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Personalized political Facebook advertisements: Persuasion knowledge, privacy concern, sponsorship disclosure and its political impact

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Yuhsi Chang

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GERMAN ABSTRACT

Obwohl personalisierte politische Werbung auf Facebook üblich ist, bleibt unklar, wie kritisch Menschen mit solchen politischen Botschaften umgehen. Da Facebook zu einer neuen Domäne für Politiker und Parteien wird, um mit potentiellen Wählern in Kontakt zu treten, müssen die Konsequenzen für die Politik und für die Gesellschaft als Ganzes betrachtet werden. In dieser Studie wird in einem 3 (nicht personalisiert vs. gering personalisiert vs. stark personalisiert) x 2 (Quelle: ÖVP vs. Die Grünen) Online-Umfrageexperiment (N = 126) untersucht, ob die TeilnehmerInnen in der Lage sind, gesponserte Inhalte von nicht-gesponserten Inhalten zu unterscheiden und kritisch zu reflektieren. Dabei wurden auch Effekte von unterschiedlichen Personalisierungsgraden untersucht. Die Ergebnisse der Studie zeigen, dass Rezipienten bei stark personalisierten Inhalten diese mit höherer Wahrscheinlichkeit erkennen, was zu stärkeren negativen Emotionen führt und letztlich die Bewertung gegenüber der politischen Partei sowie das Vertrauen in die Demokratie senkt. Dieser Effekt ist parteiunabhängig gewesen. In Übereinstimmung mit vorheriger Literatur zeigte sich zudem, dass je höher der Inhalt personalisiert ist, desto mehr wird dessen Offenlegung anerkannt. Überraschenderweise konnten in der vorliegenden Studie keine Auswirkungen auf Datenschutzbedenken gefunden werden, welche das Erkennen von gesponserten Inhalten, unabhängig davon, wie stark personalisiert die Beiträge sind, verstärken.

ENGLISH ABSTRACT

While the practice of personalized political ads on Facebook is common, what remains unclear is people's critical processing to such political message. As Facebook becomes a new domain for parties and politicians to engage with their potential voters, the consequences of it in political processing as well as for society at large needs to be considered. This study employs a 3

(non-personalized vs. low personalized vs. high personalized) x 2 (source: ÖVP vs. Die Grünen) online survey experiment (N = 126) to see if participants are able to discern the sponsored content among regular posts in different levels of personalization on Facebook, and to what extent would it leads to critical processing. Results demonstrate that when the content is highly personalized, persuasion knowledge is more likely to be activated, thus results in stronger negative emotion, and ultimately lowers their evaluation towards the political party as well as trust in democracy. Such effect does not differ from which party disseminates the sponsored posts. Furthermore, in line with pervious literature, the higher the content is personalized, the more recognition will be paid to the disclosure. Surprisingly, the current paper finds no effect on privacy concern enhancing the activation of persuasion knowledge regardless how personalized the posts are.

Keywords: #political advertisements #Facebook #sponsored content #evaluation of party #trust in democracy

INTRODUCTION

While personalized advertisements for commercial propose is common, the discussion for political personalized advertisements is limited. With the change of habit in information consumption, many Internet firms collect large amount of personal data from their users and allow advertisers to target and personalize advertisements with these data (Malheiros et al., 2012). Facebook is the trend and most popular platform for politicians and parities to engage with their voters, one of the most common strategy is the personalized political advertisements (Wen, 2014).

Since sponsored content from other media platform such as TV, blog, and news article has been widely examined, the domain of Facebook is scarce. Moreover, the consequences of political

marketing are understudied (Guzmán, Paswan & Van Steenburg, 2015), there is a lack of research in investigating personalized political advertisements on Facebook and its effect. When general tweets or Facebook posts can affect voters in a positive way (Spierings & Jacobs, 2014; Lee & Shin, 2012), personalized political advertisements might lead to the opposite direction (Kruikemeier, Sezgin & Boerman, 2016). Sponsored content on Facebook shows great resemblance in format and style that are embedded in users' newsfeed amid regular posts from befriended contact (Boerman, Willemsen & Van Der Aa, 2017), only with the exception of including a disclosure noting "sponsored", therefore, it becomes harder for users to discern sponsored content from non-sponsored content (Shrum, 2012). The different levels of personalization is one of the reasons why many people are unaware of the sponsored content on Facebook, however, they might avoid campaign information once they realize of being targeted (Turow et al., 2012), causing more serious implication than commercial sponsored content. Research also pointed out while dealing with sponsored content, the overt justification of data collection is a preferred strategy, as if people become aware of being targeted only through their exposure under highly personalized advertisements, their feeling of vulnerability increases (Tam & Ho 2005; Aguirre et al., 2015).

Previous research had a debate on personalized political content, it was argued that the use of personal data for targeted political advertising can be viewed as a breach of privacy, free exchange of political ideas (Tucker et al., 2018), voters' polarization (Sunstein, 2018), and even a threat to democracy (Persily, 2017). Media has called the practice of targeting political ads "unethical" (Graham-Harrison et al., 2018) and "immoral" (Vidler, 2018) to voters. It was also discussed that the usage of personal information, such as previous online behavior or personal information, may be perceived as invasive (McDonald & Cranor, 2010; Smit, Van Noort &

Voorveld, 2014; Turow, King & Hoofnagle, 2009), and may thus evokes resistance (Kruikemeier, Sezgin & Boerman, 2016). To sum up, collecting personal data for political targeting might influence people's attitude negatively, more than attitude towards targeting for other purposes (Baum, Meißner, Abramova & Krasnova, 2019), and such microtargeting behavior might harm political process (Barocas, 2012).

This paper therefore sets out to explore to which level of personalization can people discern the boundary between regular posts and sponsored posts on Facebook when it comes to political content, and in what circumstance will people proceed critical processing towards such political message, which are the evaluation of the party that disseminate sponsored advertisements on Facebook and trust in democracy. To examine the underlying process, the current study furthers investigates the moderating role of privacy concern, and the mediating roles of persuasion knowledge and negative emotion, which are decisive justifications to assess the effect of personalized political marketing. The literature in related field were more focused on content analysis and has not been explicitly concerned with testing moderating and mediating explanations for such political advertising effect, hence, an online survey experiment was conducted in the current paper to fulfil the research gap.

LITERTURE REVIEW

Personalized Political Advertisements on Facebook

Personalized political advertisements in this study refers to the sponsored content from certain political parties designed for their potential voters that appears as regular posts on users' Facebook timeline, based on data collection or covert observation of users. Personalization can be understood as an activity developing individualized communication to a particular customer

which is tailored based on the customer's implied or stated interests (Roberts & Zahay, 2012). With more and more parties and politicians seized the opportunity to engage in advertising on social network sites by targeting specific social media users (Jacobs & Spierings, 2016), the usage of personalized communication enables politicians to efficiently reach potential voters (Roberts & Zahay, 2012).

Facebook plays a vital role when it comes to personalized content, the importance of it in politics has been widely recognized since the 2008 U.S. presidential election (Wen, 2014). Facebook has been used in political communication in regions including Asia, Canada, and Europe, as well as several Arab nations in recent years (Kuzma, 2010; Sayed, 2012; Small, 2008; Tufekci & Wilson, 2012; Vesnic-Alujevic, 2012). Moreover, Facebook also boosts political ads during election time so that they have a higher chance to appear in users' news feed. According to Liberini et al. (2018), online campaigns on Facebook that target users based on gender, location, and partisanship, significantly increased the likelihood of undecided voters to vote for a specific candidate.

The highly resemblance of Facebook sponsored posts make it harder for people to discern commercial content from non-commercial content (Shrum, 2012). Suggested by Boerman and van Reijmersdal (2016), more research is needed to measure the effect of disclosures in different media and on disclosures of online sponsored content. While the majority of the studies regarding this were focusing on mediums such as television, print, or online editorial, the examination on Facebook is scarce, especially when it comes to political sponsored content. As a consequence, the personalized political advertisements on Facebook is worth investigating.

The Degrees of Personalized Advertising

Suggested by White, Zahay, Thorbjørnsen and Shavitt (2008), the level of personalization, the presence of justification for personalization, and the perceived utility of the message are the factors that influence an individual's perspective towards personalized political ads. As being one of the important factors, the current paper has the level of personalization set as the manipulation in experiment to measure its consequence. The intensity of personalization influences people's awareness of being targeted, and such awareness can cause consequences on political processing, including campaigning effects and interaction with society. To provide more detailed insight, the current paper will examine to which degree of personalized political content will people become conscious of being targeted, and its impact in political evaluation and trust. The lowest degree of personalization political ad in this study is designed based on participants' age, gender, and residence, meanwhile the highest degree is based on participants' age, gender, residence, and interest regarding family topics.

Recognition of Disclosure and the Degrees of Personalized Advertising

Before any label or warning can communicate its message effectively, its receiver should be aware of it (Stewart & Martin, 1994; Wogalter & Laughery, 1996). It is important for political parties and organizations to know whether their target audiences are aware of being presented with tailored political ads, which is if they notice the disclosure or not. Studies have shown that when people are informed that their data has been collected, although they might be more skeptical as a result of the activation of persuasion knowledge (Kruikemeier, Sezgin & Boerman, 2016), still, implementing overt data collection is the best strategy for sponsored content, as if consumers become aware of covert information collection only through their

exposure under a highly personalized advertisement, not only the feeling of vulnerability will increase, but also negative attitude (Tam & Ho 2005; Aguirre et al., 2015).

Previous literature have shown that highly personalized content enhances people's attention (Tam and Ho, 2005; Celsi & Olson, 1988; Pechmann & Stewart, 1990; Bang & Wojdynski, 2016), audiences are more likely to recognize an advertisement with high degree of personalization (Malheiros et al., 2012). When people are engaged in low cognitive demand task, for example, viewing a webpage without certain propose, they will pay relatively low attention to either personalized or non- personalized ads, as a result of those with low cognitive demand task have enough cognitive resources to allocate on irrelevant information (Bang & Wojdynski, 2016). Moreover, studies have shown that the activation of persuasion knowledge on personalized content only occurs when people notice the sponsorship label (Kruikemeier, Sezgin and Boerman, 2016; Boerman & Kruikemeier, 2015; Boerman, van Reijmersdal & Neijens, 2015). Hence, the recognition of disclosure is set as the premise of the theory proposed in current study, the following hypothesis presumes that the level of personalization enhances the recognition of disclosure:

H1: Personalized political Facebook ads will lead to different levels of recognition to the disclosure, with control group leading to least attention, followed by low personalized group, and by high personalized group leading to most attention.

Persuasion Knowledge

Friestad and Wright (1994) built a comprehensive definition while constructing persuasion knowledge model. Persuasion knowledge refers to personal beliefs and knowledge about

advertising motivations, it performs schema-like functions, guiding consumers' attention to aspects of advertising campaigns, thus forms valid attitudes to the things or products which are being promoted.

Persuasion knowledge is important when examining the implication and consequences of personalization, it is relevant to the goals of forming valid attitudes about products or services that are being promoted, judging what type of future relationship to have with the marketer on the basis of the marketer's persuasion behaviors, and gaining added insights about persuasion tactics in general. Citizens can use this knowledge in response to a persuasive message to decide upon the perceived appropriateness and effectiveness of the tactics used in the message (Friestad & Wright, 1994). Kruikemeier, Sezgin and Boerman (2016) founded out that the more personalized the Facebook content is, the higher one's persuasion knowledge will be activated. Moreover, as critical evaluations are usually contingent on the awareness of a message as advertising, the current paper assumes persuasion knowledge plays an important role in influencing audiences' political evaluation to the sponsored Facebook posts (Boerman, Van Reijmersdal, & Neijens, 2012; Campbell & Kirmani, 2000; Friestad & Wright, 1994). In this study, persuasion knowledge is conceptualized as persuasive intent and inference of personalization, referring to the understanding of the purpose of their exposed posts.

Privacy Concern's Effect on Persuasion Knowledge

While previous literatures have demonstrated that making the commercial purpose more salient enhances the activation of persuasion knowledge (Campbell & Kirmani, 2000; Boerman, Reijmersdal & Neijens, 2012), what remains unclear is whether one's privacy concern would cause any effect on this relationship.

Privacy concern refers to the ability to control and limit physical, interactional, psychological and informational access to the self or one's group (Burgoon et al., 1989), also in online context, privacy is directly related to the assessment of personal information (Buchholz & Rosenthal, 2002; Culnan & Bies, 2003). It has been discussed that privacy concern about the use of personal data for political advertisements are significantly greater than privacy concerns towards targeting in other settings, such as product advertisements (Baum, Meißner, Abramova & Krasnova, 2019). According to Tan et al. (2018), people are less likely to sell their personal data to a political party than to an advertising network. Privacy concern has been called one of the most important ethical issues in the information age (Mason, 1986; Smith, 1994), a number of corporations have faced legal problems and received negative media attention because of privacy issues (Cespedes and Smith, 1993; Culnan, 1993; Smith, 1994),privacy concern has been defined as the central on understanding users' acceptance and attitudes towards targeted advertisements (Sutanto et al., 2013).

Personalized ads raise additional privacy concerns, and can be seem 'creepy', especially when users perceive that personally identifiable information is used in the adaptation process (Malheiros et al., 2012). According to Phelps et al. (2001) and Sacirbey (2000), though personalized advertising may have overall benefits to advertisers, its success with audiences can be moderated by other factors, such as personalization raises privacy concerns among message recipient. Lang (2000) pointed out when people perceive threat, which is privacy concern, greater cognitive efforts will be allocated in order to select appropriate actions for the threat. Therefore, the following hypothesis supposes privacy concern enhances the positive relationship between the level of personalization and persuasion knowledge:

H2: Privacy concerns positively moderates the relationship between personalized political Facebook ads and the activation of persuasion knowledge: The effect of personalization on persuasion knowledge will be stronger when the level of privacy concern is high. The effect does not differ for viewing Facebook posts from ÖVP or Die Grünen.

Negative Emotion

While persuasion knowledge makes people aware of agents' possible tactics, the activation of it is only the first step. Targets will soon develop parallel beliefs to cope with the persuasion attempt and direct their immediate coping activities. One of the goals that targets may choose to pursue in order to cope with advertising or sale attempt is managing the experiential benefits they receive from engaging in the interaction, for example, their sensory, cognitive, or emotional stimulation (Friestad & Wright, 1994).

In the form of affective responses, emotion is an important consequence of political advertising (Rahn & Hirshorn, 1999). Emotions are expressions of affective reactions (Vanwesenbeeck, Ponnet, & Walrave, 2016), and the affective reactions to stimuli are formed prior to other judgements (Zajonc, 1980). In this paper, emotion is conceptualized as the negative sentiments aroused from participants after viewing the Facebook posts. The current study presumes that emotions will be developed negatively after recipients' exposure to the personalized political Facebook ads, as previous literature have demonstrated that personalized content may create uncomfortableness among recipients, also when the tailored content is related to politics, the overall preference decreases. A phone survey in 2012 revealed that more than 80% of U.S. adults rejected targeted political online ads and would be angry if Facebook showed them political advertisements based on their profile (Baum, Meißner, Abramova & Krasnova, 2019), and while

62% of U.S. respondents indicated that using data to present targeted political advertising is unacceptable, only 47% said the same about product ads (Smith, 2018). Build on the theory which Friestad and Wright (1994) discussed in persuasion knowledge model, making people aware of the agents' tactical action is the first step before the targets develop a capacity to consistently and effectively self-manage their responses to that tactic during a persuasion attempt, the following hypothesis proposes a mediation between degrees of personalization, persuasion knowledge and negative emotion:

H3: Persuasion knowledge positively mediates the effect of personalized political Facebook ads on negative emotions: The higher the content is personalized, the higher the persuasion knowledge will be activated, thus arouses stronger negative emotions. The indirect effect does not differ for viewing Facebook posts from ÖVP or Die Grünen.

Persuasion Knowledge and Critical Processing

The realization of the persuasive purpose through a message has repeatedly been shown to alter the interaction with the sender and consequently people's attitudes toward the sender and the message (Friestad & Wright, 1994; Main, Dahl & Darke, 2007). This process is defined as critical processing, meaning the adoption of an evaluative style of processing, in which the content is criticized (Boerman et al., 2014).

Although some studies demonstrated that when the manipulative intent of a message was salient, consumers were more suspicious thus adopted an analytical, critical processing style to evaluate the advertisement (Wentzel, Tomczak & Herrmann, 2010), on the other hand, there are also literature found no evidence for the influence of disclosure on critical processing. The diverse results regarding receivers' critical processing suggested that consumers may not always criticize

all types of sponsored content, even when they recognize it as advertisement (Boerman & Van Reijmersdal, 2016).

However, previous findings were mainly focused on commercial proposed sponsored content on media such as television, print, blogs, advergames and movies, the field of political message regarding critical processing has been neglected. Though political advertising makes up only a part of political discourse, it is necessary to analyze the role of it in this "marketisation" (Dermody & Scullion, 2003) political communication realm. As reported by Moy, Pfau and Kahlor (1999), users of particular media tend to perceive democratic institutions as depicted by these sources and make their judgments accordingly. Consequently, the current study will examine individuals' evaluation of their exposed political party and trust in democracy

Evaluation of the Political Party

Since the main purpose of personalized political advertisements is to gain voters' attention and increase their favor, it is necessary for political entities to understand whether their online promotion works positively, which is how the recipients evaluate them. Evaluation of the political party is conceptualized as how the audiences rate the party that disseminate the personalized sponsored content on Facebook in the current paper.

Attitude towards political targeting tends to be more negative than towards targeting for other purposes (Baum, Meißner, Abramova & Krasnova, 2019). Personalized advertisements result in lower support for politicians, lower engagement in political behavior, negative attitudes, lower source trustworthiness, and more ad skepticism (Turow et al., 2012; Boerman & Kruikemeier, 2015). On the other hand, studies also demonstrated that such advertising strategy has no negative effect on recipients' evaluation towards the political party. Kruikemeier, Sezgin

and Boerman (2016) found the perceived trustworthiness of the political party that disseminated the Facebook post did not appear to be affected.

Nevertheless, previous research did not specifically measure the emotion evoked after the activation of persuasion knowledge. According to Taute, McQuitty and Sautter (2011), either positive or negative emotion appeals will strengthen the responses to the advertisements, as a consequence, this paper proposes a serial mediation between personalized political Facebook advertisements, persuasion knowledge, negative emotion and evaluation of political party:

H4: When the exposed political Facebook ads are highly personalized, persuasion knowledge is more likely to be activated, resulting in stronger negative emotion, and ultimately lowers the evaluation of the political party. When the political Facebook ads are not highly personalized, such serial mediation will be weaker. The indirect effects do not differ for viewing Facebook posts from ÖVP or Die Grünen.

Trust in Democracy

In addition to audiences' evaluation on the party, the current paper draws a bigger picture in the effect of personalized political Facebook advertisements have on the general trust in democracy. Trust in democracy is conceptualized as a person's trust to Austrian political system and politicians, referring to an individual's judgement towards another individual is motivated and competent to act an individual's interest, and will do so without overseeing or monitoring (Baier, 1986; Norris, 2011).

Compared to immediate reaction, democracy is a long-term cumulative consequence effect. Democracy refers to the institutions and associations that enable people to engage in collective self-government (Warren, 2017). The relationship between citizens and democracy is largely

established on trust, which is important for all forms of human social interaction (Slovic, 1993), and is an essential role in determining the outcomes and quality of social and business interaction (Gefen, 1997). Trusting someone or an institution and organization builds on a decision which is based on an assessment of the other party's competence, integrity and benevolence (Currall 1992; Sako 1992; Mayer et al. 1995). While democracy is the political system that should protect and build upon trust relationships, it cannot be founded in a straightforward way. Scholars started to investigate the determinants of trust in political institutions in order to shed light on the reasons behind the fall in legitimacy and have shown that the news media play a role (Avery, 2009; Hanitzsch & Berganza, 2012; Mutz & Reeves, 2005; Norris, 2011; Tworzecki & Semetko, 2012). Norris (2011) found that Internet users who were being exposed to online campaign were associated with lower democratic satisfaction. Im et al. (2014) attest that citizens who spend more time on the web display a lower degree of trust in government. However, most of the studies only examined the effect of the Internet as a whole and did not discriminate between overall Internet usage or information retrieval and consumption of online news (Ceron, 2015). Since Facebook has become the new domain in politics when it comes to personalized ads, the consequence of it could not only result in campaigning effects but also for society at large (Kruikemeier, Sezgin & Boerman, 2016). Hence, the last hypothesis presumes another serial mediation a serial mediation between personalized political Facebook ads, persuasion knowledge, negative emotion, and trust in democracy:

H5: When the exposed political Facebook ads are highly personalized, persuasion knowledge is more likely to be activated, resulting in stronger negative emotion, and ultimately lowers the trust in democracy. When the political Facebook ads are not highly personalized, such serial mediation

will be weaker. The indirect effects do not differ for viewing Facebook posts from ÖVP or Die Grünen.

METHODOLOGY

Study Design and Data Collection

To test our hypotheses, a between-subjects design was employed from April to May 2020. The online survey experiment is designed with two factors and three conditions, participants were randomly assigned to highly personalized group, low personalized group, or control group, and see either posts from Die Grünen or ÖVP. Participants were recruited via Typeform (N = 216). As the Facebook posts were manipulated from real Austrian political party, the current study only aimed at German-speaking participants.

Procedure and Stimulus Material

After clicking the URL, data protection regulations were firstly asked to agree by the participants. Age, gender, and residency were inquired in order to use as the "excuse" to manipulate the personalized Facebook ads. Participants who were assigned to high personalized groups were asked additionally about their interest regarding family topics, "Which group of people do you make calls with at least once a week?", and "Imagine you're on a news page, which article is most likely for you to click and read?". Privacy concern and political spectrum were measured before the stimulus to ensure participants' perception was not affected.

Hereafter, participants were randomly assigned to one of the three conditions: high personalized group, low personalized group, and control group. In high personalized group, participants were informed that the posts were based on their age, gender, residency, and interest regarding family topics. In low personalized group, participants were informed that the posts were based on their age, gender, and residency. As for the control group, participants were only being

told that a set of random Facebook posts which could appear on any profile will be shown.

The stimulus consisted of four filler posts and three sponsored political posts, the later one was either from ÖVP or Die Grünen, which are actual Austrian parties (see Appendix A). The two parties were selected to balance the political spectrum, as ÖVP represents central-right and Die Grünen is more central-left. To prevent pre-existed bias, the political advertisements content was fictional, so did the content and accounts of filler posts. Only one post showed up per page, participants needed to scroll down to view the next post, it was designed in this way to imitate how Facebook is viewed in real life, as well to detect whether viewers were able to discern political sponsored posts among regular posts in different levels of personalization. The images used for the posts were legally downloaded from Pexels. The theme applied for the sponsored political advertisements was family, which is suitable for either right or left wings.

Manipulation checks were measured right after participants' exposure to stimulus (N = 126). "Which party posted the sponsored ads?" was asked to ensure participants paid attention to the posts, the answers included Die Grünen, ÖVP, NEOS, FPÖ, and SPÖ. "What do you think are the reasons the posts were shown to you?" was asked to verify if participants realized the inference of personalization, multiple choses between "because I have indicated my residency, gender, age, certain interest of topics, education level, or income level" were available for the participants. Afterwards, participants were asked about their recognition of the disclosure, persuasion knowledge, negative emotion evoked by posts, evaluation of the party that disseminate the sponsored advertisements, and trust in democracy. Political interest was measured in the end of the questionnaire as control. At the end of the survey, participants were debriefed and thanked. The full questionnaire can be seen in Appendix C.

Measures

Recognition of Disclosure

Participants' recognition of the sponsoring label on Facebook posts was assessed using four items, "Some of the posts included the "Gesponsert" (Sponsored) disclosure," "The "Gesponsert" (Sponsored) disclosure showed up frequently," "I concentrated on the "Gesponsert" (Sponsored) disclosure a lot in some of the posts," and "I paid attention to the "Gesponsert" (Sponsored) disclosure a lot in some of the posts". The items were measures on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) by inquiring how much did they agree (Cronbach's $\alpha = .91$, $M = 3.24$, $SD = .95$).

Privacy Concern

Based on previous theory, surveys of public opinion reported that most people are worried about what kinds of personal information marketers have and how they acquire and use the information (Harris & Westin, 1995). Therefore, items measuring one's privacy concern were extracted from the study of Diney & Hart (2004). With 5-point Likert scale, participants were asked to indicate how much did they agree on the following five statements (1 = strongly disagree, 5 = strongly agree) "I am concerned that the information I submit on the Internet could be misused," "I am concerned about submitting information on the Internet, because of what others might do with it," "When I am online, I have the feeling that all my clicks and actions are being tracked and monitored," "When I am online, I have the feeling of being watched," and "Being able to control the personal information I provide to a website is important to me" (Cronbach's $\alpha = .81$, $M = 3.58$, $SD = .63$).

Persuasion Knowledge

To verify if participants sensed the persuasive intent and the inference of personalization among the series of Facebook posts, the activation of persuasion knowledge was measured by asking participants whether they agree on the following nine statements with 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), "I feel some of the posts aim to promote a political party," "I feel some of the posts aim to increase their support for a political party," "I feel some of the posts aim to convey a positive image of a party," "I feel some of the posts aim to influence my opinion of a party," "I feel some of the posts aim to strengthen a political party," I feel some of the posts aim to win votes for a political party," "The posts are based on my data," "The posts show personalized advertising," and "The posts use location data" (Cronbach's α = .91, M = 3.79, SD = .79).

Negative Emotion

Negative emotion was assessed using five items, "The posts annoy me," "The posts make me angry," "The posts create an unpleasant feeling," "These posts unsettle me," and "The posts alert me" (Cronbach's α = .91, M = 2.67, SD = .90). The items were measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Evaluation of the political party

The items measuring evaluation of the political party were developed from previous studies (Pavlou, 2003; Ohanian, 1990). With 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), participants were asked to rate how much did they agree or disagree with the following nine characteristics to the party that posted the sponsored contents: "intelligent," "moral," "compassionate," "inspiring," "honest," "knowledgeable," "provides strong leadership," "cares

about people like me," and "get things done" (Cronbach's α = .94, M = 2.83, SD = .75).

Trust in Democracy

The three items used to assess trust in democracy were based on Uslaner (2018)'s conceptualization of trust from the standpoint of democracy. 5-point Likert scale was used to measure how much participants agree or disagree on the following statements "Politicians in Austria rarely keep their promises to the population (reverse coded)," "The politicians in Austria are honest with the voters," and "One can be confident that politicians are doing the right thing without the need for public scrutiny" (Cronbach's α = .78, M = 2.53, SD = .74).

Political Spectrum

Participants were asked "Do you consider yourself more "left" or more "right" when it comes to politics and political issues?" on a 5-point Likert scale (1 = very left, 5 = very right) before viewing the stimulus (M = 2.48, SD = .87).

Political Interest

Participants were asked to rate to what extent do they agree or disagree on the four following statements "I am very interested in politics," "I am very interested in information about recent activities of government and politics," "I pay many attentions to information regarding politics and public affairs," and "I seek political information or news online actively". The measurement was based on 5-point Likert scale (Cronbach's α = .90, M = 3.34, SD = .83).

RESULTS

Data Descriptions

Excluding non-German speakers and those who failed the manipulation check, the sample (N = 126) consisted mostly of female participants (54.8%), relatively young (50% aging from 25 to 29, followed by 31.7% aging from 18 to 24). Most of our participants were interested in politics (M = 3.34, SD = .83), and more left-wing (54.7%, followed by 33.3% neutral, and 11.9% right-wing) when it comes to political spectrum.

Differences in Recognition of Disclosure

ANOCOVA analysis was conducted to test the differences in recognition of the sponsored disclosure (H1) with three conditions as independent variable, recognition of disclosure as dependent variable, and political spectrum and interest as control variables.

Results (Table 1) showed there was a significant difference ($F(2, 121) = 34.73$, $p < .001$, $R^2 = .46$) in the recognition of disclosure between three conditions. Participants in high personalized groups (M = 3.86, SD = .93) had higher recognition on disclosure than low personalized groups (M = 3.42, SD = .66), and low personalized groups also displayed a higher recognition on disclosure compared to control groups, which were non-personalized groups (M = 2.44, SD = .61). In other words, participants were more likely to notice the sponsoring label on Facebook when the personalization level is high. H1 was supported.

Table 1: Descriptive Statistics for the Experimental Conditions.

	Control group (n = 41)	Low personalized group (n = 44)	High personalized group (n = 41)
Recognition of Disclosure	2.44 (.61)	3.42 (.66)	3.86 (.93)

Mean scores with standard deviations between parentheses. All scores based on 5-point Likert scale. N = 126.

Moderation Effect of Privacy Concern on Persuasion Knowledge

Hypothesis 2 proposed that privacy concern enhanced the positive relationship between degrees of personalization and persuasion knowledge. A three way moderation was conducted with multicategorical independent variables with non-personalized control group as reference category, persuasion knowledge as dependent variable, political spectrum and interest as controls, privacy concern as first moderator, and assigned condition as second moderator to see if such effect will be different for ÖVP and Die Grünen.

Results from SPSS macro PROCESS v3.5 Model 3 (Hayes, 2017) demonstrated that the overall moderation model had significant effect ($F(13, 112) = 8.77$, $p < .001$, $R^2 = .50$). However, the interaction effects in both low and high conditions were not significant (Table 2. low personalized group: b = .37, SE = .31, p > .05; high personalized group: b = -.09, SE = .31, p > .05). Such effect did not differ for whether viewing sponsored posts from ÖVP (b = -.29, SE = .45, p > .05) or Die Grünen (b = .18, SE = .47, p > .05; moderated moderation: $R^2 = .004$, p = .585), meaning that regardless of which party disseminated the advertisements, an individual's privacy concern about their assessment of personal information in online context would not amplify their activation of persuasion knowledge when being exposed to levels of personalized Facebook posts. Hypothesis 2 was not supported.

Table 2: Moderation effect of privacy concern.

	Persuasion knowledge			
	b	*SE*	*t*	*p*
constant	2.45	.93	2.63	.010
Low personalized group	-.99	1.10	-.90	.373
High personalized group	1.33	1.10	1.21	.231
Privacy concern	-.02	.25	-.10	.925
Political spectrum	-.07	.07	-1.02	.312
Political interest	.31	.07	4.32	.000
Assigned condition	-.21	1.10	-.20	.845
Low personalized group *privacy concern	.37	.31	1.21	.230
High personalized group *privacy concern	-.09	.31	-.29	.769
Low personalized group *assigned condition	1.04	1.58	.66	.514
High personalized group *assigned condition	-.60	1.67	-.36	.719
Privacy concern*assigned condition	.12	.31	.37	.713
Low personalized group *privacy concern*assigned condition	-.29	.45	-.65	.514
High personalized group *privacy concern*assigned condition	.18	.47	.39	.694

Note: Fit for model R^2 = .50, F(13, 112) = 8.77, p < .001. N = 126.

Mediation Effect on Negative Emotion

Hypothesis 3 assumed that the higher the personalized political Facebook posts were, the more one's persuasion knowledge will be activated, hence increased the development of negative emotion. To test the model, moderated mediation was conducted in SPSS marco PROCESS v3.5 with Model 7 (Hayes, 2013). 5,000 bootstrap samples were used to estimate the indirect effects. The moderated mediation analysis was run with multicategorical independent variables with non-personalized control group as reference category, persuasion knowledge as mediator, negative emotion as dependent variable, political spectrum and interest as controls, and assigned condition as moderator to see if the such effect differs for ÖVP and Die Grünen.

With regard to negative emotion as dependent variable, significant mediation effect was found through the activation of persuasion knowledge. Results (Table 3) indicated that high

personalized groups (high ÖVP indirect effect = .51, SE = .16, 95% CI [.245, .883]; high Die Grünen indirect effect: .57, SE = .19, 95% CI [.269, 1.010]) performed significant stronger indirect effects than low personalized groups (low ÖVP indirect effect = .23, SE = .11, 95% CI [.042, .474]; low Die Grünen indirect effect = .18, SE = .11, 95% CI [.001, .444]). The conditional effects showed that such relationship did not differ from whether viewing posts from ÖVP or Die Grünen (index of moderated mediation of low personalized groups = -.05, SE = .14, 95% CI [-.314, .232]; index of moderated mediation of high personalized groups = .05, SE = .15, 95% CI [-.222, .391]). The mediation model (Fig. 1) demonstrated that compared to low personalized content, when being exposed to high personalized political advertisements on Facebook, an individual's persuasion knowledge was more likely to be activated (b = .97, P < .001), thus evoked stronger negative emotion (b = .53, p < .001). Hypothesis 3 was therefore supported.

Table 3: Conditional mediation: Indirect effects of degrees of personalization on negative emotion through the activation of persuasion knowledge, moderated by assigned conditions.

			95% CI	
	Indirect effect	*SE*	*LL*	*UL*
Low personalized ÖVP	.23	.11	.042	.474
Low personalized Die Grünen	.18	.11	.001	.444
High personalized ÖVP	.51	.16	.245	.883
High personalized Die Grünen	.57	.19	.269	1.010
			95% CI	
	Index	*SE*	*LL*	*UL*
Conditional effects of assigned party				
Low personalized	-.05	.14	-.314	.232
High personalized	.05	.15	-.222	.391

N = 126. SE, standard error; CI, confidence interval; LL, lower limit; UL, upper limit.

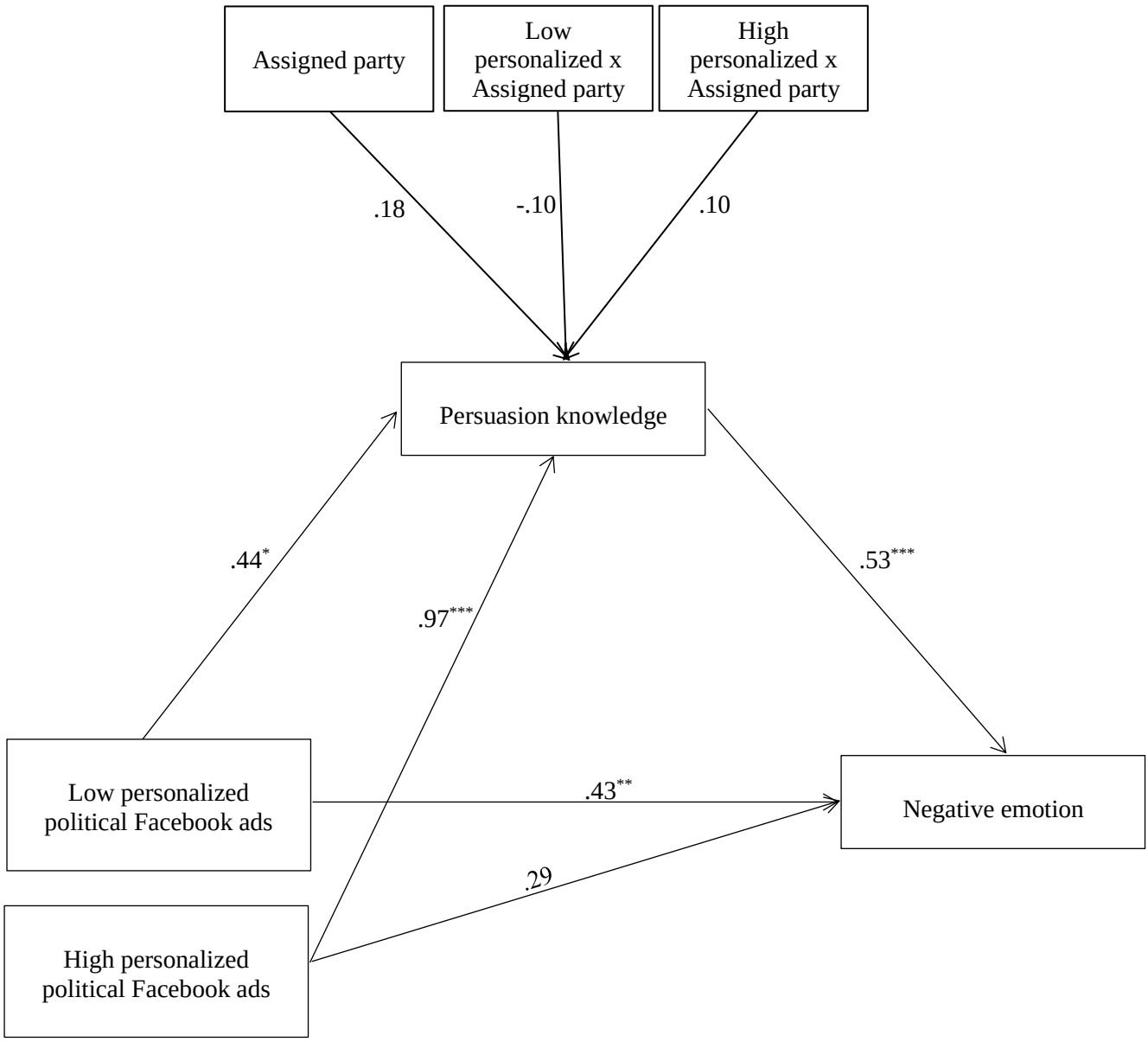

Fig. 1. Tested moderated mediation effect (H3) with non-personalized group as reference category, controlling for political spectrum and interest. N = 126. *p < .05. **p < .01. ***p < .001.

Serial Mediation Effects on Evaluation of Party and Trust in Democracy

Hypothesis 4 proposed a negative indirect effect between the degrees of personalization and evaluation of the political party, mediating by the activation of persuasion knowledge and negative emotion in serial. Moderated serial mediation was tested to answer the hypothesis and

see if the such effect differs for ÖVP and Die Grünen in SPSS marco PROCESS v3.5 Model 84 with 5,000 bootstrap samples. The degrees of personalization was functioned as multicategorical independent variable with non-personalized control group as reference category, persuasion knowledge as first mediator and negative emotion as second mediator, evaluation of party as dependent variable, assigned condition as moderator, and political spectrum and interest as controls.

Results (Table 4) showed that high personalized groups (high ÖVP indirect effect = -.23, SE = .10, 95% CI [-.462, -.089], high Die Grünen indirect effect = -.26, SE = .10, 95% CI [-.501, -.099]) had significant higher indirect effects than low personalized groups (low ÖVP indirect effect = -.10, SE = .06, 95% CI [-.242, -.014], low Die Grünen indirect effect = -.08, SE = .05, 95% CI [-.212, -.001]), regardless of which party disseminated the sponsored political advertisements (index of moderated mediation of low personalized groups = .02, SE = .06, 95% CI [-.106, .154]; index of moderated mediation of high personalized groups = -.02, SE = .07, 95% CI [-.181, .108]), meaning that when being exposed to high personalized political advertisements on Facebook, an individual's persuasion knowledge was more likely to be activated ($b = .97$, $P < .001$), thus evoked negative emotion ($b = .52$, $P < .001$), and ultimately lowered the evaluation of political party ($b = -.46$, $P < .001$) compared with low personalized group (Fig. 2). Hypothesis 4 was therefore supported. In addition, we found significant direct effect ($b = -.36$, $p < .01$) from degrees of personalization to evaluation of party in high personalized group, however there was no significant direct effect in low personalized group ($b = -.19$, $p > .05$).

Table 4: Conditional serial mediation: Indirect effects of degrees of personalization on evaluation of party mediated by persuasion knowledge and negative emotion, moderated by assigned conditions.

			95% CI	
	Indirect effect	*SE*	*LL*	*UL*
Low personalized ÖVP	-.10	.06	-.242	-.014
Low personalized Die Grünen	-.08	.05	-.212	-.001
High personalized ÖVP	-.23	.10	-.462	-.089
High personalized Die Grünen	-.26	.10	-.501	-.099
			95% CI	
	Index	*SE*	*LL*	*UL*
Conditional effects of assigned party				
Low personalized	.02	.06	-.106	.154
High personalized	-.02	.07	-.181	.108

N = 126. SE, standard error; CI, confidence interval; LL, lower limit; UL, upper limit.

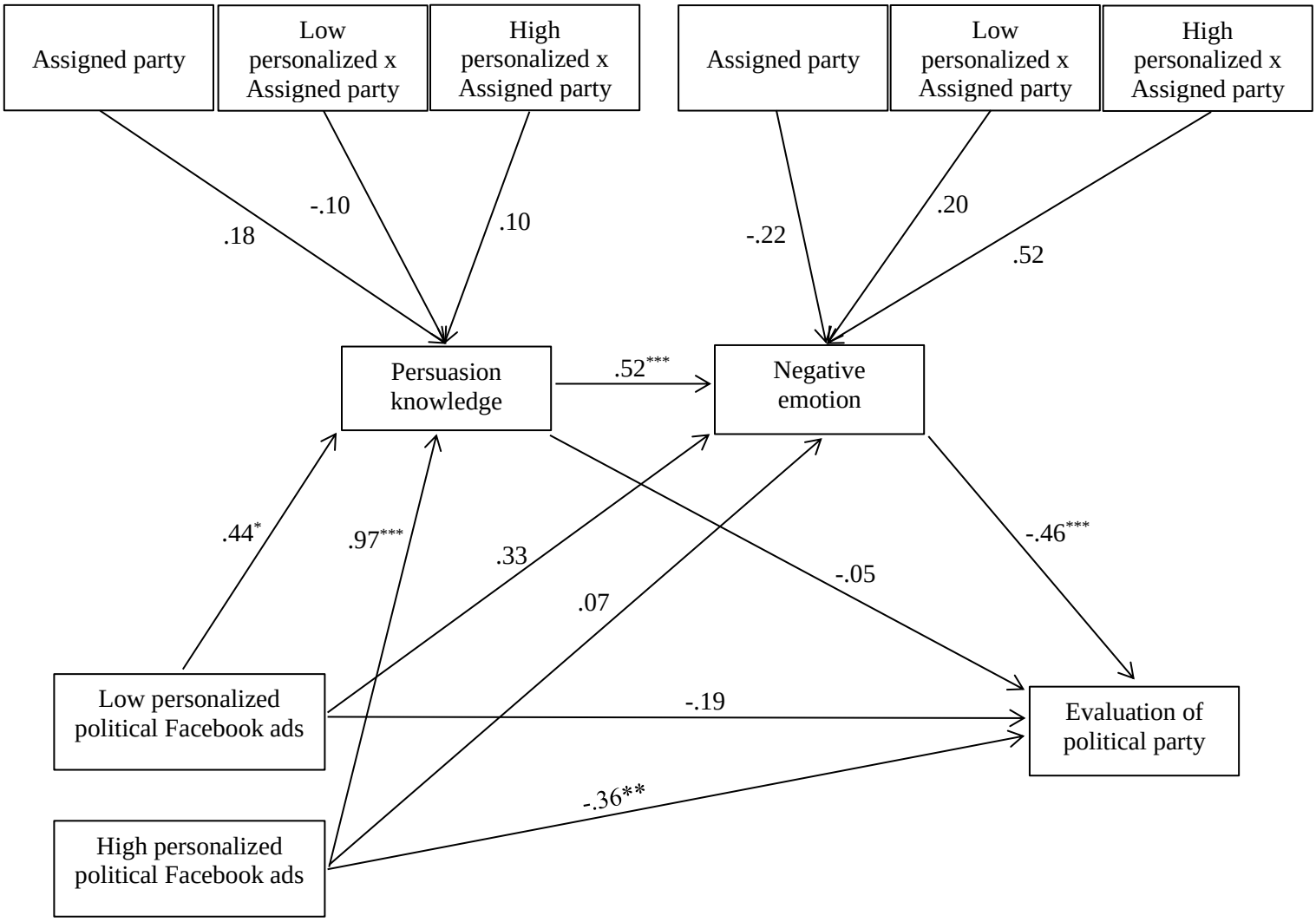

Fig. 2. Tested moderated serial mediation (H4) with non-personalized group as reference category, controlling for political spectrum and interest. N = 126. *p < .05. **p < .01. ***p < .001.

Moderated serial mediation was conducted again to answer Hypothesis 5. In the last hypothesis, a negative indirect effect between degrees of personalization and trust in democracy, mediating by the activation of persuasion knowledge and negative emotion in serial was proposed. The moderated serial mediation model was tested in SPSS marco PROCESS v3.5 Model 84 with 5,000 bootstrap samples. The degrees of personalization was functioned as multicategorical independent variable with non-personalized control group as reference category, persuasion knowledge as first mediator and negative emotion as second mediator, trust in democracy as dependent variable, political spectrum and interest as controls, and assigned condition as moderator to see if the such effect differs for ÖVP and Die Grünen.

Regarding to trust in democracy (Table 5), it was proved that the indirect effects in high personalized groups (high ÖVP indirect effect = -.15, SE = .07, 95% CI [-.302, -.049]; high Die Grünen indirect effect = -.16, SE = .07, 95% CI [-.324, -.052]) were significantly higher than low personalized groups (low ÖVP indirect effect = -.07, SE = .04, 95% CI [-.165, -.009]; low Die Grünen indirect effect = -.05, SE = .04, 95% CI [-.138, -.001]), regardless of which party disseminated the sponsored political advertisements (index of moderated mediation of low personalized groups = .01, SE = .04, 95% CI [-.071, .104]; index of moderated mediation of high personalized groups = -.02, SE = .04, 95% CI [-.119, .065]). Although no significant direct effect was founded (low: b = -.13, SE = .13, p > .05; high: b = -.23, SE = .15, p > .05), both indirect effects in low and high personalized groups were significant, indicating that being exposed to high personalized political advertisements on Facebook were more likely to activate persuasion knowledge (b = .97, P < .001), thus evoked negative emotion (b = .52, P < .001), and ultimately lowered trust in democracy (b = -.30, P < .001), compared to being exposed to low personalized content (Fig. 3). Hypothesis 5 was supported. Persuasion knowledge and negative emotion as

mediating roles had been successfully proven as significant underlying mechanisms in the formation of participants' evaluation of party and trust in democracy.

Table 5: Conditional serial mediation: Indirect effects of degrees of personalization on trust in democracy mediated by persuasion knowledge and negative emotion, moderated by assigned conditions.

			95% CI	
	Indirect effect	*SE*	*LL*	*UL*
Low personalized ÖVP	-.07	.04	-.165	-.009
Low personalized Die Grünen	-.05	.04	-.138	-.001
High personalized ÖVP	-.15	.07	-.302	-.049
High personalized Die Grünen	-.16	.07	-.324	-.052
			95% CI	
	Index	*SE*	*LL*	*UL*
Conditional effects of assigned party				
Low personalized	.01	.04	-.071	.104
High personalized	-.02	.04	-.119	.065

N = 126. SE, standard error; CI, confidence interval; LL, lower limit; UL, upper limit.

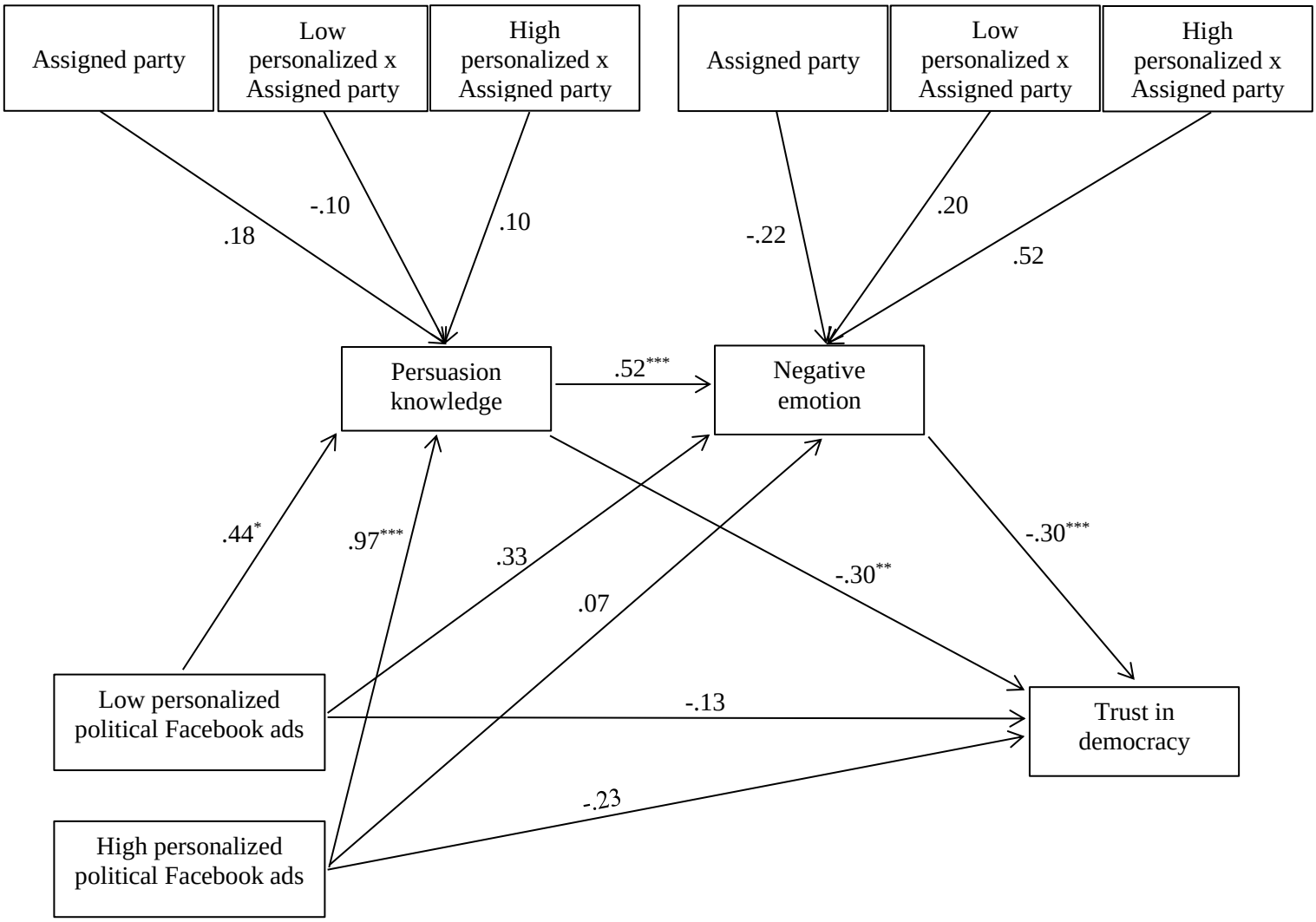

Fig. 3. Tested moderated serial mediation (H5) with non-personalized group as reference category, controlling for political spectrum and interest. N = 126. *p < .05. **p < .01. ***p < .001.

To see if participants' political fit influenced their attitude and preference, which is whether only sponsored content from the opposed party is shown to be annoying, additional analyses were conducted to check if the mediating effects changed under such circumstance.

Moderated mediation and serial moderated mediation for Hypothesis 3, 4, and 5 were analyzed again in SPSS marco PROCESS v3.5 with Model 7 and Model 84 with 5,000 bootstrap

samples. In the additional analyses, the moderating variable was replaced by participants' political spectrum. Results (see Appendix B) showed that participants' political spectrum had no conditional effect on all the proposed mediating indirect effects, indicating that whether an individual was more left- or right-wing, viewing low or high personalized posts from either ÖVP or Die Grünen had no significant effects in forming negative emotion, as well as critical processing in the evaluation of party and trust in democracy.

DISCUSSION AND CONCLUSION

This paper addressed the effects of personalized political advertisements on Facebook and its consequences in political processing. The propose of the study was mainly twofold, it discussed the levels of personalization as a crucial factor for people to distinguish sponsored political content among regular posts on Facebook, as well as its influence in critical political processing. In order to gain more insight behind the formation of attitude and judgement, recognition of disclosure, privacy concern, persuasion knowledge, and negative emotion were also investigated.

As previous literature indicated the majority of public are unaware of the sponsoring disclosure, the current paper added on that an individual's recognition on disclosure is depended on how personalized their exposed content is. Participants in high personalized group had most attention paid to the disclosure, while those in non-personalized group paid the least attention to the disclosure, referring to the more personalized the content is, the more people are able to discern sponsored posts from regular posts when scrolling on Facebook.

The current study shed light on the domain of online political advertising by demonstrating that highly personalized political sponsored content on Facebook would cause a negative impact in political processing. Significant insights with respect to the evaluation of political party and

trust in democracy were found, it was showed when exposing to highly personalized political posts on Facebook, one's persuasion knowledge and negative emotion were more likely to be evoked, thereby lowered the evaluation of party as well as trust in democracy. The finding about evaluation of the party in line with previous works, that attitude towards political targeting is more negative than targeting for other proposes (Baum, Meißner, Abramova & Krasnova, 2019), and such advertising strategy could lower support for politicians and increase advertisement skepticism (Turow et al., 2012; Boerman & Kruikemeier, 2015). Result regarding low trust in democracy also corresponds with previous literature, that news media plays a role in the decline of trust in democracy (Avery, 2009; Hanitzsch & Berganza, 2012; Mutz & Reeves, 2005; Norris, 2011; Tworzecki & Semetko, 2012), and Internet users who exposed to online campaign tends to have lower democratic satisfaction (Norris, 2011).

Persuasion knowledge and negative emotion are proved to be important underlying mechanisms that explain citizens' responses to personalized Facebook's political advertising in this study. The relevance of persuasion knowledge in lines with previous literature, is an important element in the formation of valid attitudes towards the promoted object. The current paper contributes another notable component in the development of persuasion knowledge, which is negative emotion. From our findings it was showed that feelings such as annoyance, anger and unpleasantness towards the exposed posts will be elicited when the content is highly personalized, hence decreases the evaluation to political party and trust in democracy. Altogether, the current study demonstrates that negative emotion towards personalized political posts on Facebook is formed after the activation of persuasion knowledge, and more importantly, before the judgements to political processing, meaning that individuals' affective response is a crucial factor when deciding what type of future relationship to have with the marketer who displays the persuasion behavior,

and to further decide the perceived appropriateness of the promoted message.

With regard to privacy concern, one of the most controversial worries in nowadays digital era, this study found no effect of it in enhancing the activation of persuasion knowledge, regardless of how intense the content was personalized. A possible reason for this could be related to the measurement in survey, participants' privacy concern was asked before their exposure to the stimulus, were as most studies had it measured after the stimulus, in which participants' alertness about their assessment of personal information had already been evoked. The insignificant finding in this study explains that though most people are concerned about their online privacy, it does not stimulate the formation of persuasion knowledge when viewing personalized political Facebook advertisements.

Other noteworthy things in our findings is that the effects evolved from exposing to different levels of personalized Facebook content neither differed from whether receiving posts from ÖVP or Die Grünen, nor did it vary from one's political spectrum. This can be interpreted that regardless of which party disseminate the sponsored Facebook posts, people in general just dislike personalized content on Facebook when the advertising theme is related to politics.

Whilst this paper provides important novel insights into the field of Facebook's personalized political advertising, it does have some limitations. Firstly, due to the characteristic of online survey experiment, although good internal consistency can be guaranteed (Thomas & Petersen, 1982), self-report problems such as sampling bias, social desirability bias, and recall bias could occur (Bhattacherjee, 2012). Second, despite the fact of providing significant result while measuring trust in democracy, however, personal belief to democracy is more or less a long-term effect, the measurement could be more accurate with other experiments, for example, longitudinal field survey (Bhattacherjee, 2012). Last but not least, this study was mainly conducted in Austria, it is

important to note that the relationship between citizens and evaluation in social media political advertising may vary across different culture. Future research is needed to understand the effects between countries and see whether the finding in current paper can be generalized to a wider range.

In summary, this study provides valuable implications in the implantation of personalized political advertisement on Facebook. The current paper suggests that personalized political online content is not always beneficial and can be harmful for the party's image. Our finding has demonstrated that negative judgement is strongest when the exposed political content is tailored to users' intimate information, such as certain interest towards an issue. A better way to balance the backlash could be adapting low personalized political advertisements, for example, utilizing only basic information like age, gender, and location, however, although less, the general attitude towards it is still negative.

Suggested by Turow et al. (2012), while citizens seems to understand the practice of personalized political advertisements on Facebook and possess less favor with it, what could be worried is that people may therefore view every political advertisements, and eventually every message from politician, with wariness about how politicians acquire their interest and personal information, such attitude could end up hurting the credibility of politicians or political parties as people may perceive such strategy as an anti-democratic way of practicing democracy. Having in mind that as general public view targeted political advertising more unacceptable than advertisements targeted for product or commercial propose, political organizations and politicians must be more attentive while reaching their potential voters via personalized content on Facebook, obviously only including a sponsorship disclosure is not enough, more explanations, for example, asking for users' permission before collecting their data, and inform them clearly about the use of their information should be considered. Future research in needed to fully understand in which way can

citizens accept political tailored message, and to investigate whether such strategy functions better in other media platform, or even contemplate whether the usage of personalized political advertisements is necessary not only to the political organization and politician itself, but to the social interaction between citizen and government in a long-term effect.

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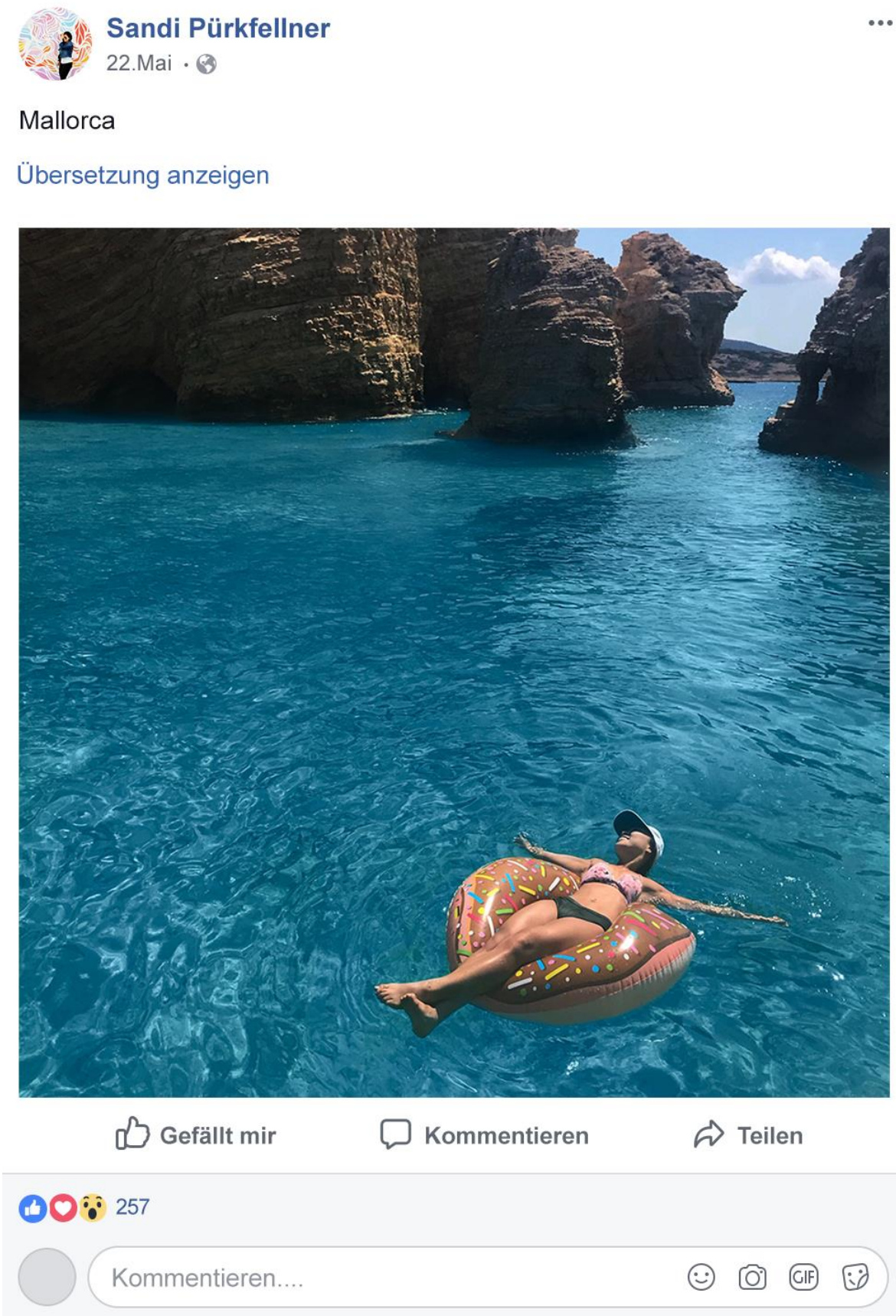
APPENDIX A: Stimulus Images


Die Grünen
Gesponsert ·
Familien STÄRKEN!- weil auch die Kleinsten zählen.
Die Grünen für die Familie.
Übersetzung anzeigen
DIE GRÜNEN
GRUENE.AT
Gefällt mir
Kommentieren
Teilen
1.035
Kommentieren....
GIF


Die Grünen
Gesponsert ·
Weil Familie einfach alles bedeuten kann-
Wir machen uns für das Wichtigste im Leben stark!
Übersetzung anzeigen
DIE GRÜNEN
GRUENE.AT
Gefällt mir
Kommentieren
Teilen
2.463
Kommentieren....
GIF


Marie Saumer
22.Mai
Flowers are always a good idea! :)
Übersetzung anzeigen
Gefällt mir
Kommentieren
Teilen
114
Kommentieren....


Sandi Pürkfellner
22.Mai
Mallorca
Übersetzung anzeigen
Gefällt mir
Kommentieren
Teilen
257
Kommentieren....
GIF


Christoph Lichti
59 Min
In the mood for food :)
Übersetzung anzeigen
Gefällt mir
Kommentieren
Teilen
61
Kommentieren....


Mani Schobesberger
59 Min
Kalifornien ich komme!
Übersetzung anzeigen
Gefällt mir
Kommentieren
Teilen
111
Kommentieren....


ÖVP-Parlamentsklub
Gesponsert
Gemeinsam sind wir stark!
Die ÖVP möchte Ihre Familie stärken- für die Kleinsten unter uns
Übersetzung anzeigen
Die neue Volkspartei
Gefällt mir
Kommentieren
Teilen
1.043
Kommentieren....


ÖVP-Parlamentsklub
Gesponsert
Familienglück ist das oberste Gebot!
Die ÖVP macht es möglich
Übersetzung anzeigen
Die neue Volkspartei
Gefällt mir
Kommentieren
Teilen
544
Kommentieren....


ÖVP-Parlamentsklub
Gesponsert ·
Weil Familie die unterschiedlichsten Facetten haben kann-
Wir kümmern uns um das Wichstige im Leben!
Übersetzung anzeigen
Die neue Volkspartei
Gefällt mir
Kommentieren
Teilen
2.476
Kommentieren....

APPEBDIX B: Tables of Additional Analyses

Table 6: Conditional mediation: Indirect effects of degrees of personalization on negative emotion through the activation of persuasion knowledge, moderated by political spectrum, controlled for political interest.

			95% CI	
	Indirect effect	*SE*	*LL*	*UL*
Low personalized group:				
Conditional indirect effect at different levels of political spectrum				
-1 SD	.26	.14	.052	.573
M	.21	.09	.065	.427
+1 SD	.16	.11	-.057	.396
Index of moderated mediation				
Political spectrum	-.06	.10	-.286	.103
High personalized group:				
Conditional indirect effect at different levels of political spectrum				
-1 SD	.61	.20	.293	1.057
M	.52	.16	.265	.899
+ 1SD	.43	.18	.166	.840
Index of moderated mediation				
Political spectrum	-.10	.10	-.320	.094

N = 126. SE, standard error; CI, confidence interval; LL, lower limit; UL, upper limit.

Table 7: Conditional serial mediation: Indirect effects of degrees of personalization on evaluation of party mediated by persuasion knowledge and negative emotion, moderated by political spectrum, controlled for political interest.

			95% CI	
	Indirect effect	*SE*	*LL*	*UL*
Low personalized group:				
Conditional indirect effect at different levels of political spectrum				
-1 SD	-.12	.07	-.277	-.020
M	-.09	.04	-.201	-.026
+1 SD	-.07	.05	-.185	.024
Index of moderated mediation				
Political spectrum	.03	.05	-.048	.133
High personalized group:				
Conditional indirect effect at different levels of political spectrum				
-1 SD	-.27	.10	-.515	-.120
M	-.23	.09	-.444	-.103
+ 1SD	-.19	.09	-.419	-.064
Index of moderated mediation				
Political spectrum	.05	.05	-.044	.148

N = 126. SE, standard error; CI, confidence interval; LL, lower limit; UL, upper limit.

Table 8: Conditional serial mediation: Indirect effects of degrees of personalization on trust in democracy mediated by persuasion knowledge and negative emotion, moderated by political spectrum, controlled for political interest.

			95% CI	
	Indirect effect	*SE*	*LL*	*UL*
Low personalized group:				
Conditional indirect effect at different levels of political spectrum				
-1 SD	-.07	.05	-.191	-.012
M	-.06	.03	-.140	-.015
+1 SD	-.04	.04	-.126	.013
Index of moderated mediation				
Political spectrum	.02	.03	-.031	.087
High personalized group:				
Conditional indirect effect at different levels of political spectrum				
-1 SD	-.17	.08	-.359	-.059
M	-.15	.06	-.300	-.053
+ 1SD	-.12	.06	-.268	-.037
Index of moderated mediation				
Political spectrum	.03	.03	-.027	.106

N = 126. SE, standard error; CI, confidence interval; LL, lower limit; UL, upper limit.

APPENDIX C: Questionnaire

- No matter how much, can you understand some basic German?

- Yes

- No

- How old are you?

- Younger than 18

- 18-24

- 25-29

- 30-40

- 41-50

- 51-60

- Older than 60

- What is your gender?

- Male

- Female

- Prefer not to say

- Where is your residency?

- Open-ended answer

- Please describe how much you agree or disagree with the following statements (5-point Likert scale):

1. I am concerned that the information I submit on Internet could be misused.
2. I am concerned about submitting information on Internet, because of what others might do with it.

3. When I am online, I have the feeling that all my clicks and actions are being tracked and monitored.
4. When I am online, I have the feeling of being watched.
5. Being able to control the personal information I provide to a website is important to me.

- Do you consider yourself more "left" or more "right" when it comes to politics and political issues? (1 = very left, 5 = very right)
- Which group of people do you make calls with at least once a week? (only shown to participants in highly personalized groups)

- Colleagues
- Families
- close friends
- extended circle of friends

- Imagine you are on a news page. Which article is most likely for you to click and read? (only shown to participants in highly personalized groups)

- Which party posted the sponsored ads?

- SPÖ
- ÖVP
- Die Grünen
- NEOS
- FPÖ

- What do you think are the reasons the posts were shown to you (choose as many as you like)?

- because I have indicated my gender.
- because I have indicated my residency.
- because I have indicated my certain interest of topics.
- because I have indicated my education level.
- because I have indicated my income level.

- Please describe how much you agree or disagree with the following statements (5-point Likert scale):

1. Some of the posts included the "Gesponsert" (Sponsored) disclosure.
2. The "Gesponsert" (Sponsored) disclosure showed up frequently.
3. I concentrated on the "Gesponsert" (Sponsored) disclosure a lot in some of the posts.
4. I paid attention to the "Gesponsert" (Sponsored) disclosure a lot in some of the posts.

- Please describe how much you agree or disagree with the following statements (5-point Likert scale):

1. I feel some of the posts aim to promote a political party.
2. I feel some of the posts aim to increase their support for a political party.

3. I feel some of the posts aim to convey a positive image of a party.
4. I feel some of the posts aim to influence my opinion of a party.
5. I feel some of the posts aim to strengthen a political party.
6. I feel some of the posts aim to win votes for a political party.
7. The posts are based on my data.
8. The posts show personalized advertising
9. The posts use location data.

- Please describe how much you agree or disagree with the following statements (5-point Likert scale):

1. The posts annoy me.
2. The posts make me angry.
3. The posts create an unpleasant feeling.
4. These posts unsettle me.
5. The posts alert me.

- How much do the following characteristics apply to the party that disseminated the sponsored posts on Facebook? (5-point Likert scale)

1. Intelligent
2. Mora
3. Compassionate
4. Inspiring
5. Provides strong leadership
6. Honest
7. Knowledgeable

8. Cares about people like me
9. Gets things done

- Please indicate how much do you agree or disagree with the following statements (5-point Likert scale):

1. Politicians in Austria rarely keep their promises to the population.
2. The politicians in Austria are honest with the voters.
3. One can be confident that politicians are doing the right thing without the need for public scrutiny.

- Please indicate how much do you agree or disagree with the following statements (5-point Likert scale):

1. I am very interested in politics.
2. I am very interested in information about recent activities of government and politics.
3. I pay many attentions to information regarding politics and public affairs.
4. I seek political information or news online actively.

APPENDIX D: SPSS Output

Hypothesis 1

Descriptive Statistics

Dependent Variable: recog

group	Mean	Std. Deviation	N
1	2.4390	.61436	41
2	3.4205	.66204	44
3	3.8598	.92542	41
Total	3.2440	.94523	126

Tests of Between-Subjects Effects

Dependent Variable: recog

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	51.029[a]	4	12.757	25.449	.000	.457
Intercept	14.920	1	14.920	29.764	.000	.197
specturm	.107	1	.107	.213	.645	.002
interest	7.268	1	7.268	14.500	.000	.107
group	34.813	2	17.407	34.725	.000	.365
Error	60.654	121	.501			
Total	1437.688	126				
Corrected Total	111.683	125				

a. R Squared = .457 (Adjusted R Squared = .439)

Hypothesis 2

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 3
    Y  : pkmsuso
    X  : group
    W  : privacy
    Z  : pp

Covariates:
 specturm interest

Sample
Size:  126

Coding of categorical X variable for analysis:
  group     X1     X2
  1.000   .000   .000
  2.000  1.000   .000
  3.000   .000  1.000

**************************************************************************
OUTCOME VARIABLE:
 pkmsuso

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .7103      .5045      .3485     8.7725    13.0000   112.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.4452      .9282     2.6343      .0096      .6061     4.2844
X1           -.9862     1.1014     -.8954      .3725    -3.1685     1.1961
X2           1.3285     1.1020     1.2055      .2306     -.8550     3.5120
privacy      -.0234      .2469     -.0950      .9245     -.5126      .4657
Int_1         .3743      .3098     1.2081      .2295     -.2396      .9883
Int_2        -.0925      .3148     -.2939      .7694     -.7163      .5312
```

Page 1

```
pp           -.2075     1.0598     -.1958      .8451    -2.3074     1.8923
Int_3        1.0373     1.5823      .6556      .5135    -2.0979     4.1725
Int_4        -.6025     1.6706     -.3606      .7191    -3.9126     2.7077
Int_5         .1152      .3118      .3693      .7126     -.5027      .7331
Int_6        -.2925      .4468     -.6546      .5140    -1.1778      .5928
Int_7         .1834      .4655      .3939      .6944     -.7390     1.1057
specturm     -.0672      .0662    -1.0155      .3121     -.1983      .0639
interest      .3086      .0715     4.3175      .0000      .1670      .4502

Product terms key:
 Int_1    :        X1       x        privacy
 Int_2    :        X2       x        privacy
 Int_3    :        X1       x        pp
 Int_4    :        X2       x        pp
 Int_5    :        privacy  x        pp
 Int_6    :        X1       x        privacy  x        pp
 Int_7    :        X2       x        privacy  x        pp

Test(s) of highest order unconditional interaction(s):
         R2-chng          F        df1        df2          p
X*W*Z      .0048      .5395     2.0000   112.0000      .5846

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

------ END MATRIX -----
```

Hypothesis 3

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 7
    Y  : negemo
    X  : group
    M  : pkmsuso
    W  : pp

Covariates:
 specturm interest

Sample
Size:  126

Coding of categorical X variable for analysis:
  group     X1     X2
  1.000   .000   .000
  2.000  1.000   .000
  3.000   .000  1.000

**************************************************************************
OUTCOME VARIABLE:
 pkmsuso

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6942      .4819      .3459    15.6766     7.0000   118.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.3173      .3423     6.7703      .0000     1.6395     2.9950
X1            .4375      .1916     2.2839      .0242      .0582      .8168
X2            .9719      .1830     5.3122      .0000      .6096     1.3342
pp            .1836      .1854      .9903      .3240     -.1835      .5507
Int_1        -.0983      .2565     -.3834      .7021     -.6062      .4095
Int_2         .1032      .2649      .3895      .6976     -.4213      .6276
```

Page 1

```
specturm     -.0666      .0643    -1.0349      .3028     -.1940      .0608
interest      .3248      .0690     4.7092      .0000      .1882      .4614

Product terms key:
 Int_1    :        X1        x        pp
 Int_2    :        X2        x        pp

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0026      .3011     2.0000   118.0000      .7405

**************************************************************************
OUTCOME VARIABLE:
 negemo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6383      .4074      .5018    16.5026     5.0000   120.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.2162      .4693     -.4607      .6458    -1.1455      .7130
X1            .4315      .1633     2.6430      .0093      .1083      .7548
X2            .2919      .1917     1.5228      .1304     -.0876      .6715
pkmsuso       .5288      .1093     4.8384      .0000      .3124      .7452
specturm      .0427      .0777      .5501      .5833     -.1110      .1965
interest      .1588      .0904     1.7572      .0814     -.0201      .3377

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y *****************

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1      .4315      .1633     2.6430      .0093      .1083      .7548
X2      .2919      .1917     1.5228      .1304     -.0876      .6715

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      .0345     3.4935     2.0000   120.0000      .0335
----------

Relative conditional indirect effects of X on Y:
```

```
INDIRECT EFFECT:
 group       ->    pkmsuso     ->    negemo

           pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000      .2313      .1115      .0421      .4743
X1     1.0000      .1793      .1126      .0006      .4439

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0520      .1368     -.3142      .2316
---

           pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000      .5139      .1645      .2447      .8829
X2     1.0000      .5685      .1901      .2694     1.0095

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp      .0545      .1534     -.2215      .3909
---

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```

Hypothesis 4

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 84
    Y  : party
    X  : group
   M1  : pkmsuso
   M2  : negemo
    W  : pp

Covariates:
 specturm interest

Sample
Size:  126

Coding of categorical X variable for analysis:
  group     X1     X2
  1.000   .000   .000
  2.000  1.000   .000
  3.000   .000  1.000

**************************************************************************
OUTCOME VARIABLE:
 pkmsuso

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6942      .4819      .3459    15.6766     7.0000   118.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.3173      .3423     6.7703      .0000     1.6395     2.9950
X1            .4375      .1916     2.2839      .0242      .0582      .8168
X2            .9719      .1830     5.3122      .0000      .6096     1.3342
pp            .1836      .1854      .9903      .3240     -.1835      .5507
Int_1        -.0983      .2565     -.3834      .7021     -.6062      .4095
```

```
Int_2         .1032      .2649      .3895      .6976     -.4213      .6276
specturm     -.0666      .0643    -1.0349      .3028     -.1940      .0608
interest      .3248      .0690     4.7092      .0000      .1882      .4614

Product terms key:
 Int_1    :        X1       x        pp
 Int_2    :        X2       x        pp

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0026      .3011     2.0000   118.0000      .7405

**************************************************************************
OUTCOME VARIABLE:
 negemo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6486      .4207      .5032    10.6196     8.0000   117.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.0297      .4864     -.0611      .9514     -.9931      .9336
X1            .3278      .2361     1.3884      .1677     -.1398      .7954
X2            .0655      .2457      .2667      .7901     -.4210      .5520
pkmsuso       .5195      .1110     4.6787      .0000      .2996      .7394
pp           -.2201      .2245     -.9801      .3290     -.6647      .2246
Int_1         .1978      .3095      .6391      .5240     -.4152      .8108
Int_2         .5177      .3197     1.6194      .1080     -.1154     1.1507
specturm      .0406      .0779      .5207      .6036     -.1138      .1949
interest      .1499      .0907     1.6536      .1009     -.0296      .3295

Product terms key:
 Int_1    :        X1       x        pp
 Int_2    :        X2       x        pp

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0132     1.3316     2.0000   117.0000      .2680

**************************************************************************
OUTCOME VARIABLE:
```

```
 party

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .7282      .5303      .2798    22.3901     6.0000   119.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     4.3121      .3507    12.2941      .0000     3.6175     5.0066
X1           -.1928      .1254    -1.5371      .1269     -.4411      .0556
X2           -.3597      .1445    -2.4889      .0142     -.6459     -.0735
pkmsuso      -.0485      .0892     -.5435      .5878     -.2251      .1282
negemo       -.4601      .0682    -6.7504      .0000     -.5951     -.3252
specturm      .0816      .0581     1.4046      .1628     -.0334      .1965
interest     -.0272      .0683     -.3986      .6909     -.1626      .1081

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1     -.1928      .1254    -1.5371      .1269     -.4411      .0556
X2     -.3597      .1445    -2.4889      .0142     -.6459     -.0735

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      .0245     3.1052     2.0000   119.0000      .0485
----------

Relative conditional indirect effects of X on Y:

INDIRECT EFFECT:
 group       ->    pkmsuso     ->    party

          pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000     -.0212      .0416     -.1095      .0590
X1     1.0000     -.0164      .0352     -.1000      .0466

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp      .0048      .0250     -.0485      .0588
---
```

```
          pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000     -.0471      .0866     -.2237      .1245
X2     1.0000     -.0521      .0957     -.2480      .1272

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0050      .0275     -.0772      .0386
---

INDIRECT EFFECT:
 group       ->    negemo      ->    party

          pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000     -.1508      .1285     -.3882      .1260
X1     1.0000     -.2418      .0869     -.4260     -.0809

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0910      .1520     -.4164      .1778
---

          pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000     -.0301      .1589     -.3079      .3154
X2     1.0000     -.2683      .1062     -.4800     -.0582

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.2382      .1580     -.5762      .0439
---

INDIRECT EFFECT:
 group       ->    pkmsuso     ->    negemo      ->    party

          pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000     -.1046      .0576     -.2421     -.0140
X1     1.0000     -.0811      .0535     -.2118     -.0008
```

```
Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp      .0235      .0639     -.1060      .1538
---

           pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000     -.2323      .0953     -.4622     -.0886
X2     1.0000     -.2570      .1018     -.5013     -.0985

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0247      .0707     -.1807      .1075
---

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

NOTE: The contrast option is not available with a multicategorical X.

------ END MATRIX -----
```

Hypothesis 5

```
Run MATRIX procedure:

***************** PROCESS Procedure for SPSS Version 3.5 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 84
    Y  : demoacd
    X  : group
   M1  : pkmsuso
   M2  : negemo
    W  : pp

Covariates:
 specturm interest

Sample
Size:  126

Coding of categorical X variable for analysis:
  group     X1     X2
  1.000   .000   .000
  2.000  1.000   .000
  3.000   .000  1.000

**************************************************************************
OUTCOME VARIABLE:
 pkmsuso

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6942      .4819      .3459    15.6766     7.0000   118.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2.3173      .3423     6.7703      .0000     1.6395     2.9950
X1            .4375      .1916     2.2839      .0242      .0582      .8168
X2            .9719      .1830     5.3122      .0000      .6096     1.3342
pp            .1836      .1854      .9903      .3240     -.1835      .5507
Int_1        -.0983      .2565     -.3834      .7021     -.6062      .4095
```

```
Int_2         .1032      .2649      .3895      .6976     -.4213      .6276
specturm     -.0666      .0643    -1.0349      .3028     -.1940      .0608
interest      .3248      .0690     4.7092      .0000      .1882      .4614

Product terms key:
 Int_1    :        X1       x        pp
 Int_2    :        X2       x        pp

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0026      .3011     2.0000   118.0000      .7405

**************************************************************************
OUTCOME VARIABLE:
 negemo

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6486      .4207      .5032    10.6196     8.0000   117.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     -.0297      .4864     -.0611      .9514     -.9931      .9336
X1            .3278      .2361     1.3884      .1677     -.1398      .7954
X2            .0655      .2457      .2667      .7901     -.4210      .5520
pkmsuso       .5195      .1110     4.6787      .0000      .2996      .7394
pp           -.2201      .2245     -.9801      .3290     -.6647      .2246
Int_1         .1978      .3095      .6391      .5240     -.4152      .8108
Int_2         .5177      .3197     1.6194      .1080     -.1154     1.1507
specturm      .0406      .0779      .5207      .6036     -.1138      .1949
interest      .1499      .0907     1.6536      .1009     -.0296      .3295

Product terms key:
 Int_1    :        X1       x        pp
 Int_2    :        X2       x        pp

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W      .0132     1.3316     2.0000   117.0000      .2680

**************************************************************************
OUTCOME VARIABLE:
```

```
 demoacd

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6935      .4810      .2977    18.3788     6.0000   119.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     4.3948      .3618    12.1462      .0000     3.6783     5.1112
X1           -.1302      .1294    -1.0067      .3161     -.3864      .1259
X2           -.2329      .1491    -1.5619      .1210     -.5281      .0623
pkmsuso      -.2963      .0920    -3.2199      .0017     -.4785     -.1141
negemo       -.2911      .0703    -4.1405      .0001     -.4304     -.1519
specturm      .0534      .0599      .8921      .3741     -.0652      .1720
interest      .0078      .0705      .1102      .9125     -.1318      .1474

****************** DIRECT AND INDIRECT EFFECTS OF X ON Y ****************

Relative direct effects of X on Y
       Effect         se          t          p       LLCI       ULCI
X1     -.1302      .1294    -1.0067      .3161     -.3864      .1259
X2     -.2329      .1491    -1.5619      .1210     -.5281      .0623

Omnibus test of direct effect of X on Y:
    R2-chng          F        df1        df2          p
      .0107     1.2283     2.0000   119.0000      .2965
----------

Relative conditional indirect effects of X on Y:

INDIRECT EFFECT:
 group       ->    pkmsuso     ->    demoacd

           pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000     -.1296      .0805     -.3180     -.0104
X1     1.0000     -.1005      .0772     -.2975     -.0002

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp      .0291      .0815     -.1442      .1900
---
```

```
          pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000     -.2880      .1427     -.6167     -.0646
X2     1.0000     -.3186      .1547     -.6774     -.0739

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0306      .0873     -.2235      .1295
---

INDIRECT EFFECT:
 group       ->    negemo      ->    demoacd

          pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000     -.0954      .0912     -.2958      .0682
X1     1.0000     -.1530      .0728     -.3252     -.0380

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0576      .0960     -.2703      .1202
---

          pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000     -.0191      .1031     -.2323      .1832
X2     1.0000     -.1698      .0906     -.3754     -.0216

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.1507      .1035     -.3806      .0230
---

INDIRECT EFFECT:
 group       ->    pkmsuso     ->    negemo      ->    demoacd

          pp     Effect     BootSE   BootLLCI   BootULCI
X1      .0000     -.0662      .0399     -.1646     -.0087
X1     1.0000     -.0513      .0355     -.1379     -.0008
```

```
Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp      .0149      .0413     -.0714      .1037
---

           pp     Effect     BootSE   BootLLCI   BootULCI
X2      .0000     -.1470      .0650     -.3018     -.0491
X2     1.0000     -.1626      .0715     -.3236     -.0522

Index of moderated mediation (difference between conditional indirect effects)
:
        Index     BootSE   BootLLCI   BootULCI
pp     -.0156      .0448     -.1194      .0650
---

************************ ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  5000

------ END MATRIX -----
```