Visual attention to mobilizing political social media posts: An eye-tracking study

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This is a pre-copyedited, author-produced version of an article accepted for publication in *Journal of Visual Political Communication* (Intellect Books) following peer review.

Citation: Gaul, A., Pohl, K., Schmidbauer, E., Kümpel, A. S., & Haßler, J. (in press). Visual attention to mobilizing political social media posts: An eye-tracking study. *Journal of Visual Political Communication*.

VISUAL ATTENTION TO MOBILIZING SOCIAL MEDIA POSTS

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Abstract

This study employs an eye-tracking experiment with Instagram posts to explore how (political)

actors can capture users' attention with mobilizing messages and encourage political

participation. Grounded in the Elaboration Likelihood Model (ELM), the study investigates both

top-down (low vs. high involvement) and bottom-up factors (neutral vs. activating image;

political vs. non-political source) in influencing political participation. The findings indicate that

issue involvement is a significant predictor of low-threshold participation (liking, sharing), while

task involvement significantly predicts high-threshold participation ([intention to] purchase).

Additionally, visual attention significantly affects high-threshold but not low-threshold

participation. These results contribute to understanding attentional mechanisms in political

mobilization and provide strategic insights for designing effective visual social media

campaigns.

Keywords: Visual attention, eye-tracking, political participation, involvement

Introduction

Political activists, politicians, and parties increasingly rely on social media platforms as central tools for mobilization, as these platforms facilitate crucial contact with citizens (Verba et al. 1995; Wurst et al. 2023). However, capturing users' attention—especially among those least interested in politics—remains a significant challenge. Research suggests that such individuals often avoid or quickly skip political content on social media (Bode et al. 2017). One possibility to draw the attention of citizens on social media and to promote engagement is to create posts that visually guide recipients' gaze by using eye-catching images or direct calls to action (Keib et al. 2018; Moran et al. 2020; Vraga et al. 2016). Successfully attracting users' attention increases the likelihood of motivating them to take political action, such as signing a petition, commenting on, or sharing a post (Valenzuela et al. 2019). Against this background, this pilot study seeks to explore how political actors can effectively mobilize users to participate politically. To address this question, we examine both users' intentions to engage politically and their actual behavior.

Grounded in the *Elaboration Likelihood Model* (ELM; Petty and Cacioppo 1986), we rely on an eye-tracking study to investigate which factors may determine participation. Eye-tracking research is based on two key assumptions: the immediacy hypothesis, which posits that cognitive appraisal occurs immediately during visual processing, and the eye-mind hypothesis, which suggests that individuals focus on objects only as long as they are cognitively evaluating or interested in them (Just and Carpenter 1980; Rakoczi 2012). These assumptions imply that eye movement patterns can be used to analyze information absorption and that visual attention to an object is a necessary prerequisite for content processing and subsequent political engagement (Geise et al. 2021).

This paper first discusses the role of social media in promoting political participation. It further examines the role of attention in the elaboration process within a political scenario, specifically focusing on sustainability-related content on Instagram. We discuss potential influencing factors of visual attention in the context of attention-related top-down approaches where attention is guided by involvement and interest—and bottom-up approaches, where attention is guided by design and content. Furthermore, we discuss how these top-down and bottom-up factors, alongside (visual) attention, are related to (the motivation to take) political action. The results of our eye-tracking study indicate that both involvement and visual attention are linked to different forms of participation. The study also provides insights into how (political) communicators can mobilize citizens. Overall, our findings suggest that the organizers of political campaigns can encourage participation through targeted messaging for engaged audiences (low-threshold participation) and visually compelling content with mobilizing messages (higher-threshold participation). Although our study is based on a relatively small and homogenous sample of university students, which limits the generalizability of the findings, it offers valuable insights that can inform future research on digital political mobilization.

Visual attention to mobilizing political social media posts

The role of social media in political participation and mobilization

Citizen participation in political processes is fundamental to sustaining and advancing democratic systems (van Deth 2009). Political participation refers to "individualized, creative, expressive, and everyday forms of engagement with societal and political issues" (Theocharis et al. 2021: 31). It encompasses various forms, including offline and online participation. Offline participation includes political activities outside the digital sphere, like casting a vote, joining a

demonstration or signing a paper petition (Vissers and Stolle 2013), while online participation refers to digital activities, like commenting on political issues. With the rise of social media platforms in recent decades, online political participation has become increasingly important, particularly on image- and video-based platforms like Instagram gaining significant prominence in this context in recent years (Theocharis et al. 2023). Online political participation on social media is often associated with low-effort, low-commitment behaviors, such as liking or sharing posts (Kristofferson et al. 2014). These lower-threshold forms of online political participation may not always stem from strong political motivations and do not necessarily translate into higherthreshold engagement (Vaccari et al. 2015). However, studies have shown that online political participation can also afford high effort and facilitate impactful political action, as for example the Arab Spring or #MeToo proved (Brünker et al. 2020; Karpf 2017; Tufekci, 2017). Higherthreshold participation requires more resources (such as time, skills, or financial resources), and includes activities such as contacting politicians or campaigning for or against political actors (Vaccari et al. 2015; Verba et al. 1995). This study examines both lower- and higher-threshold forms of political (online) participation.

The willingness to engage in political participation can be enhanced through effective political mobilization (Theocharis 2015). Social media platforms, like Instagram, offer political actors several advantages in reaching potential audiences, such as voters, and mobilizing them to take action. First, political actors maintain message control on these platforms, allowing them to directly determine the content of their posts without interference from journalists as gatekeepers (Christenson et al. 2014; Magin et al. 2017). Second, engagement metrics (e.g., likes, comments, and shares) facilitate broader dissemination of posts, potentially expanding their reach beyond the initial audience of party or candidate followers ('logic of virality', Klinger and Svensson

2015: 1248). Third, political actors can utilize microtargeting to direct content to specific audiences, increasing the likelihood of reaching users who might not have been exposed to the message otherwise (Haller and Kruschinski 2020). Fourth, social media can also attract the attention of journalists, potentially leading to coverage in traditional media and extending its reach to non-social media users (Theocharis and van Deth 2018). For these reasons, social media platforms are an ideal tool for informing, interacting with, and mobilizing potential voters (Christenson et al. 2014).

A crucial condition for mobilizing citizens is establishing effective contact between political actors and citizens through targeted messaging. This contact is essential for two reasons:

- (1) From the perspective of citizens, exposure to political content is fundamental in fostering intentions to participate. Verba et al. identified three main reasons why individuals might refrain from political engagement: "because they can't; because they don't want to; or because nobody asked" (1995: 269). In addition to individual characteristics and attitudes, participation intentions are influenced by how effectively political actors address citizens. Capturing attention and interest is critical in fostering politically participatory behavior.
- (2) From the perspective of political actors, this contact is also a starting point for their efforts to mobilize potential voters (Boulianne et al. 2020). When users pay attention to content from parties or candidates, they are more likely to become politically motivated (Valenzuela et al. 2019). One effective way to attract attention is through direct calls for political action, known as *calls to participate* (Heiss and Matthes 2016).

For both citizens and political actors, it is therefore essential for fostering political participation that citizens are adequately addressed. Previous studies have shown that visual presentation is particularly important when trying to capture users' attention (Duchowski 2017;

Josephson and Miller 2015). Among visual social media, Instagram offers an especially suitable context for studying the connection between visual attention and political participation, as it predominantly features visual content like images and videos. This study, therefore, examines how Instagram users engage with images and embedded calls for participation.

The role of (visual) attention in the elaboration process

A normative principle rooted in democratic theory is that citizens should form their opinions and attitudes through thorough and active engagement with those issues (Klimmt and Rosset 2020; Pohl 2023). However, this idea of a rational-thinking person is criticized by theories such as the ELM (Petty and Cacioppo 1986), which assumes that people do not always consider all available information when making (political) decisions. While the ELM does not target a specific type of behavior, previous research has linked it to the processing of political information (e.g., Earnheardt 2013; Shahin et al. 2020). In this study, we apply the ELM to explore how political participation develops.

The basic idea of the ELM is that messages can be processed on a central route and a peripheral route, that is, in a dual process. These two routes differ in the probability (likelihood) that a person will engage with, think about, and process the message's information (O'Keefe 2008). The depth of message processing is also called elaboration (Petty and Cacioppo 1986). On the central route, individuals actively engage with the content and arguments of a message (e.g., in social media posts), which is called strong elaboration. On the peripheral route, recipients focus less on the actual content and form their opinion based on peripheral aspects like design and visualization; this is called weak elaboration (Petty and Cacioppo 1986). Persuasive outcomes of the central route of processing tend to be more enduring, resistant to

counterarguments, and are stronger linked to subsequent behavior compared to those from the peripheral route (Holbert et al. 2010; Petty and Wegener 1999).

Which of these two routes applies to an individual and how processing affects attitudes toward the behavior depends on three groups of factors: (1) the characteristics of the message, (2) the characteristics of the person, and (3) the characteristics of the situation (Klimmt and Rosset 2020).

- (1) The *characteristics of the message* include factors such as the strength of its arguments, the design and layout of the post, its tone and clarity, and the rhetorical strategies used to convey the message. Additionally, users' attitudes toward the creator of the post influence the elaboration. Previous research comparing social, news-based, and political posts indicates that social media users pay more attention to social and news-based posts than to political posts (Vraga et al. 2016). When users identify a post as political—often triggered by the first political word—they tend to skip it (Bode et al. 2017; Vraga et al. 2016).
- (2) Important *characteristics of the persons*—those who are exposed to the social media post—include their predispositions, such as their ability to process information, often referred to as involvement. Involvement signifies the personal relevance an issue or message holds for a person (Petty and Cacioppo 1979). High involvement increases the motivation to elaborate the post message; low involvement decreases this motivation (Petty and Cacioppo 1986). In the context of political mobilization, prior research suggests that individuals highly involved in a specific political issue are more likely to engage in central-route processing, which positively influences political participation (Earnheardt 2013).
- (3) According to the ELM, the *characteristics of the situation* in which a person encounters a message are also crucial. Whether an individual is actively seeking information or

passively and incidentally comes across a message significantly affects their elaboration process. Shahin et al. (2020) found that intentional news exposure promotes both higher-threshold (offline) and lower-threshold (online) forms of participation via the central route of elaboration. In contrast, incidental news exposure enhances lower-threshold participation through the peripheral route. These findings align with Earnheardt (2013), who found that information-seeking is positively associated with central route processing of political content. Further, this context is closely linked to time constraints and stress, which limit the ability to consider all the arguments presented. Additionally, the level of distraction plays a key role; higher levels of distraction lead to weaker elaboration. Therefore, maintaining the person's attention is crucial (Eveland 2001; Petty and Cacioppo 1986).

Concerning visual attention, a distinction is usually made between two basic approachs, the conscious approach, also called the *top-down approach*, and the unconscious, saliency-based approach, also called the *bottom-up approach* (Bucher and Schumacher 2006; Vraga et al. 2016). Top-down processes refer to recipients' preferences, intentions, and competencies that determine which information they pay attention to (Kruikemeier et al. 2018). Individual characteristics that can be assigned to the top-down processes are, for example, age (Kirkorian et al. 2012), knowledge (Theeuwes et al. 2006), or motivation (Cao et al. 2019). The bottom-up approach assumes that concrete cues within the information, for example, in the design or form of a message, influence attention to this information (Kruikemeier et al. 2018). However, a sharp distinction between both processes is impossible in complex media environments (Bucher and Schumacher 2012). For this reason, some researchers assume that both processes occur in parallel (Bucher and Schumacher 2012; Vraga et al. 2016). In addition, it can be assumed that the top-down approach is particularly important in online environments, like social media

platforms, where users have more individual control over the flow of information. In these 'pull' media, users actively select the content they engage with. This contrasts with traditional 'push' media like print publications, where information is passively received (Haßler et al. 2019; Kruikemeier et al. 2018). This study includes both approaches by examining (1) the role of individual characteristics (top-down) and (2) the influence of message characteristics (bottomup) as well as the effect of (visual) attention on political participation.

Factors influencing political participation on (visual) social media platforms

In a highly dynamic information environment with virtually unlimited access to information, capturing users' attention—and subsequently promoting political participation—is challenging (Ferrara 2020). Both user characteristics (top-down) and elements within the post itself (bottom-up) influence the elaboration process, shaping outcomes such as political participation. Drawing on the ELM, this study examines the impact of involvement as a top-down factor, the post's source and image as bottom-up factors, and (visual) attention as predictors of political participation. Altogether, we formulate four research questions.

The ELM suggests that an individual's level of involvement influences how persuasive messages promoting political participation are processed: Higher levels of involvement enhance persuasive effects on attitudes, intentions, and behaviors through the central route of processing (Petty et al. 1983). Highly involved individuals engage more intensively with a message and evaluate it thoughtfully (O'Keefe 2008). While both routes of the ELM can result in persuasion, attitude changes achieved through the central route have a stronger impact on behavior

¹ For reasons of transparency, it should be stated at this point that we included more outcome variables in the initial study design. However, we focus on factors influencing political participation as an outcome supporting democratic processes (van Deth 2009) to sharpen the focus of the paper.

(Verplanken 1991). In addition to *task involvement*, which refers to the intensity of engagement with the post, we also examine *issue involvement*, which reflects a pre-existing interest in the topic addressed by the message. We assume that both task and issue involvement are linked not only to lower-threshold activities like liking and sharing but also to higher-threshold activities beyond online engagement. Thus, our first research question is:

RQ1: How are lower- and higher-threshold forms of involvement related to a) the likelihood to like a post, b) the likelihood to share a post, c) behavioral intentions, and d) actual behavior?

In addition to involvement as a bottom-up factor, the source of a message can play an important role in information processing. Simple cues like the message source can influence persuasive outcomes, especially when involvement is low (Petty and Cacioppo 1984). These source cues may include the source's expertise (Petty et al. 1981) or its level of popularity (Petty et al. 1983). This study examines how political versus non-political sources impact information processing, considering the role of partisan preferences in shaping these effects (Jennings 2019). Given the tendency for political social media content to attract less attention, leading to reduced elaboration and persuasive impact, we pose the following research question:

RQ2: How does a post from a politician compared to a post from a company influence a) the likelihood to like a post, b) the likelihood to share a post, c) behavioral intentions, and d) actual behavior?

Moreover, images can play a key role in capturing attention and fostering participation (Geise et al. 2020; Geise et al. 2021; Keib et al. 2018). Geise and colleagues (2020) found that visually appealing images in news articles—particularly those that are surprising or emotional—positively affect users' intention to participate online. Furthermore, emotional images can increase the likelihood of sharing and clicking on a post (Keib et al. 2018). While negative images also capture attention, they do not necessarily enhance online participation (Geise et al. 2020). However, negative images depicting protest mobilization can increase the intention to engage in offline protests (Geise et al. 2021). These findings suggest that images can influence recipients' willingness to participate in politics, making them a critical element for mobilization (Doerr et al. 2013). Thus, we explore whether activating images encourage political participation:

RQ3: Do activating images influence a) the likelihood of liking a post, b) the likelihood of sharing a post, c) behavioral intentions, and d) actual behavior?

Just and Carpenter (1980) demonstrated through eye-tracking that people focus on an object as long as they are cognitively processing it. Thus, longer fixation can serve as an indicator of more intensive elaboration (Sülflow et al. 2019). The central role of (visual) attention in information processing has been explored in several empirical studies. Kim and colleagues (2021) investigated how different communication strategies influence misperceptions about vaccines using eye-tracking. They concluded that attention precedes information processing and serves as a first step in reducing misperceptions. In a political context, Geise and colleagues (2021) found that a longer fixation on negative protest images increases willingness

to participate. However, prolonged fixation on news text does not necessarily increase political engagement. Given these mixed empirical findings, we propose the following research question:

RQ4: Does fixation duration on post text and post image influence a) the likelihood to like a post, b) the likelihood to share a post, c) behavioral intentions, and d) actual behavior?

Method

Procedure, participants, and stimulus design

We conducted a laboratory experimental study using a mobile eye-tracking device followed by a survey. The study employed a 2 x 2 x 2 between-subject design, varying three factors: (1) the instruction provided before the stimulus, (2) the image, and (3) the source of an Instagram post. We used the Tobii Pro Fusion 120 Hz eye-tracker, attached to a desktop computer screen. Participants were provided with a computer mouse and keyboard to complete the survey component independently. The experiment was carried out in a controlled setting to ensure consistent lighting and minimal distractions.

After conducting a pretest with five participants, the field phase took place between June 13 and July 28, 2022. We recruited 108 students from a large German university. Study participants whose calibration values did not meet the requirements (accuracy or precision > 1-degree deviation) were excluded from the analysis (n = 8). We also excluded participants who looked at the stimulus < 60 seconds or > 400 seconds (n = 3) and who failed our attention checks (n = 30). These checks required participants to correctly identify statements about the post's content and author as "true" or "false." The final sample consists of 67 participants.

Of these, 64 % were female, and their ages ranged from 18 to 31 years (M = 23.7, SD = 2.72, Mdn = 24). 57 % of the participants held a college degree (BA or higher).

Table 1. *Gender, Age and Education of the Participants (Absolute Numbers)*

	Low involvement $(n = 31)$	High involvement $(n = 36)$
female	22	20
male	9	16
diverse	0	0
< 20 years old	2	1
20-24 years old	18	22
25-29 years old	10	13
> 29 years old	1	0
No college degree	15	15
College degree (BA or higher)	16	21

The study began with a questionnaire, followed by the calibration of the eye-tracking device under the guidance of the experimenter to ensure minimal deviation in accuracy and precision. Participants were then presented with instructions, followed by the stimulus, incorporating various experimental manipulations: First, participants received an instruction-based manipulation, including information on how to perform subsequent tasks within the experiment (Koch et al. 2019). It contained a variation of the *task involvement*, differentiating between high and low involvement. In the high-involvement condition, participants were instructed to closely examine the post, as they would answer questions about it afterward. In contrast, participants in the low-involvement condition were directed to view the post as they would in their daily Instagram use, simulating a typical newsfeed experience.

In addition to the instruction-based manipulation, we also included a stimulus-based manipulation by creating social media posts that matched Instagram's current layout. The text of

the post, the likes, and the feed of the post source (visible in the background) remained identical across all variations. The post's message was also consistent: It provided information about an initiative related to Munich's Oktoberfest, the world's largest folk festival. In order to organize the Oktoberfest in a more climate-friendly way, the participants were informed that they could buy a pin in advance, with the proceeds going to environmental organizations. In addition, they could wear the pin at the Oktoberfest, which would result in further donations for every drink purchased.

Four different stimulus variations were randomly assigned: The post's *source* was either a well-known politician from the conservative Christian Social Union (CSU), Markus Söder, or the non-political commercial beer company Hacker Pschorr. Furthermore, the stimuli varied on whether a neutral or an active *post image* was displayed. The neutral image showed a pretzel, while the active image displayed a group in traditional Bavarian attire, with a young man at the center of the picture pointing directly at the camera. The active image was loosely inspired by the iconic 'I want you for US Army' poster (see Table 2). All images included a short mobilization call that read 'Heads up! Be part of it, get a pin, and show your support for the environment.' The stimulus was displayed entirely on a single screen, eliminating the need for participants to navigate with the mouse while viewing it. Once participants had finished examining the stimulus, they were instructed to inform the researcher. Afterward, participants completed a post-experiment questionnaire to record their reactions to the manipulation.

Measures

To assess the characteristics of the person, the questionnaire included a measure of *issue involvement*. This was based on a single-item question: 'How likely is it that you read a news

article about measures against climate change?' (5-point Likert scale from 1 for 'very unlikely' to 5 for 'very likely').

Further variables are *fixation duration* and *willingness to participate in politics*. We measured the *fixation duration* via the eye-tracking device in seconds. It was calculated for the entire post and also subdivided into two predefined areas of interest (AOIs): (1) the post image, which included a brief call to action, and (2) the caption and information on the right side of the post (post text). The *willingness to participate* was surveyed in the post-questionnaire with items referring to (online low-threshold) interaction via social media (liking and sharing) and offline higher-threshold forms of participation (buying the pin). Each item was rated on a 5-point Likert scale with 1 for 'very unlikely' to 5 for 'very likely.' In the models using the willingness to participate as a dependent variable, we also introduced the fixation duration as an independent variable. This approach was based on the assumption that increased visual attention to the mobilization call could potentially enhance participants' willingness to participate.

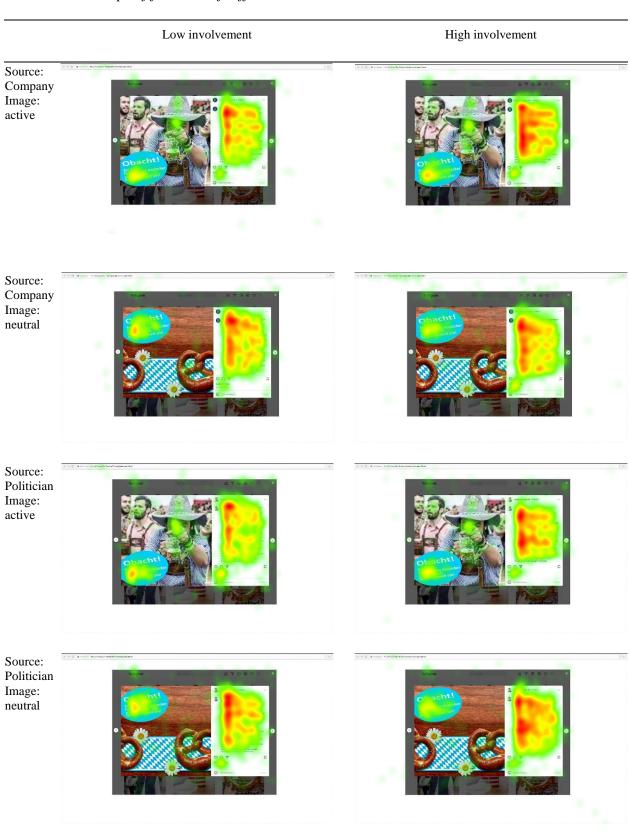
To measure both intentions and *actual behavior*, participants were given the opportunity to purchase a pin in the laboratory as part of the initiative to make Oktoberfest more climate-friendly. After indicating whether they wished to buy a pin, participants underwent a comprehensive debriefing, in which they were informed about the experimental variations and made aware that the initiative selling pins was fictional.

We also measured a set of control variables to include in the participation models. These control variables encompassed sociodemographic factors such as *gender* ('female', 'male' or 'diverse'), *age* (year of birth), and *education* (highest educational qualification). Additionally, we controlled for participants' individual *evaluation of the politician Markus Söder* and their *party preference for the CSU*, as one variant of the post featured this politician.

Results

The results of the eye-tracking experiment indicated that participants viewed the entire Instagram post for durations ranging from approximately 1 minute and 6 seconds to 4 minutes and 46 seconds (M = 2 minutes and 22 seconds, SD = 44.29 seconds). For further analysis, we differentiate between fixation duration on the post text and fixation duration on the image. Visual attention towards the post text, measured by the fixation duration, varied between 13 seconds and 58 seconds (M = 30 seconds, SD = 10.11 seconds). The fixation duration on the image ranged from approximately 2 seconds to 16 seconds (M = 6 seconds, SD = 3.15 seconds). Time not spent focusing on the image or text corresponded to fixations on other areas, such as the background of the post. The results revealed a significant effect of involvement on the fixation duration for the post text (Low Involvement (n = 31): M = 26.18, SD = 9.48; High Involvement (n = 36): M = 33.34, SD = 9.57; p < .01; d = 0.75; see also Figure 1 in the Appendix) and for the fixation duration on the post image between the low and high task involvement groups (Low Involvement (n = 31): M = 5.53, SD = 2.36; High Involvement (n = 36): M = 7.16, SD = 3.56; p = 3.56= .03; d = 0.53; see also Figure 1 in the Appendix). For a general overview of the stimulus material and an initial exploration of the heatmaps visualized based on fixation durations, see Table 2.

 Table 2. Heat maps of fixations of different stimuli



In our analysis, we used fixation durations on the post text and post image as explanatory (independent) variables in our models. To explore how different personal and post characteristics influence the willingness to participate, we conducted a series of linear regression models. The first two regression models examined indicators of low-threshold participation, specifically willingness to like and share the post. Additionally, we performed a linear regression on one higher-threshold participation indicator—the willingness to buy the pin described in the post and emphasized in the mobilization call within the post image (see Table 3).

Our results indicate that different factors influence users' willingness to engage in low-threshold versus higher-threshold tasks. We found a significant effect of topic involvement on both the willingness to like and share the post (RQ1). Participants with higher involvement in climate change issues reported a greater likelihood of liking the post (b = 0.47, p = .04) and sharing the post (b = 0.42, p = .03). However, fixation durations on the post text and image did not significantly affect the likelihood of liking or sharing the post. Additionally, task involvement, post source (RQ2), and the activation level of the image (RQ3) showed no significant effect on the willingness to like or share the post.

In contrast, the likelihood of buying the pin was significantly influenced by the fixation duration on the post image (b = 0.13, p = .04; RQ4). For this indicator of higher-threshold participation, issue involvement, task involvement, post source, activation level of the image, and fixation duration on the post text had no significant effects.

Table 3. Linear regression models: Top-down- and bottom-up-factors influencing the likelihood of (different indicators of) participation

	Likelihood to Like Post			Likelihood to Share Post			Likelihood to Buy Pin					
Predictors	Estimates	std. Error	CI	p	Estimates	std. Error	CI	p	Estimates	std. Error	CI	p
(Intercept)	0.74	2.40	-4.08 – 5.56	0.76	0.29	2.07	-3.86 – 4.45	0.89	-0.12	2.05	-4.24 – 3.99	0.95
Issue Involvement	0.47	0.22	0.02 - 0.91	0.04	0.42	0.19	0.04 - 0.81	0.03	0.21	0.19	-0.17 - 0.59	0.27
Task Involvement	-0.15	0.42	-0.99 - 0.69	0.72	-0.32	0.36	-1.05 - 0.41	0.38	-0.46	0.36	-1.18 - 0.26	0.20
Post Source (0 = Soeder)	-0.55	0.37	-1.29 – 0.19	0.14	-0.35	0.32	-0.99 – 0.29	0.27	-0.17	0.31	-0.80 - 0.46	0.59
Activation Level of Image (0 = Active)	-0.15	0.41	-0.98 – 0.68	0.72	-0.28	0.36	-1.00 – 0.44	0.44	-0.18	0.35	-0.89 – 0.53	0.62
Fixation Duration: Image	0.02	0.07	-0.12 – 0.16	0.80	0.08	0.06	-0.04 - 0.21	0.17	0.13	0.06	0.01 - 0.25	0.04
Fixation Duration: Post Text	-0.01	0.02	-0.05 - 0.03	0.60	-0.03	0.02	-0.06 – 0.01	0.18	0.00	0.02	-0.03 – 0.04	0.80
Education	0.25	0.46	-0.66 - 1.16	0.59	-0.46	0.39	-1.25 - 0.33	0.25	-0.06	0.39	-0.84 - 0.72	0.88
Age	-0.04	0.09	-0.22 - 0.14	0.67	0.01	0.08	-0.14 - 0.17	0.88	0.01	0.08	-0.14 - 0.16	0.88
Gender $(0 = male)$	0.07	0.40	-0.72 - 0.87	0.85	0.02	0.34	-0.66 - 0.71	0.95	-0.14	0.34	-0.81 - 0.54	0.69
Evaluation: Soeder	-0.00	0.12	-0.24 - 0.23	0.97	-0.17	0.10	-0.37 - 0.04	0.10	-0.03	0.10	-0.23 - 0.17	0.78
Party Preference: CSU	0.15	0.13	-0.11 – 0.41	0.24	0.26	0.11	0.04 - 0.48	0.02	0.17	0.11	-0.05 – 0.39	0.13
Observations	65			65			65					
R^2 / R^2 adjusted	0.138 / -0.041			0.207 / 0.043			0.197 / 0.030					
AIC		240.197			221.081			219.616				
AICc	247.334			228.218			226.754					

To test the robustness of these findings and to complement the intention measure with a behavioral indicator, we conducted a binary logistic regression analysis. The dependent variable was participants' actual decision to *purchase the pin* (yes or no). The results showed a significant effect of fixation duration on the post image (OR = 3.88, p = .01). Additionally, task involvement had a significant but negligible effect on the likelihood of purchasing the pin (OR = 0.00, p = .02).

Table 4. Binary logistic regression model: Top-down- and bottom-up-factors influencing the purchase of a pin (actual participation)

	Purchase of Pin						
Predictors	Odds Ratios	std. Error	CI	p			
(Intercept)	0.00	0.00	0.00 - 0.00	0.03			
Issue Involvement	0.75	0.80	0.07 - 6.33	0.79			
Task Involvement	0.00	0.00	0.00 - 0.11	0.02			
Post Source $(0 = Soeder)$	0.73	0.85	0.06 - 7.44	0.79			
Activation Level of Image (0 = Active)	0.10	0.17	0.00 - 2.15	0.18			
Fixation Duration: Image	3.88	2.06	1.74 - 14.88	0.01			
Fixation Duration: Post Text	0.96	0.06	0.84 - 1.08	0.51			
Education	0.05	0.11	0.00 - 1.78	0.16			
Age	3.08	1.54	1.42 - 11.25	0.02			
Gender $(0 = male)$	2.01	2.94	0.12 - 60.96	0.63			
Evaluation: Soeder	1.74	0.72	0.81 - 4.51	0.18			
Party Preference: CSU	2.52	1.18	1.15 - 7.88	0.05			
Observations	65						
R ² Tjur	0.568						
AIC	49.353						
AICc	55.353						

Discussion and Conclusion

In this experimental pilot study, we combined eye-tracking with a survey to examine how top-down and bottom-up factors influence (the willingness to engage in) political participation. We manipulated task involvement, post source (non-political vs. political), and image type (activating vs. neutral). Eye-tracking was used to measure visual attention by capturing participants' eye movements and fixation durations on different elements of the posts. Through exploratory analyses, we were able to gain direct insights into recipients' media usage behavior.

Building upon the ELM, we investigated the influence of various personal and post characteristics on low-threshold and higher-threshold political participation. For higher-threshold participation—measured by the actual behavior of whether participants bought a pin—we identified task involvement as a significant predictor. In contrast, issue involvement emerged as a significant predictor of lower-threshold behaviors, such as the likelihood to like or share an Instagram post (RQ1). These findings align with previous research on the ELM, demonstrating that different forms of involvement promote varying levels of participation through either the central or peripheral route of information processing (Earnheardt 2013; Shahin et al. 2020).

Regarding the source of the post, we found no significant effect on political participation (RQ2). This does not align with research on the effect of such simple cues in persuasion processes (e.g., Petty and Cacioppo 1984). Our findings could be attributed to the lack of variation in the political nature of the text or 'source blindness', meaning that social media audiences tend to miss who posted the content (Pearson 2021).

Similarly, the post image did not significantly impact lower- or higher-threshold political participation (RQ3). Although activating images attracted more visual attention (see Figure 3 in the Appendix), they did not increase political participation. This indicates that bottom-up

characteristics, such as image design, can influence visual attention but do not necessarily promote persuasion effects through the central or the peripheral route.

For higher-threshold participation, fixation duration on the image emerged as a significant predictor of pin purchase likelihood (RQ4)—indicating that the longer participants focused on the image, the higher their reported likelihood of buying a pin. Additionally, fixation duration significantly influenced actual pin purchases. These findings align with Geise and colleagues (2021), who concluded that attention to images, rather than text, promotes certain types of participation. Additionally, the results underscore the critical role of visual attention in persuasive processes (Kim et al. 2021) and raise an important question: Does visual attention to images drive participation through the peripheral route, or could images also facilitate the central route when (task) involvement is high?

Considering control variables, the analysis revealed that participants with a preference for the CSU (party affiliated with the depicted politician) were more likely to share the post.

Moreover, older participants and those with stronger party preferences were more likely to purchase a pin. This suggests that incorporating partisan preferences could be a promising direction for future research.

In summary, we were able to demonstrate the importance of involvement as a top-down factor in the elaboration process. Specifically, task involvement, as a characteristic of the situation, and issue involvement, as a characteristic of the person, promote political participation through the central route of information processing. Additionally, visual attention to the post image, which is an indicator of the depth of elaboration based on the immediacy and the eyemind hypotheses (Just and Carpenter 1980; Rakoczi 2012), emerged as a significant predictor of participation. However, the characteristics of the message did not significantly influence political

participation in this study. Thus, we were unable to replicate previous findings on the role of bottom-up factors in the elaboration process, particularly the post source (Bode et al. 2017; Petty and Cacioppo 1984; Vraga et al. 2016) and the post image (Geise et al. 2020; Geise et al. 2021; Keib et al. 2018).

Of course, our study has some limitations. Due to the results of our attention checks, we had to exclude a substantial number of participants, which significantly reduced our sample size. As a result, the statistical analyses were conducted with 65 participants instead of the original 108. The attention check results also indicate that users often do not closely engage with Instagram posts, even in controlled laboratory settings. This can further lead to phenomenons like source blindness (Pearson 2021), where participants are unable to recall who published a post. Given its potential implications for the effectiveness of political messaging more broadly, as well as for phenomena such as disinformation, source blindness represents a compelling starting point for future research.

Another limitation is the specific topic of the post—the Oktoberfest, a famous folk festival in Munich—which may not resonate with all participants, potentially distorting the results. Additionally, while the laboratory setting allowed us to observe media engagement in a controlled environment, it also created an artificial and unfamiliar experience that may not fully reflect real-world social media use. Moreover, the use of a desktop screen contrasts with the mobile consumption patterns of most social media users. Finally, our sample consisted of students, limiting generalizability to the broader German population in terms of gender, age, and educational background.

Despite these limitations, our pilot study provides first, valuable insights into how different top-down and bottom-up factors guide visual attention and influence various forms of

participation. These findings not only enhance our understanding of information processing in digital environments but also offer practical implications for political communication strategies. Future research could build on these findings by investigating how different types of political messages (e.g., persuasive vs. informative) affect visual attention patterns and engagement. While this paper addresses activating versus neutral images, future research could dissect additional design features of pictures, such as emotional intensity or cultural resonance, to assess their role in political mobilization. Moreover, applying our experimental design to video-based content could further illuminate the effects of audiovisual stimuli in political communication. Additionally, future studies would benefit from semi-structured interviews or post-exposure walkthroughs, allowing researchers to better understand the motives behind different types of political mobilization and the role of visual attention among them.

Overall, our findings offer valuable insights for the practical work of political mobilization campaigns run by political parties, social movements, or civil society organizations. They highlight that visually appealing communication can enhance participation. Actively engaging the audience and directly encouraging participation, as our results suggest, can influence actual political involvement. For instance, social media campaigns could leverage visually activating messages to capitalize on their attention-grabbing potential. Additionally, the micro-targeting capabilities of social media platforms allow campaigns to identify and directly address recipients with high levels of involvement, increasing the likelihood of mobilization.

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Appendix

Figure 1. Total Fixation Duration on Post Text and Post Image by Involvement Level

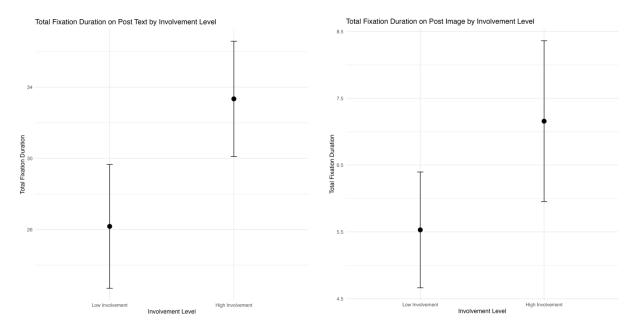


Figure 2. Total Fixation Duration on Post Text and Post Image by Post Source

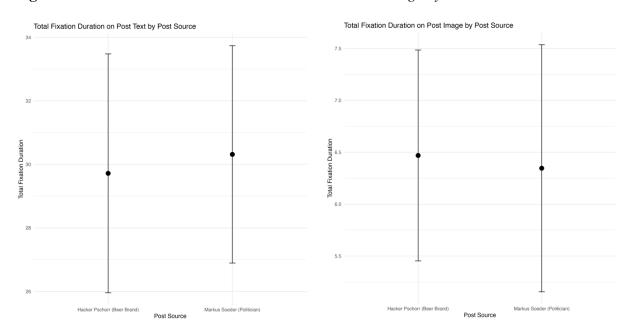


Figure 3. Total Fixation Duration on Post Text and Post Image by Activation Level of the Image

