election fraud to Facebook users but also to spread polarizing and discriminating messages about their political opponents.

The misuse of DPA raised concerns that led to regulatory proposals in the United States (US Congress, 2021), or the European Union (European Commission, 2021) to implement rules on transparency of DPA. More broadly, transparency of sposored content refers to a sender's intentional disclosure of information about advertorial content that enables recipients to identify the advertorial intent (Ikonen et al., 2017; Kim et al., 2019). Applied to DPA, this means that the platforms should provide disclosing information about what data is being collected from users, how that data is being used, which actors are using which information for targeting, and with what financial resources. Accordingly, since 2018, Facebook requires advertisers of politics, elections, and social issues to register on its ad management platform and publish their ads in Facebook's so-called "Ad Library". In it, users can publicly access who paid for specific ads and which data was used for targeting (Le Pochat et al., 2022). Though the benefits of such broad transparency efforts are important, transparency in the design of individual ads is also an important consideration: Online platforms that display advertising need to ensure that the users can *identify* them as paid advertisements (i.e., are *aware* to be targeted by a specific message) and *provide information* about its nature, spender, or intent (European Commission, 2021). In 2018, Facebook answered the call for ad-related transparency by introducing transparency disclaimers that are displayed with every ad since then.

While the disclaimers are intended to raise transparency, "disclosure of information must be perceived properly by the receivers in order for it to be effective" (Ikonen et al., 2017, p. 4). Since there is still a lack of scientific evidence about the effect of DPA disclaimers, we want to know if and how users perceive transparency disclaimers of DPA on social media and whether they recall them. Moreover, in light of Facebook's new advertising policies we are interested if more prominence/visibility of disclaimers enhance the awareness of DPA and by this help citizens to recognize ads and take this knowledge into consideration when evaluating the messages' content.

This article aims to provide first empirical answers to these questions by drawing on a two-part eye-tracking study with 177 participants. Specifically, we explore how disclaimers that vary with regard to their prominence/visibility affect (a) attention, (b) ad recognition, (c) recall, and (d) perceived intrusiveness of the ads as well as the effect on general DPA acceptance. Our study advances the literature with the following three contributions: (1) We test different types of disclaimers that differ with regard to their prominence and by this take new regulations that are assumed to foster transparency into account. (2) Using eye-tracking methodology, we generate new empirical insights if and how intensively users (visually) perceive different types of disclaimers. Finally, (3) we provide implications based on our empirical findings that are relevant to political parties, regulators as well as social media platforms.

THE USE OF DPA ON FACEBOOK IN GERMANY

DPA on Facebook refers to a communication strategy in which parties use data, technology, and data analytics to identify selected voters and target them with personalized ads on the platform (Zuiderveen Borgesius et al., 2018). First, parties analyze datasets that contain information about voters' attitudes, interests, or behaviors and identify segments of strategically important voters. In the next step, the content of DPA messages are tailored to

the different needs and preferences of these identified voter segments. Finally, parties can upload and choose various targeting audiences in Facebook' advertising manager which match their identified voter segments best (Andreou et al., 2019).

To date, the research on DPA with Facebook ads focuses, with few exceptions, on the United States. As a result, the scholarly findings on its use almost exclusively reflect the country's specific systemic and intraparty conditions. However, European countries differ from the United States in key areas at the systemic and party level which influence how parties are able to use DPA (for an overview, see Kefford et al., 2022; Kruschinski & Bene, 2022): On the system level, European countries have multiparty systems, strict data protection regimes, or strict campaign rules on donations or political advertising. On the party level, European parties rather have low financial resources and digital marketing know-how.

First studies (Kefford et al., 2022; Kruschinski & Bene, 2022; Kruschinski et al., 2022) about the use of DPA in Germany show that all parties draw on Facebook advertising. In comparison to US-campaigns, the spending and sophistication of DPA practices are rather basic (Kefford et al., 2022). However, in a comparison between European countries, German parties bought most Facebook ads, and invested the largest budget on them during the 2019 European Parliament election (Kruschinski & Bene, 2022). First results of a comparison of DPA practices in Germany indicate that larger parties use DPA with more sophistication, which can be attributed to the uneven allocation of campaign resources (Kruschinski et al., 2022). Regarding the content of DPA, German parties highlight information about their own party or programs, mobilize selected users to vote, but also draw on negative campaigning (ibid.).

THE ROLE OF DISCLAIMERS IN DPA REGULATION

In the societal and academic discourse, concerns are raised about the use of DPA, which includes concerns about the potential distribution of disinformation (Crain & Nadler, 2019), the violation of existing laws or regulations (Dobber et al., 2019), and threatening the representation of the people by targeting partial information only at certain voter groups (Zuiderveen Borgesius et al., 2018).

These concerns have led policymakers and legislators to propose rules and laws to regulate DPA (European Commission, 2020; US Congress, 2021), which until now mostly falls outside existing regulations and thus illustrates the challenge of incorporating emerging technologies into pre-existing regulatory frameworks (Dobber et al., 2019). In all the regulatory proposals "transparency" is mentioned as a key variable to allow for public scrutiny of DPA and secure fair, open, and pluralistic political competition (Mehta & Erickson, 2022). One central measure of transparency set out in the proposed regulation of DPA are disclaimers. These should help voters to discern information they want to consume, and better understand how they are being profiled and categorized by social networking platforms (e.g., Digital Services Act; European Commission, 2021).

The basic idea behind DPA disclaimers is to empower users to distinguish information that was bought and targeted at them with a specific intention by an advertiser versus information from a friend or a followed page. In the wake of the 2016 US Presidential Election, Facebook determined that all political ads must be labeled as "Sponsored" and with a "Paid for by" disclaimer from the advertiser (see Figure 1, version 2) since May 2018 in the United States and since March 2019 in Europe (Le Pochat et al., 2022). This was done in an attempt to increase transparency of political ads since they were labeled only with a "Sponsored" disclaimer before these policy changes came into play in the given countries (see Figure 1, version 1). While the old disclaimer gave users the information that the

FIGURE 1 Stimuli versions (Version 1: old disclaimer; Version 2: new and current disclaimer; Version 3: self-designed disclaimer)

message they are seeing is bought/sponsored, the *new* and *current* ad disclaimer on Facebook also indicates which funding entity (individual, page, or organization) paid for a given ad.

However, we lack scientific evidence about if and how users perceive DPA transparency disclaimers on social media, and whether more prominence/visibility of disclaimers enhance the awareness of DPA.

EFFECTS OF DISCLAIMERS ON ATTENTION AND RECOGNITION

Generally speaking, visual attention can either be guided by the content that is viewed, for example, its text, pictures, or multimedia content, or by the intentions and capacities of the viewers. These approaches have been described as bottom-up versus top-down approaches or salience and schema mechanisms (Greussing et al., 2020; Haßler et al., 2019) and have been integrated into multimedia learning theory (Mayer, 2005). In the context of social media use, the bottom-up approach means that either the way an information is presented—the way a post looks, whether there is an image in a post, or whether there are any disclaimers—guides the attention of the users. In the top-down approach, the involvement of users guides where attention is directed towards—this is, the users actively seek for some information and avoid others. The multimedia learning model (Mayer, 2017, p. 405) abstracts the learning process by conceptualizing that words and pictures (e.g., in a post) are viewed and listened to using one's eyes and ears. This process can be activated from the bottom-up when reading text or hearing sound (Mayer, 2005, 2017). Sounds and images are then processed using a verbal model and a pictorial model, like in well-established dual-coding models (e.g., Paivio, 1986). The coherent integration of knowledge is then determined by prior knowledge. The ability to recall and recognize information that has previously been processed is highly dependent on this prior knowledge and the intensity of the processing via the verbal and pictorial model (Mayer, 2017, p. 405).

POLICY AND INTERNET

P&I
Policy & Internet

PSO

WILEY

209

Deducing from the initial assumption of the model that design of a message guides attention from the bottom up, it can be assumed that DPA transparency disclaimers are viewed by social media users simply because they are salient. In other words, since DPA messages include disclaimers they look different from regular organic posts and attention might thus be raised. Consequently, more prominent—for example, bigger or more colorful—disclaimers would raise more attention. Conversely, following the assumption that individual preconditions—and previous knowledge (of targeting and ads)—guides visual attention, it could be argued that if intentions and capacities of users guide attention, users seeking for fast information could focus on post content using the same schema for all posts. Therefore, they might miss DPA transparency disclaimers—at least when they are not visually intrusive. Taking together, whether disclaimers have any effect at all and thus fulfill political and democratic expectations depends first and foremost on whether they are viewed at all.

To understand visual attention more thoroughly, eye-tracking studies can provide insights. Analyzing gaze behavior enables researchers to gain information about where users direct their visual attention. Further, it is assumed that visual perception of content correlates with the uptake of information (Just & Carpenter, 1980; Orquin & Mueller Loose, 2013, p. 193). Nonetheless, previous research has shown that to understand why and how certain information is processed beyond their visual perception, additional research is necessary, for example, complementing eye-tracking with surveys (Meißner & Oll, 2019). Thus, eye-tracking helps us to understand if people—in a first step—visually perceive disclaimers within a post. If they do, we might assume that they also process this information. For Facebook news posts, eye-tracking studies suggest that users pay less attention to the area of a posts that contains information about the post and the disclaimer compared to other elements (e.g., main text, headline) (Sülflow et al., 2019). In light of Facebook's policy changes regarding the transparency of disclaimers the question arises whether more prominent disclaimers might facilitate recognition. Following the bottom-up approach one could assume that more salient objects within a media stimulus should promote visual attention (e.g., Bialkova et al., 2013). Thus, disclaimers that are bigger in size or positioned more prominently within a DPA message should draw more attention by users and thus raise awareness. Taken together, we assume:

H1: *The prominence of an ad disclaimer is positively related to the level of visual attention to the disclaimer.*

Based on the previous discussion, visual attention indicates whether a disclaimer is perceived and it is also the prerequisite for recognition and processing of the information. But when it comes to the influence of disclaimers on subsequent processing and evaluation of posts, users should also remember that they saw an advertisement. Research on recognition of disclaimers or sponsored content mainly relies on two different measures. Either if users remember if they have seen sponsored posts or disclaimers ("recall") or if they perceived the content they have encountered to be an ad ("ad recognition"). Iversen and Knudsen (2019) found that labeling a political news story with an ad disclaimer enhances the perception that it is an advertisement compared to no labeling. This is in line with results from Campbell and Evans (2018) who also found that a disclaimer ("Sponsored Content by") increased the recognition of a native advertising news article to be an advertisement compared to nondisclosure. In the context of social media posts, Kruikemeier et al. (2016) found that only 68% of participants recalled that a stimulus post contained a "sponsored" disclaimer. Binford et al. (2021) show that the variation of the disclaimer ("Sponsored. Paid for" in combination with either candidates' campaign names or a fictitious campaign funding entity) had no effect on the ad recognition.

In summary, studies indicate that many users are not able to recall if a post contained a disclaimer or do not recognize ads as such. This in turn, makes it difficult to perceive DPA and realize manipulative intent. However, study results also suggest that variations of the disclaimer type (e.g., prominent position, bigger size, explicit wording) affects recall and ad recognition. Thus, it can be assumed that with increasing prominence of the disclaimer, the memory performance also increases. Therefore we pose two hypotheses that relate to the recognition of sponsored content:

H2: *The prominence of an ad disclaimer is positively related to recalling an ad.*
H3: *The prominence of an ad disclaimer is positively related to the recognition of an ad.*

EFFECTS OF DISCLAIMERS ON PERCEPTION AND ACCEPTANCE

DPA offers political actors the opportunity to target supporters with specific messages, but also to tap into new target groups, or—at best—persuade potential voters. However, targeting confronts users with messages that are different from the content they usually receive on social media platforms. When the advertising message is perceived as divergent to the media surrounding or the media reception is disturbed by the appearance of advertising, individuals tend to perceive a message as intrusive (Li et al., 2002). In this case, the recall of the content decreases and the recipients are likely to develop reactance towards the message content and the sender (Morimoto & Macias, 2009). However, the feeling of intrusiveness can also occur when people solely recognize content as advertisement (McCoy et al., 2008). Since social networking platforms were originally created for interpersonal exchange among friends and acquaintances, users might perceive content from business and political communicators (e.g., brands or political actors) as intrusive, especially if the content is not congruent with their motives of media use (Noguti & Waller, 2020). As argued above, the likelihood that DPA will be perceived as advertising increases with the prominence of the disclaimer (see also Iversen & Knudsen, 2019), which potentially increases the perceived intrusiveness of the ad. Accordingly, we assume:

H4: *The prominence of an ad disclaimer is positively related to the perceived intrusiveness of the ad.*

Finally, DPA is often discussed against the backdrop of data security and privacy invasion. One of the concerns is that people will feel monitored and manipulated when they are shown content that is personally tailored to them (Zuiderveen Borgesius et al., 2018). This perception might be actualized when recipients are confronted with a DPA message that they recognize as an ad. Moreover, recognizing DPA can also activate persuasion knowledge (Kruikemeier et al., 2016), which in turn is known to unfold negative effects on the perception of the ad, its sender, and the general trust in online advertising (Wojdynski & Evans, 2020). Since the recognition of an ad increases with the prominence of the disclaimer, it seems plausible that the recipients who saw an ad with a prominent disclaimer are more likely to be reactant towards DPA. On the other hand, studies on native advertising have shown that negative effects of ad recognition (e.g., the reactance towards the ad or the sender) are mitigated by the perceptions of sponsorship transparency (Beckert et al., 2021; Campbell & Evans, 2018; Wojdynski & Evans, 2020). Thus, it seems plausible that the prominence of the ad disclaimer might enhance the perceived transparency and, therefore, reduce the negative effects of recognizing the DPA as advertised. In light of the potentially countervailing effects of disclaimer prominence we pose the following research question:

RQ1: *Does the prominence of the ad disclaimer affect the general acceptance of digital political advertising?*

METHOD

To investigate the effects of different types of ad disclaimers we conducted an eye-tracking study with 177 student participants. These were exposed to a fictitious Facebook Newsfeed that contained an ad by one of five German parties embedded within six organic posts (e.g., news posts). Thus, the ad differed with regard to the source of the ad (party) and the ad disclaimer (three different types). The first part of the study was conducted in February 2019. Until then, ads were marked in Europe with the disclaimer "sponsored" within the upper part of the ad (see Figure 1, version 1). After Facebook's new advertising policies were introduced in late March 2019, ads had to be labeled with the disclaimer "sponsored—paid for by [political advertiser]" (see Figure 1, version 1). To investigate if Facebook's new and current disclaimer would enhance awareness and recognition of ads, we decided to expand our study. Thus, we replicated our eye-tracking study from November to December 2019 and used the current disclaimer within our stimuli. Further, we decided to investigate effects of a self-designed more prominent disclaimer ("sponsored—paid for by [political advertiser]" located within a frame around the post; see Figure 1, version 3), since gaining visibility is a prerequisite for the content to be recognized as paid advertisements, thus contributing to transparency. This was done to take up the ongoing debate about public demands to further increase the transparency of DPA on Facebook (Le Pochat et al., 2022). For our analysis, we combined both studies since only the disclaimer version differed between the studies but the Newsfeed, content of the ads, and questionnaire did not, ultimately resulting in a 3×1 design.

SAMPLE

For the study, student participants were recruited from various seminars and lectures. In addition, participants were motivated to recruit other fellow students to participate. As an incentive, shopping vouchers were raffled among the participants. Overall, 202 undergraduate students participated in the study. Due to insufficient quality of eye-tracking data we had to exclude 25 participants from the sample (see for further information below), which resulted in 177 final study participants (68.9% female; $M_{age} = 22.07$, SD = 2.37). Of these, 103 students participated in the first part of the study and 74 in the second part.

Both the choice of participants and the size of the sample are quite acceptable or, respectively, above average for eye-tracking studies. In a review, King et al. (2019) analyzed all eye-tracking studies published in the top 25 communication journals between 2005 and 2019. The 136 studies reviewed were based on an average of 73 participants and nearly two-thirds recruited only students.

All recruited participants had an account on Facebook; 91% were active Facebook users, and 9% have had an account in the past. The recruited participants used Facebook about 20 minutes a day ($M = 19.81$; SD = 22.34) and 27% of the participants followed one or more accounts of politicians or political parties. To generate more insights into our sample, on the one hand we created an index of political Facebook-use (3 items, e.g., "I read Facebook posts from politicians or political parties," $\alpha = 0.86$; $M = 2.15$; SD = 0.98). On the other hand, questions about participants' political interest (single item measure) revealed a comparably high value ($M = 3.66$; SD = 0.90).

PROCEDURE

The studies' participants were invited into the laboratory and were informed that their gaze behavior would be recorded while they were looking at online content. After calibrating the eye-tracker, participants were informed that they would see a Facebook Newsfeed which they should browse through ordinarily and that they could exit the Newsfeed by pressing a button on the computer keyboard. After this instruction, the Facebook Newsfeed appeared and the gaze behavior was recorded while participants scrolled through the Newsfeed. Afterwards the participants were asked to fill out a survey that contained questions to measure the dependent variables.

Apparatus

Gaze behavior was recorded with a SMI RED250 remote eye-tracker (sampling rate of 250 Hz). Participants were seated 60–70 cm away from the monitor. To ensure accuracy and data quality a 9-point calibration was performed before the trial. We excluded participants with a derivation above 1.0° on either the x- or y-axis and if less than 80% of the expected points of measurement (in this case 250 points of measurement per second) could be recorded over the course of the entire stimulus reception. Finally, 177 participants met all criteria and could thus be included in the data analysis (derivation: x-axis: $M = 0.44$, $SD = 0.18$; y-axis: $M = 0.42$, $SD = 0.20$; average proportion of recorded gaze data: $M = 95.84\%$, $SD = 4.19$).

Stimulus

For this study, a fictitious Facebook Newsfeed was designed including seven posts. The Newsfeed contained one ad by a party and six organic posts by media outlets that did not address party politics (see Figures A1 and A2 in the Appendix). The stimulus varied (between-subject design) with regard to the type of disclaimer ("sponsored" or "sponsored —paid for by [party]" within the upper part of the ad below its source or "sponsored—paid for by [party]" located at the upper part of a blue frame around the ad) (see Figure 1). Moreover, we varied the source of the ad. By randomly assigning the source to one out of five German parties, we aim to hold constant any possible influence of party affiliation on the perception of ads and its disclaimers. The party affiliation of the participants towards the party they encountered did not vary between the three stimulus versions, $F(4,171) = 0.186$, $p = 0.841$. Further, in the first part of the study, the stimulus varied with regard to the topic that the party addressed in their ad (either higher education policy or pension policy). The data analysis of study 1 revealed that participants did not differ regarding their interest in both topics and that the topic had no effect on attention distribution to the posts. Thus, we decided that no variation of the topic was necessary for the second part of the study. Therefore, only the source of the ad (party) and the type of disclaimer was varied. The content of the ads were held constant independently of the source.

As a stimulus check, we asked participants about the likelihood that a given party would publish the post that they saw in the Newsfeed (1—not likely at all, 5—very likely). We found no differences between the parties, $F(4,171) = 1.373$, $p = 0.245$, thusour participants tended to agree, that the post could be published by a party on Facebook in real ($M = 3.71$, $SD = 1.05$).

Measures

Independent variables

As independent variable, the ad in the Newsfeed varied with regard to the type of the disclaimer: The first type was Facebook's original disclaimer from 2019 which only mentioning that an ad was "sponsored" within the upper part of the ad and below its source (version 1). The second type was the current Facebook disclaimer with the "sponsored—paid for by [party]" disclosure also located at the upper part of the ad below its source (version 2). The third type was a self-designed disclaimer to stimulate higher conspicuousness by placing the disclosure "sponsored—paid for by [party]" in a blue frame around the ad (version 3).

Dependent variables

Visual attention was measured as *fixation duration* in milliseconds by the eye-tracker. To measure attention distribution to the ad as well as the disclaimer we created two Areas of Interest (AOIs) (see Figure A3): The first one was the entire ad by the party and the second was the disclaimer. Fixations were measured if the eye rested on an AOI for at least 80 ms.

    Recall was measured by asking participants how many of the posts within the Newsfeed that they were exposed to were "sponsored." Participants could choose between the answers "none," "one," "more than one," and "I cannot remember." The answer "one" was counted as correct recall (19.21% of the participants correctly answered this question).

    To measure *ad recognition* participants were asked to state their agreement to four items that were obtained from Kruikemeier et al. (2016): *"The news post felt like advertisement," "The news post was clearly sponsored," "It was made transparent that this news post is an advertisement,"* and *"The news post was labeled as advertisement"* (1—do not agree at all, 5—fully agree; $M = 3.48$, SD = 1.27). Based on these items a mean index was calculated ($\alpha = 0.78$). These items were only used in the second part of the study. Thus, we can only analyze potential differences between disclaimer versions 2 and 3.

    We used semantic differentials to measure *intrusiveness* and asked participants whether they find the ad *irritating*, *intrusive*, and *annoying* (e.g., 1—"not intrusive," 5—"intrusive") (e.g., Li et al., 2002). We then summarized the answers in a mean-index ($\alpha = 0.71$; $M = 2.14$, SD = 0.88).

    Finally, we used semantic differentials to assess the general *acceptance of DPA* and asked participants whether they find microtargeting *appropriate*, *acceptable*, *fair*, and *legit* (e.g., 1—"not appropriate," 5—"appropriate"). We then summarized the answers in a mean-index ($\alpha = 0.83$; $M = 3.07$, SD = 0.84).

RESULTS

On average, participants spent more than one and a half minutes ($M = 90.43$ s, SD = 38.66) on the fictitious Facebook newsfeed and fixated the party ad for 13.85 s (SD = 7.59) on average. The ad was fixated the longest when it was labeled with the first version of the ad disclaimer ($M_{V1} = 14.81$ s, SD = 8.30) compared to the other two versions ($M_{V2} = 12.81$ s, SD = 6.00; $M_{V3} = 12.17$ s., SD = 6.63). However, these differences were not statistically significant, $F(2, 174) = 2.078$, $p = 0.128$.

    In H1, we assumed that the prominence of an ad disclaimer is positively related to the level of visual attention to the disclaimer. Results indicate that the ad disclaimer in versions 2 and 3

was fixated more often (41%/42.9%) compared to version 1 (35.9%; cf. Figure 2). However, these differences were not statistically significant ($\chi^2(2) = 0.675$, $p = 0.714$). Moreover, the ad disclaimer was fixated longer on average in version 2 ($M = 633.69$ ms, SD = 1088.203) and 3 ($M = 525.49$ ms, SD = 849.26) compared to version 1 ($M = 444.23$ ms). Yet, these differences did not yield statistical significance, $F(2, 174) = 0.604$, $p = 0.548$. Thus, we did not find differences in the visual attention to the disclaimers depending on the prominence of the disclaimer.

Moreover, we hypothesized that the prominence of an ad disclaimer is related positively to the recall of an ad (H2). Our results show that most of the participants reported that an ad was displayed when it was labeled with the self-designed prominent disclaimer ($M_{V3} = 48.6\%$), compared to the disclosure that is currently applied on Facebook ($M_{V2} = 17.9\%$; cf. Figure 3). Participants were least likely to report that the ad was sponsored if they encountered the former disclaimer used by Facebook ($M_{V1} = 9.7\%$). These differences were statistically significant ($\chi^2(2) = 25.474$, $p < 0.001$), and thus the prominence of the ad disclaimer is positively related to the correct number of ads participants recalled.

Further, we assumed that the prominence of an ad disclaimer is positively related to ad recognition (H3). As stated, we measured ad-recognition only in the second part of our study and, thus, can only report differences between the second and third version of the
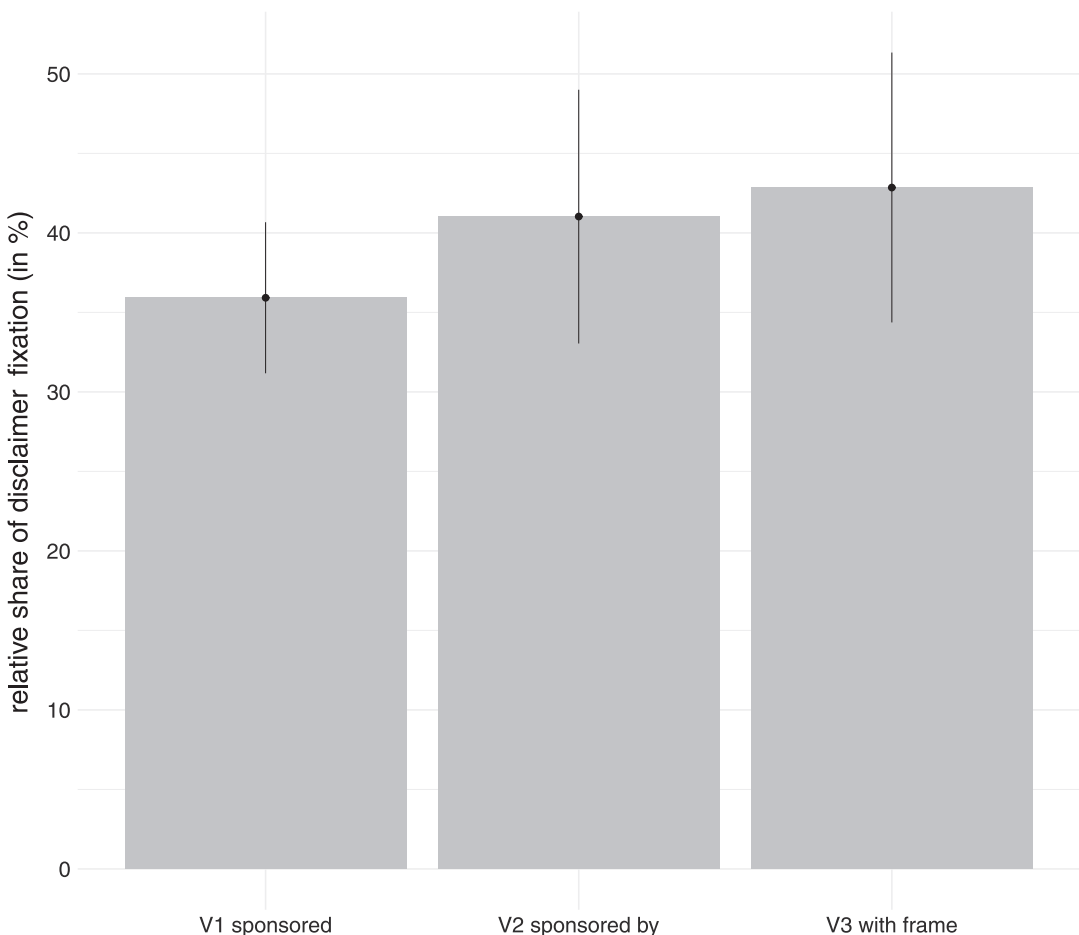

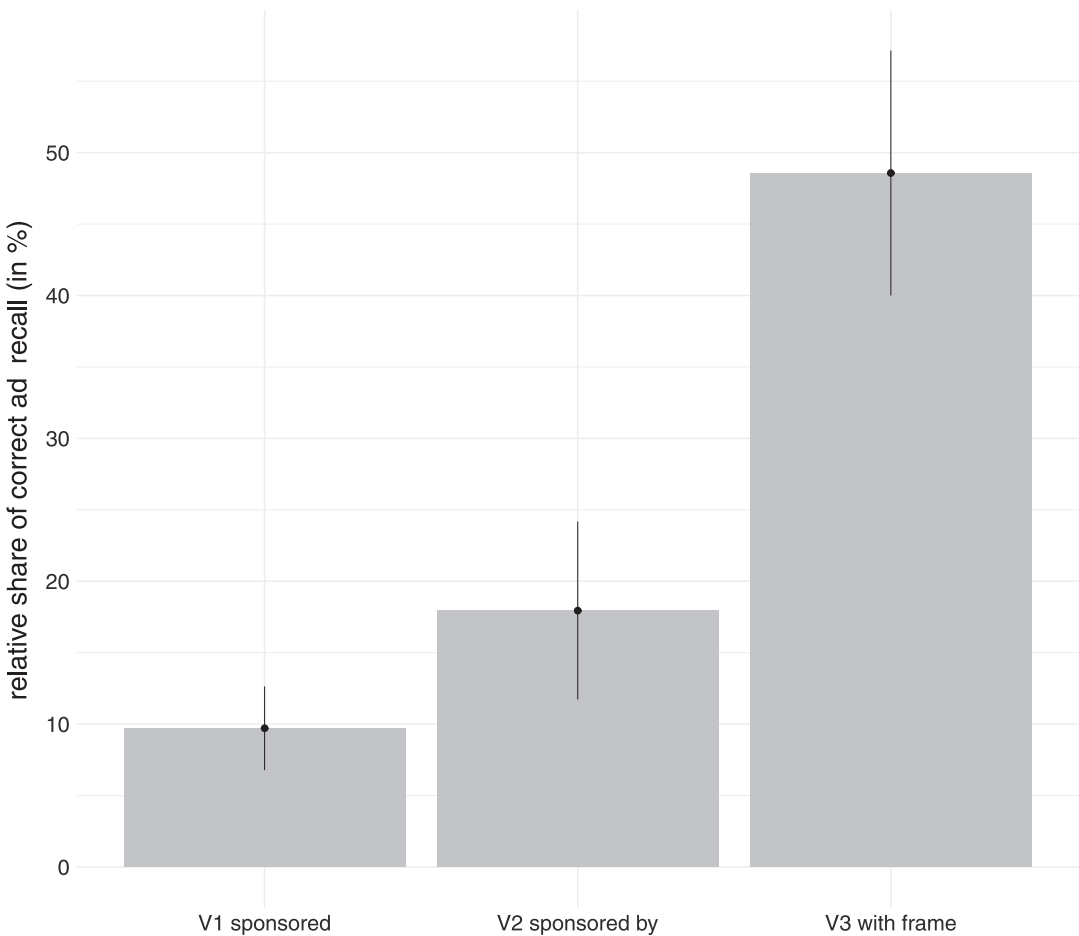FIGURE 2   Relative share of participants fixating the ad-disclaimers

FIGURE 3 Relative share of participants correctly recalling the ad

disclaimers. Results show that ad recognition significantly differed between version 2 and version 3 ($t(68) = -2.752$, $p = 0.008$; cf. Figure 4). More precisely, when the ad disclosure was positioned within our self-designed frame (version 3) participants considered the message more to be an ad ($M_{V3} = 3.93$) compared to when the ad disclaimer currently used by Facebook (version 2) ($M_{V2} = 3.13$). Thus, participants show a higher level of ad recognition if the ad disclaimer is more prominent.

Further, we assumed that the prominence of an ad disclaimer is positively related to the feeling of intrusiveness (H4). Results show that the ads were generally rated as rather unintrusive independently of the ad disclaimer ($M_{V1} = 2.06$; $M_{V2} = 2.14$; $M_{V3} = 2.41$). Although the results signal a tendency of version 3 being perceived as most intrusive, the results did not differ significantly, $F(2,173) = 2.163$, $p = 0.11$. (Figure 5).

Finally, we raised the question to which extent the general acceptance of DPA depends on the prominence of the disclaimer (RQ1). Although there is a tendency that the acceptance of DPA grows with the disclaimer's prominence ($M_{V1} = 2.99$; $M_{V2} = 3.10$; $M_{V3} = 3.29$; c.f. Figure 6), the results reveal no significant differences between the different versions of the stimuli, $F(2,173) = 2.40$, $p = 0.093$.
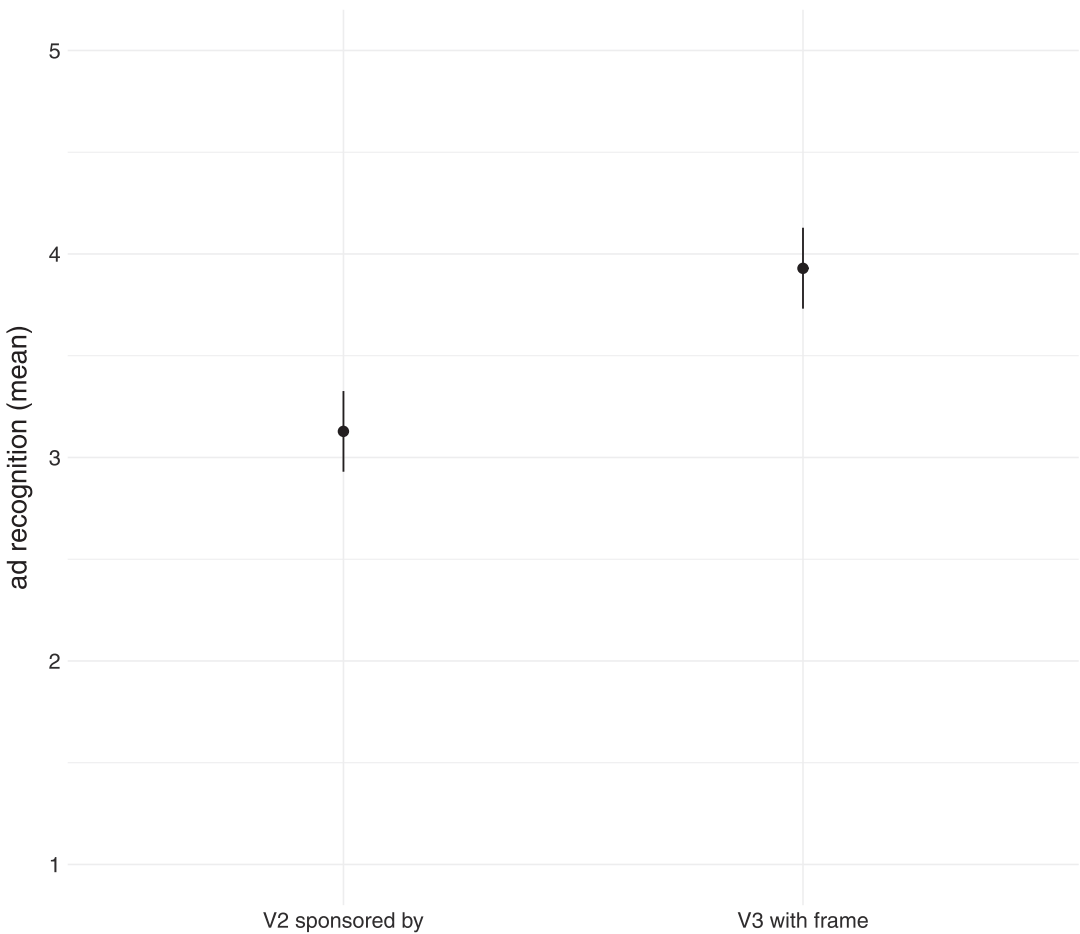
FIGURE 4 Ad-recognition

DISCUSSION

Based on a two-part eye-tracking study with 177 participants this study investigated how new advertising policies that were implemented by Facebook 2018 contribute to more transparency concerning the ads. More specifically, we wanted to gain insights into how different types of disclaimers on Facebook—varying with regard to their prominence within an ad—affect attention, ad recognition, recall and perceived intrusiveness of political ads as well the effect on general DPA acceptance.

The results of our eye-tracking experiment reveal that the participants' fixation of ad disclaimers did not differ along the prominence of the disclaimer (H1), nor did the prominence of the disclaimer affect the time spent on the ad itself. Thus, contrary to our assumptions of bottom-up processing, disclaimers that are more prominent with regard to size, visibility, and contain more advertising information do not foster more attention. However, results show that independently of the type of disclaimer only a minority of users fixate the disclaimers at all. Thus, the majority of users do not visually perceive the information that the post was paid for by a party and consequently are potentially not aware of it. Taken together, disclaimers are largely not visually perceived by users and this also
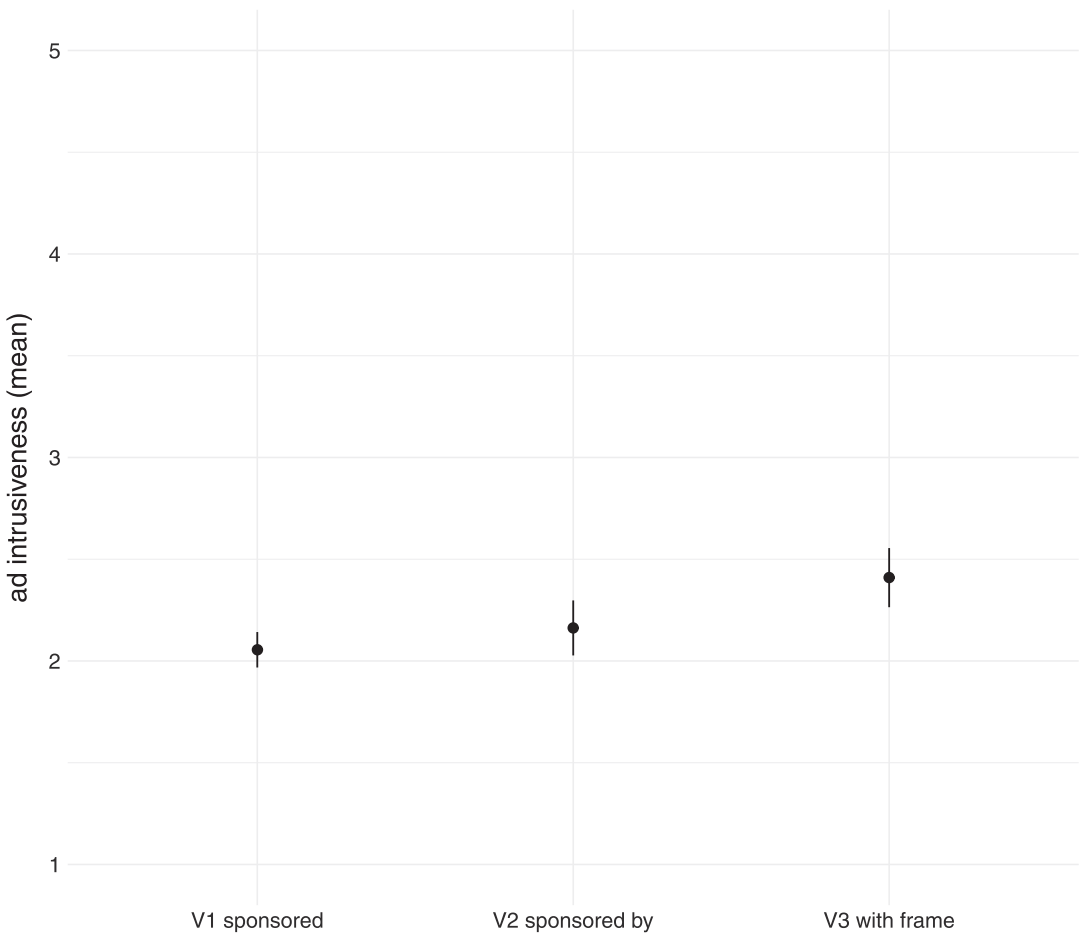
FIGURE 5 Perception of ad-intrusiveness

applies to disclaimers that are more conspicuous and contain more information. One explanation could be that users are predominantly interested in the content of the ad and focus their attention on the other and more salient parts of it (e.g., headline and picture).

Although there is little difference in the fixation duration, the results show significant differences in ad recall which are explained by the prominence of the disclaimers. While only about one-fifth of the participants correctly remembered the DPA across all three versions, the proportion for the self-designed version is about five and respectively three times higher than for the disclaimers used by Facebook in the past and currently (H2). In addition, 73% of those who actually fixated the prominent disclaimer correctly recalled the ad. This proportion is much lower for both Facebook's old (5%) and current disclaimer version (19%). This suggests that the versions used by Facebook are not perceived as advertising disclaimers, which implies that Facebook's current (and past) labeling practices are insufficient in creating awareness for DPA.

Moreover, the results show that participants attribute the ad with the most prominent disclaimer (version 3) more of an advertising character compared to the version currently used by Facebook (version 2; H3). This highlights that a short additional text is not successful in creating transparency about the advertising intent of a post. Rather, a
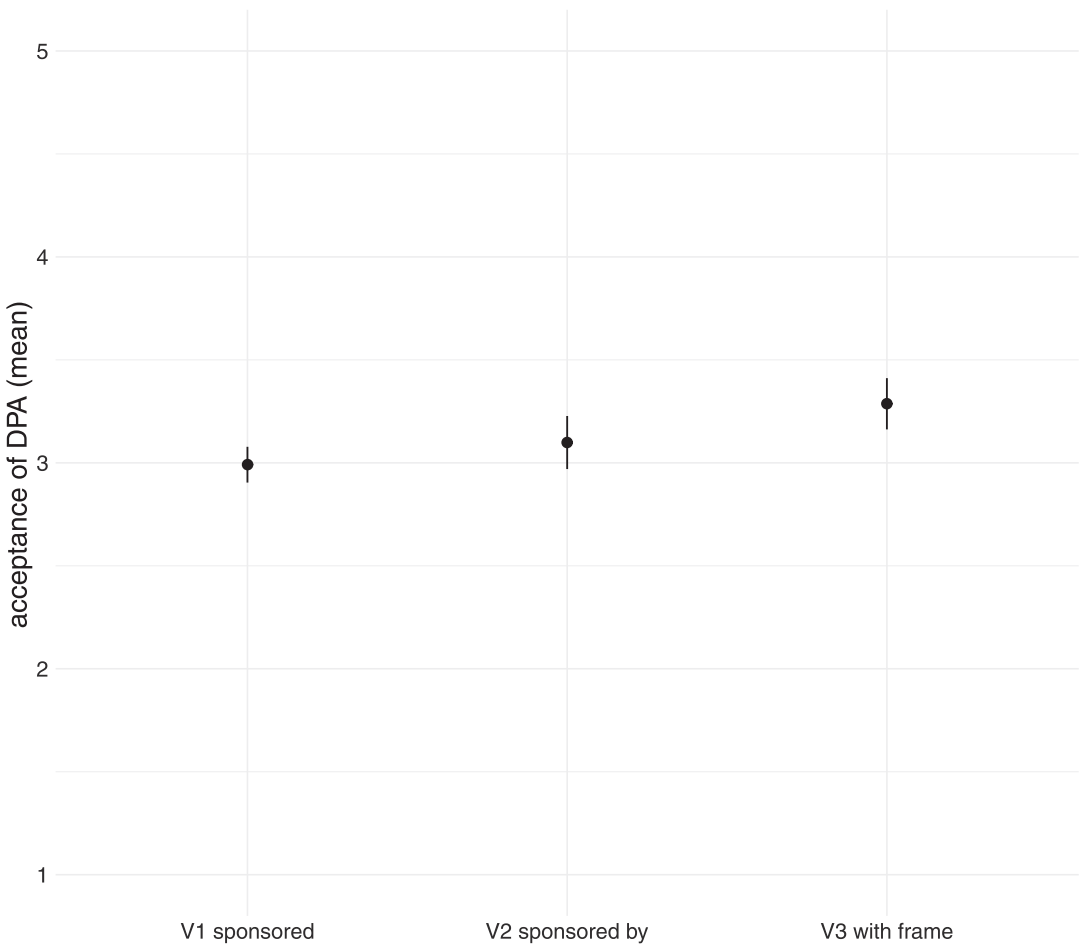
FIGURE 6 General acceptance of digital political advertising (DPA).

disclaimer seemingly has to stand out graphically in order for users to distinguish a DPA from organic messages. Interestingly, even though only a minority of the participants fixated the disclaimers and recalled that they had encountered a "sponsored" post, ad recognition was relatively high for both versions tested here. This could be attributed to the fact that users might also perceive that it is an ad from its content.

Further, the DPA messages were perceived by the subjects as not very intrusive. Contrary to our assumptions, the prominence of the disclaimer had no significant influence on this perception (H4) nor did the disclaimers significantly influence the general acceptance of DPA (RQ1). This could be due to the fact that although perception, as well as recall of promotional content, increased with the prominence of the disclaimer, the perceived transparency equalized the negative effects of persuasive knowledge at the same time, as was found in studies on native advertising (e.g., Beckert et al., 2021).

Overall, our findings can be summed up as follows: First, increasing the visibility of disclaimers does not foster more visual attention to them. Furthermore, only a low number of participants fixated the disclaimers at all. Thus, even with (prominent) disclaimers embedded within the ads users might not be more aware that they are confronted with DPA. Second, more prominent disclaimers increase the ability of users to recall that they have seen a sponsored

post. However, this holds only true for the "fictitious" version that we created for the purpose of this study to simulate even more transparency than is currently applied on Facebook. Third, ad recognition can be promoted when more graphically prominent disclaimers are used. Fourth, users do not feel annoyed by ads—independently of the type of ad disclaimers. Even participants that were exposed to the ad with the most prominent disclaimer did not report a high level of perceived intrusiveness. Fifth, also when it comes to the acceptance of DPA participants did not differ strongly in their judgements. The results even imply that the visually most conspicuous disclaimer might lead to a higher degree of acceptance. Taken together, even though users might be able to better recall that they encountered an ad with rising transparency this does not have negative consequences when it comes to feeling of intrusiveness or general acceptance of DPA. From the point of view of political parties and Facebook, these results can be seen positive, because higher transparency of the disclaimers does not increase the risk that DPA will be perceived as advertising or rated as annoying. Thus, the opaque targeting practices of DPA can still be conducted without much transparency and scrutiny.

LIMITATIONS

The results of the study should be viewed in light of some limitations. First, the study was conducted in a student sample, due to the expense of recruiting participants for an eye-tracking study. While we ensured equal distribution of potentially relevant variables between experimental groups, it still seems possible that higher use of social media or greater political interest compared to the general population might have increased general acceptance of DPA. On the other hand, intensive use is related to media literacy (Balaban-Sali, 2012), which leads to a more critical processing of media content and, thus, might increase the tendency to recognize the advertorial intention of the DPA posts. The question, whether the results are sample-specific, could be answered in future studies using population-representative samples.

Further, we examined DPA on Facebook and developed our own disclaimer within a platform-specific layout. The extent to which the results can be transferred to other networks depends not least on the layout of the platforms but might also be due to the specific design of our disclaimer. Further studies might include other platforms as well as examine other gradations of the disclaimer when exploring the reception and impact of DPA.

Due to the complex and time-consuming research design, the study had to operate with a comparatively small number of participants, which is why we can only speculate about possible mechanisms of the effect of various disclaimers at this point. Future studies might apply greater samples and use mediation models to examine the extent to which the effect of perceived transparency and the perception of the advertorial content on the acceptance of DPAs cancel each other out (e.g., Beckert et al., 2021).

Even though eye-tracking enables us to gain valuable insights into attention distribution the method itself comes with limitations. For instance, eye-tracking only measures where users direct their overt attention within a stimulus. It is possible that participants did perceive the disclaimer through peripheral vision without fixating this area of interest. This could explain why a high(er) share of participants recalled the ad and scored high on the ad recognition scale compared to a relatively low number of participants fixating the disclaimer (s). Furthermore, the results of the eye-tracking suggest that the DPA post was viewed. However, we cannot rule out that participants tuned out the DPA message without processing them.

Against the background of the limitations, the study should rather be understood as the "tip of the iceberg" that provides starting points for further research. To tackle the limitations and to validate the results, future research might not rely on gaze behavior measurement

alone but to combine these data with additional information about the participants' perception of the Newsfeed and the disclaimers. Future studies might let the participants watch their recorded scrolling and gaze behavior and document their impressions with guided interviews or the method of thinking aloud, which could provide valuable information about the boundary conditions of the (non)perception of the disclaimers.

CONCLUSION

Despite the limitations, the study provides insights into the relevance of different types of disclaimers on awareness and evaluation of ads and thereby contributes to the ongoing discussion about transparency of DPA on Facebook.

The results of our study show that Facebook's revised version of the disclaimer - which was introduced in the wake of the 2016 US Presidential Election to increase transparency of political ads - did neither improve the detection nor the recall of DPA compared to the disclaimer used beforehand until May 2019. In its current form, the labeling does not meet the democratically necessary requirement for a transparent design of advertising labeling. Thus, the persuasive intent of DPA messages remains invisible to the majority of the recipients. Our results further show that a more prominent disclaimer of DPA, clearly distinguished from non-advertising content, leads to a better awareness of DPA. Against the backdrop of these findings and the demand for a more transparent design, we argue, that it is necessary for Facebook to revise its ad disclaimers.

For audiences it could be helpful to provide more information and media literacy about disclaimers on social media platforms because many users seem not to be familiar with the design and meaning of a disclaimer and thus not conclude that they are exposed to a paid advertisement (Binford et al., 2021). Since it does neither seem to diminish DPA's acceptance nor foster the feeling of intrusiveness, a more prominent labeling will neither undermine the inclusive function of DPA nor risk platforms' business models. Therefore, we argue, that companies should muster the courage to revise their disclaimers for the sake of transparency and enable citizens to make informed decisions when processing DPA messages.

It should be noted that disclaimers are not a sufficient condition for creating transparency, nor do they deter actors from abusing DPA. However, they might contribute to transparency by enabling users to distinguish paid content from unpaid content. Citizens are then more likely to identify the persuasive intent before processing the message and might be more suspicious when evaluating messages' content. Whether the implementation of new disclaimers and other policy revisions have the intended impact should be the subject of future studies.

ORCID
Pablo Jost http://orcid.org/0000-0001-9267-1773
Simon Kruschinski http://orcid.org/0000-0002-3185-5656
Jörg Haßler http://orcid.org/0000-0003-2907-5228

REFERENCES

Andreou, A., Silva, M., Benevenuto, F., Goga, O., Loiseau, P., & Mislove, A. (2019). Measuring the Facebook advertising ecosystem. *NDSS 2019—Proceedings of the Network and Distributed System Security Symposium*, 1–15.

Balaban-Sali, J. (2012). New media literacies of Communication students. *Contemporary Educational Technology, 3*(4), 265–277.

Beckert, J., Koch, T., Viererbl, B., & Schulz-Knappe, C. (2021). The disclosure paradox: How persuasion knowledge mediates disclosure effects in sponsored media content. *International Journal of Advertising*, *40*(7), 1160–1186. https://doi.org/10.1080/02650487.2020.1859171

Bialkova, S., Grunert, K. G., & van Trijp, H. (2013). Standing out in the crowd: The effect of information clutter on consumer attention for front-of-pack nutrition labels. *Food Policy*, *41*, 65–74. https://doi.org/10.1016/j.foodpol.2013.04.010

Binford, M. T., Wojdynski, B. W., Shuoya Sun, Y.-I. L., & Briscoe, A. (2021). Invisible transparency: Visual attention to disclosures and source recognition in Facebook political advertising. *Journal of Information Technology & Politics*, *18*(1), 70–83. https://doi.org/10.1080/19331681.2020.1805388

Boerman, S. C., Willemsen, L. M., & van der Aa, E. P. (2017). This post is sponsored. *Journal of Interactive Marketing*, *38*, 82–92. https://doi.org/10.1016/j.intmar.2016.12.002

Campbell, C., & Evans, N. J. (2018). The role of a companion banner and sponsorship transparency in recognizing and evaluating article-style native advertising. *Journal of Interactive Marketing*, *43*, 17–32. https://doi.org/10.1016/j.intmar.2018.02.002

Crain, M., & Nadler, A. (2019). Political manipulation and Internet advertising infrastructure. *Journal of Information Policy*, *9*, 370–410. https://doi.org/10.5325/jinfopoli.9.2019.0370

Dobber, T., Ó Fathaigh, R., & Zuiderveen Borgesius, F. J. (2019). The regulation of online political micro-targeting in Europe. *Internet Policy Review*, *8*(4). https://doi.org/10.14763/2019.4.1440

European Commission. (2020). On the European democracy action plan. Retrieved online from https://ec.europa.eu/info/sites/info/files/edap_communication.pdf

European Commission. (2021). Proposal for a regulation of the European Parliament and of the Council on a single market for digital services (Digital Services Act) and amending Directive 2000/31/EC. https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=72148

Greussing, E., Kessler, S. H., & Boomgaarden, H. G. (2020). Learning from science news via interactive and animated data visualizations: An investigation combining eye tracking, online survey, and cued retrospective reporting. *Science communication*, *42*(6), 803–828. https://doi.org/10.1177/1075547020962100

Haßler, J., Maurer, M., & Oschatz, C. (2019). What you see is what you know: The influence of involvement and eye movement on online users' knowledge acquisition. *International Journal of Communication*, *13*, 3739–3763. https://ijoc.org/index.php/ijoc/article/view/10937

Ikonen, P., Luoma-aho, V., & Bowen, S. A. (2017). Transparency for sponsored content: Analysing codes of ethics in public relations, marketing, advertising and journalism. *International Journal of Strategic Communication*, *11*(2), 165–178. https://doi.org/10.1080/1553118X.2016.1252917

Iversen, M. H., & Knudsen, E. (2019). When politicians go native: The consequences of political native advertising for citizens' trust in news. *Journalism*, *20*(7), 961–978. https://doi.org/10.1177/1464884916688289

Just, M. A., & Carpenter, P. A. (1980). A theory of reading: From eye fixations to comprehension. *Psychological Review*, *87*(4), 329–354.

Kefford, G., Dommett, K., Baldwin-Philippi, J., Bannerman, S., Dobber, T., Kruschinski, S., Kruikemeier, S., & Rzepecki, E. (2022). Data-driven campaigning and democratic disruption: Evidence from six advanced democracies. *Party Politics*. https://doi.org/10.1177/13540688221084039

Kim, T., Barasz, K., & John, L. K. (2019). Why am I seeing this ad? The effect of ad transparency on ad effectiveness. *Journal of Consumer Research*, *45*(5), 906–932. https://doi.org/10.1093/jcr/ucy039

King, A. J., Bol, N., Cummins, R. G., & John, K. K. (2019). Improving visual behavior research in communication science: An overview, review, and reporting recommendations for using eye-tracking methods. *Communication Methods and Measures*, *13*(3), 149–177. https://doi.org/10.1080/19312458.2018.1558194

Knowles, E. S., & Linn, J. A. (2004). *Resistance and persuasion*. Lawrence Erlbaum Associates.

Kruikemeier, S., Sezgin, M., & Boerman, S. C. (2016). Political microtargeting: Relationship between personalized advertising on Facebook and voters' responses. *Cyberpsychology, Behavior and Social Networking*, *19*(6), 367–372. https://doi.org/10.1089/cyber.2015.0652

Kruschinski, S., & Bene, M. (2022). In varietate concordia?! Political parties' digital political marketing in the 2019 European Parliament election campaign. *European Union Politics*, *23*(1), 43–65. https://doi.org/10.1177/14651165211040728

Kruschinski, S., Haßler, J., Jost, P., & Sülflow, M. (2022). Posting or Advertising? How Political Parties Adapt Their Messaging Strategies to Facebook's Organic and Paid Media Affordances. *Journal of Political Marketing*. https://doi.org/10.1080/15377857.2022.2110352

Li, H., Edwards, S. M., & Lee, J.-H. (2002). Measuring the intrusiveness of advertisements: Scale development and validation. *Journal of Advertising*, *31*(2), 37–47. https://doi.org/10.1080/00913367.2002.10673665

Mayer, R. E. (2017). Using multimedia for e-learning. *Journal of Computer Assisted Learning*, *33*(5), 403–423. https://doi.org/10.1111/jcal.12197

Mayer, R. E. (2005). Cognitive theory of multimedia learning. In R. E. Mayer (Ed.), *Cambridge handbooks in psychology: The Cambridge handbook of multimedia learning* (pp. 31–48). Cambridge University Press.

McCoy, S., Everard, A., Polak, P., & Galletta, D. F. (2008). An experimental study of antecedents and consequences of online ad intrusiveness. *International Journal of Human-Computer Interaction*, *24*(7), 672–699. https://doi.org/10.1080/10447310802335664

Mehta, S., & Erickson, K. (2022). Can online political targeting be rendered transparent? Prospects for campaign oversight using the Facebook Ad Library. *Internet Policy Review*, *11*(2), 1–30.

Meißner, M., & Oll, J. (2019). The promise of eye-tracking methodology in organizational research: A taxonomy, review, and future avenues. *Organizational Research Methods*, *22*(2), 590–617. https://doi.org/10.1177/1094428117744882

Moran, R. E. (2017). Who's behind that political ad? The FCC's online political files and failures in sponsorship identification regulation. *International Journal of Communication*, *11*(2017), 4702–4717.

Morimoto, M., & Macias, W. (2009). A conceptual framework for unsolicited commercial e-mail: Perceived intrusiveness and privacy concerns. *Journal of Internet Commerce*, *8*(3–4), 137–160. https://doi.org/10.1080/15332860903467342

Noguti, V., & Waller, D. S. (2020). Motivations to use social media: Effects on the perceived informativeness, entertainment, and intrusiveness of paid mobile advertising. *Journal of Marketing Management*, *36*(15–16), 1527–1555. https://doi.org/10.1080/0267257X.2020.1799062

Orquin, J. L., & Mueller Loose, S. (2013). Attention and choice: A review on eye movements in decision making. *Acta Psychologica*, *144*(1), 190–206. https://doi.org/10.1016/j.actpsy.2013.06.003

Paivio, A. (1986). *Mental representations: A dual coding approach*. Oxford University Press.

Le Pochat, V., Edelson, L., Van Goethem, T., Joosen, W., McCoy, D., & Lauinger, T. (2022). An audit of Facebook's political ad policy enforcement. In *Proceedings of the 31st USENIX Security Symposium*. USENIX Association.

Sülflow, M., Schäfer, S., & Winter, S. (2019). Selective attention in the news feed: An eye-tracking study on the perception and selection of political news posts on Facebook. *New Media & Society*, *21*(1), 168–190. https://doi.org/10.1177/1461444818791520

US Congress. (2021). Platform Accountability and Transparency Act. https://www.coons.senate.gov/imo/media/doc/text_pata_117.pdf

Wojdynski, B. W., & Evans, N. J. (2020). The covert advertising recognition and effects (CARE) model: Processes of persuasion in native advertising and other masked formats. *International Journal of Advertising*, *39*(1), 4–31. https://doi.org/10.1080/02650487.2019.1658438

Zuiderveen Borgesius, F. J., Möller, J., Kruikemeier, S., Ó Fathaigh, R., Irion, K., Dobber, T., Bodo, B., & De Vreese, C. (2018). Online political microtargeting: Promises and threats for democracy. *Utrecht Law Review*, *14*(1), 82–96. https://doi.org/10.18352/ulr.420

SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.