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Article

Is Personality Key? Persuasive Effects of Prior Attitudes and Personality in Political Microtargeting

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Abstract

Messages that are designed to match a recipient's personality, as enabled by microtargeting, have been found to influence political reasoning and even voting intentions. We extended these findings by adding prior attitudes to a microtargeting setting. Specifically, we examined what role different microtargeting approaches play in political reasoning by conducting an online experiment with a 2 (extraverted vs. introverted communication) × 2 (attitude-congruent vs. attitude-incongruent statement) between-subject design ($N = 368$). In line with the assumptions of the theory of motivated reasoning, attitude position matching emerged as an effective microtargeting strategy, and attitude strength moderated the effect of attitude congruency on recipients' evaluations of political ads. While extraverted messages had no direct effect, that was unrelated to attitude congruency, recipients' level of extraversion moderated the effect of extraverted communication on their evaluation of an ad. Interestingly, the intention to vote was significantly higher when an attitude-incongruent statement was phrased in an introverted rather than an extraverted manner, suggesting that information that challenges prior attitudes might be more persuasive when it is delivered in a more temperate way. In sum, the study indicates that matching message with personality alone might not be the most effective microtargeting approach within democratic societies.

Keywords

extraversion; motivated reasoning; political attitudes; political microtargeting; personality traits

Issue

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1. Introduction

In the run-up to democratic elections, political campaigns represent a means to disseminate ideas and information (Brady et al., 2006). Informing the public about candidates, parties, and their political positions is an important task prior to elections, enabling voters to make conscious voting decisions. Indeed, the perception of feeling politically informed has been shown to affect political participation, for instance by mobilizing people to cast their vote in an election (Moeller et al., 2014). Due to the ever-growing digitalization of the media landscape, political campaigns are becoming increasingly diverse (Dobber et al., 2017). Social media

offer a wide range of possibilities to spread information and interact on a personal level (Ohme, 2019). One such possibility is online political microtargeting (OPM), a communication strategy that consists of forming small groups and sending them personalized messages (Papakyriakopoulos et al., 2018).

The marketing firm Cambridge Analytica claimed to have found a way to categorize potential voters into micro-groups, which were used for highly personalized advertising on Facebook during Trump's 2016 US presidential election campaign, the UK Brexit campaign, and other political contexts (Heawood, 2018). This personalized microtargeting strategy was purportedly based on research on the prediction of personal attributes.

Kosinski et al. (2013) found that highly personal information such as ethnic background, sexual orientation, partisanship, and even personality traits could be derived from online data (e.g., Facebook likes). Following this revelation, discussion arose among journalists, politicians, and scientists about how to deal with the potential threat of OPM to democracies. Despite some legal regulations, OPM on social media is still permitted (Witzleb & Paterson, 2021) and the potential impact of OPM based on personality predictions currently remains unclear.

Recent findings suggest that OPM which matches the message style with the recipient's personality traits (extraversion or introversion) might even influence voting decisions (Zarouali et al., 2020). While these findings indicate that personality matching may be a highly persuasive tool, so far, this has only been demonstrated for ads that endorse the recipient's prior preferences. Moreover, it has not yet been considered that campaigns using big data techniques have many different options besides personality matching to assess and address relevant target groups. Theoretical models of political reasoning view prior attitudes as a relevant factor with regard to information processing (Lodge & Taber, 2013). Based on the theory of motivated reasoning, people are motivated to come to conclusions that fit their prior beliefs (Kunda, 1990), meaning that the processing of political information differs depending on whether the information challenges existing attitudes or confirms them.

If one is to assume potential manipulation of the electorate through OPM, it is important to understand whether ads that challenge recipients' attitudes might influence their political evaluations by bringing about a shift towards parties or candidates to whom recipients were previously opposed. Additionally, targeted advertising on social media also entails the potential to address, inform, and mobilize citizens who have a low interest in politics and might therefore not be reached through traditional media (Zuiderveen Borgesius et al., 2018). As OPM research has focused on the personalization of political advertising due to the advancement of big data (e.g., Zarouali et al., 2020), we wish to extend previous findings by examining what role different factors of microtargeting strategies might play within political campaigns, focusing on the personality trait extraversion and including the position and strength of prior attitudes. In contrast to defining target groups based on bivariate attitude positions when grouping individuals according to personality traits, a cut-off value is necessary to determine whether an individual should be assigned to a particular trait group. Therefore, the present study refrains from dividing participants based on their level of extraversion when analyzing the influence of personality matching regarding message-recipient fit. Rather, we use participants' level of extraversion as a moderator to evaluate the degree of matching. Hence, we applied a controlled experimental setting in order to gain a first understanding of the influences of prior attitudes and personality traits within campaign messages.

2. Theoretical Background

2.1. Political Reasoning and Prior Attitudes

Processes of political reasoning cannot be described without first considering the existing attitudes that an individual holds. According to the theory of motivated reasoning, people are motivated to both come to accurate conclusions and to confirm their prior beliefs (Kunda, 1990). While the motivation for accuracy may serve as a rational approach, the motivation for confirmation of prior beliefs means that incoming information is evaluated differently depending on the individual's prior attitudes. Thus, people are motivated to evaluate information more positively when it is in line with their own views and more negatively when it contradicts their own views. This confirmation bias can undermine the motivation to come to reasonable conclusions (Kunda, 1990).

The question of how existing attitudes influence the reception and processing of information, as well as the resulting behavior, is highly relevant, especially when studying persuasion in the sense of attitude change. Research on OPM has demonstrated that matching a political party's advertising to people's personality traits through social media enhances their subsequent evaluations of the message and of the political party itself if the recipient is already in favor of that political party (e.g., Zarouali et al., 2020). However, it remains unclear how persuasive personality trait matching might be when the message opposes the individual's existing political views. To determine whether OPM may have a manipulative impact on the electorate, research on the perception of counter-attitudinal advertising is needed. Taber et al. (2009) found that information that is congruent with existing beliefs is evaluated more strongly and thus receives more acceptance. Moreover, the authors reported that arguments that challenged participants' prior attitudes were evaluated more critically than attitude-congruent arguments, and this "attitude congruence bias" (Taber et al., 2009, p. 153) was moderated by attitude strength.

Lodge and Taber (2013) theoretically derived conscious and unconscious processes to describe the formation and deliberation of political views, including "motivated bias" (p. 38), positing that the processing of new information is affected by the motivation to preserve prior beliefs. The authors suggested that this "will often occur outside of awareness" (Taber & Lodge, 2016, p. 62), meaning the path of information processing is laid unconsciously. Such findings lead to the hypothesis that political evaluation is not merely rational but is rather influenced by prior attitude positions and attitude strengths (Taber et al., 2009). In line with Krosnick and Petty (1995), attitude position and attitude strength can be seen as two dimensions, meaning that people can take extreme positions without being strongly involved.

In an eye-tracking study, van Strien et al. (2016) examined how prior attitudes bias the evaluation not

only of arguments but also of the information source. In their experiment, participants spent less time looking at attitude-incongruent information than at attitude-congruent information. Moreover, the results revealed a positive association of attitude strength with recalled arguments and with perceived source credibility. These findings support the hypothesis of a motivated bias and also highlight the persuasive potential of prior attitudes and their strength with regard to political information (e.g., within advertisements), parties or candidates, and even voting intentions.

While previous research focused on targeting factors such as personality traits within attitude-congruent settings (Zarouali et al., 2020), the present study includes both attitude-congruent and attitude-incongruent statements. As such, we assess OPM that is not solely focused on personality traits but rather includes recipients' political opinions. We propose that matching people's prior attitude positions will increase the persuasive appeal of OPM. In line with recent studies, we investigate participants' evaluations of each argument (ad evaluation), the political party (party evaluation), and behavioral intention (voting intention), and add a manipulation of attitude (in-)congruency:

H1: Within the attitude-congruent groups (vs. the attitude-incongruent groups), the (H1a) ad evaluation, (H1b) party evaluation, and (H1c) intention to vote for the party is significantly higher.

Empirical findings suggest a relation between prior attitudes, attitude strength, and subsequent evaluations (van Strien et al., 2016). Taber et al. (2009) found a moderating role of attitude strength in political processing, insofar as "attitude strength moderates all forms of bias" (p. 153). We, therefore, hypothesize a similar role of attitude strength in the context of OPM, and suggest that the stronger a recipient's attitude, the greater its moderating impact on attitude congruency effects:

H2: The effect of attitude congruency on (H2a) ad evaluation, (H2b) party evaluation, and (H2c) intention to vote is moderated by attitude strength, meaning the stronger the prior attitude, the higher the moderating effect.

2.2. Personality Traits and Politics

The five-factor model of personality is a fundamental approach to describe and assess five different personality traits (neuroticism, agreeableness, conscientiousness, openness, and extraversion; McCrae & Costa, 1987). Schoen and Schumann (2007) investigated the effects of personality traits on attitudes towards parties and vote choice in Germany, and confirmed that personality traits indirectly affected partisan attitudes and voting behavior. With regard to personality traits and communication, Oreg and Sverdluk (2013) found an association between

the perceived personality of a sender and the sender's persuasiveness in conversations. Specifically, their findings revealed a higher persuasive effect when the sender was perceived as more extraverted, meaning that high extraversion was associated with high persuasiveness. In line with this, Argyris et al. (2021) showed that the perceived extraversion of online influencers had a positive effect on recipients' purchase intentions.

In accordance with previous findings that extraverted messages seem to be more persuasive than introverted messages (Argyris et al., 2021), we assume a greater persuasive effect of a high (compared to low) extraverted message on ad evaluation, party evaluation, and voting intention:

H3: Within the extraverted messages groups, the (H3a) ad evaluation, (H3b) party evaluation, and (H3c) intention to vote is significantly higher than in the introverted messaging groups.

2.3. Online Political Campaigning and Persuasion

The evolution of data tracking has led to the ability to specify target groups in even greater detail and to address these groups directly while reducing scatter loss and thus increasing the reach and effectiveness of campaigns (Witzleb & Paterson, 2021). Segmentation of potential target groups often results from market research among readers or viewers of different media or programs in order to find optimal placements for ads (Tynan & Drayton, 1987). The advance of big data analysis has led to so-called microtargeting, which can be implemented within different segmentation strategies depending on campaign goals or available data.

Recent research has revealed that social media data has the potential not only to yield direct information based on online behavior (e.g., likes) but also personal information (e.g., partisanship) and even personality traits. Kosinski et al. (2013) used Facebook likes, which are easily accessible, to predict psychodemographic profiles. While dichotomous variables were predicted quite accurately, personality predictions were only moderately correlated with the actual values. Nevertheless, these findings might be used to address prior political attitudes and personality traits within microtargeted campaigns. Subsequent studies on microtargeting found that online communication that matched messages reflecting extraversion and openness to recipients' personality were more persuasive (Matz et al., 2017). This persuasive appeal of microtargeted ads that match recipients' personality was also found with respect to political content. Zarouali et al. (2020) derived participants' personality traits from behavioral data and then targeted them with personality-congruent political ads. The results provided evidence for the persuasive effect of advertising using personality-congruent extraverted or introverted messages. However, their setting only included attitude-congruent stimuli. Meaning, a positive effect

of personality-congruent ads among so-called “persuadables” (Zarouali et al., 2020, p. 20) on voting intention and party evaluation could be found for parties, that fit participants’ broader political orientation. Thus, those need to be replicated in more balanced samples and include personality-incongruent messages.

Therefore, we hypothesize that social media ads that are created to match people’s level of extraversion have a more persuasive appeal regarding evaluations of the message, the sender, and even regarding voting intention within attitude-congruent communication. However, in contrast to defining target groups based on attitudes (i.e., agreement or disagreement with a statement), grouping based on dimensional variables such as personality traits requires a cut-off value in order to assign an individual to a personality group. To avoid using such cut-off values, we decided to test the assumed personality congruence by using participants’ degrees of extraversion as a moderator:

H4: The (H4a) ad evaluation, (H4b) party evaluation, and (H4c) intention to vote, depending on whether the statement is attitude-congruent or not, is moderated by the receivers’ level of extraversion.

In terms of matching communication style and recipients’ personality, research has found the extraversion–introversion dimension to be effective. For instance, Moon (2002) demonstrated that highly extraverted recipients are influenced more by highly extraverted messages in comparison to the incongruency of message and recipients’ personality. Regarding election campaigns, Van Steenburg and Guzmán (2019) reported mediating effects of a political candidate’s brand image and voters’ self-brand image on voting intention, indicating that theoretical implications of self-congruency are transferable to politics. Positive effects of congruency between self-reported personality and perceived personality of politicians were also found for the traits of the Big Five (Caprara & Zimbardo, 2004).

In line with the findings regarding the direct effects of extraverted messages, as well as the findings that personality congruency moderates persuasive effects (Argyris et al., 2021), we hypothesize similar effects in OPM regarding ad and party evaluation and intention to vote:

H5: The effect of messages that are designed to match the level of extraversion (high/low) on the (H5a) ad evaluation, (H5b) party evaluation, and (H5c) the intention to vote for it, is moderated by the receivers’ level of extraversion.

3. Method

3.1. Open Science

To test our hypotheses, we conducted an online experiment using a 2 (extraverted vs. introverted communi-

cation) × 2 (attitude-congruent vs. attitude-incongruent statement) between-subject design. The study was pre-registered on the Open Science Framework prior to data collection and approved by our department’s ethics committee. The description of measures and the numbering of the hypotheses has been partially modified with regard to the theoretical framework. Specifically, we added ad evaluations to the hypotheses and changed the order of hypotheses to fit with the line of argument. Additional material such as stimulus materials can also be found in the supplementary materials.

3.2. Stimulus Material

The personalized manipulation of text framing was based on the descriptions of introverted–extraverted messages reported in previous research (Moon, 2002; Zarouali et al., 2020). Accordingly, the introverted ads included weaker language consisting of questions and suggestions whereas extraverted ads used stronger, more confident, and dominant language. Statements were adjusted to match the experimental conditions (pro-con attitude position, extraverted–introverted message style). To serve as the sender of the ad, we created a fictional, hypothetically neutral political party, *Demokratie Neu Denken* (Rethink Democracy), to ensure that participants had no prior attitudes towards the party. In Germany’s multiparty democracy, it is not uncommon for new, previously unknown parties to appear in elections. We chose Facebook, which is the most commonly used social media platform throughout different adult age groups and is used for political advertising. The party name and logo were also evaluated in our pre-test. The overall topic was environmental policies, as this had featured in all larger German party programs for the upcoming Federal election of 2021. In total, 36 ads regarding nine statements were created and pretested to evaluate the perceived level of extraversion. The selected statements (four conditions for each of the three statements) were about coal-fired power stations, bicycle-friendly streets, and afforestation. We chose to implement three ads to replicate a campaigning context, assuming repeated reception of political advertising.

3.3. Measures

“Extraversion” was measured using eight items from the 40-item German scale of the Big Five (Hartig et al., 2003); e.g., “I make friends easily”; $\alpha = .86$). Items were rated on a 5-point Likert scale from 1 = *I totally disagree* to 5 = *I totally agree* ($M = 3.1, SD = .8$). “Attitude strength” was assessed based on the procedure described by Taber et al. (2009). For each political statement, participants answered four questions (e.g., “how much do you personally care?”) on a 6-point Likert scale from 1 = *not at all* to 6 = *very much* ($M = 3.8, SD = 1$). Internal consistency was measured for each statement, and was found to be good for the topics coal-fired power stations ($\alpha = .88$;

$M = 3.8$, $SD = 1.3$) and bicycle-friendly streets ($\alpha = .90$; $M = 4.2$, $SD = 1.3$), and excellent for afforestation ($\alpha = .93$; $M = 3.6$, $SD = 1.4$). “Attitude position” was assessed for the experimental manipulation using one item (“how much do you agree with the statement?”) rated on a 6-point Likert scale from 1 = *not at all* to 6 = *very much*, and implemented as a covariate using the mean score of the three statements ($M = 3.3$, $SD = .8$). “Ad evaluation” was measured with four items based on previous research on advertising evaluations. Participants indicated how trustworthy (Ohanian, 1990), pleasant, good, and appealing (MacKenzie & Lutz, 1989) they found each of the three ads on a bipolar semantic differential scale (e.g., 1 = *bad* to 5 = *good*; $M = 3.2$, $SD = .8$). Internal consistency was good for the ad on coal-fired power stations ($\alpha = .88$; $M = 2.8$, $SD = 1.1$) and excellent for bicycle-friendly streets ($\alpha = .92$; $M = 3.1$, $SD = 1.1$) and afforestation ($\alpha = .94$; $M = 3.8$, $SD = 1$). “Party evaluation” was rated by a direct indication of selected traits (Ohanian, 1990; Olivola & Todorov, 2010; van Strien et al., 2016). To assess the perception of the political party, participants indicated how trustworthy, credible, competent, and sympathetic they found the sending party to be on a bipolar semantic differential scale (e.g., 1 = *not trustworthy* to 5 = *very trustworthy*; $M = 2.8$, $SD = .9$). Reliability was excellent ($\alpha = .95$). “Voting intention” for the party was assessed using one item based on the study by Zarouali et al. (2020): “Please indicate how likely it is that you would vote for the party *Demokratie Neu Denken*,” rated on a 5-point Likert scale ranging from 1 = *very unlikely* to 5 = *very likely* ($M = 2$, $SD = 1.1$). “Political interest” was measured as a control variable following Dubois and Blank (2018), with one item asking “how interested are you generally in politics?” rated on a 5-point Likert scale from 1 = *not at all* to 5 = *very much* ($M = 3.6$, $SD = 1.2$).

To control for the assumingly unknown, fictional political party, the sender of the microtargeted ad, the participants were asked whether they knew the party (answers: *yes/no*). A manipulation check was also implemented regarding congruency of the ads shown and the prior attitudes, where participants were asked whether they agreed with the statements overall (*yes, no, not sure*). Moreover, as a further quality check, we asked whether participants understood the statement for each ad (*yes/no*).

3.4. Procedure

First, participants answered questions regarding sociodemographic characteristics and their social media usage. Next, they were randomly assigned to one of the four experimental groups. Participants were shown 10 statements regarding environmental policies and indicated their attitude position and strength for each statement. Three statements were later used within the stimulus ads, either depicting attitude-congruent or incongruent statements, depending on the experimental condition.

Following this, political interest and the personality trait extraversion were assessed. Three microtargeted ads were shown, while attitude congruency was manipulated on the fly based on the prior attitude position (approval = 1–3; disapproval = 4–6), the personalization towards introversion and extraversion was only based on the randomly assigned group. Each stimulus was rated regarding ad evaluation and understanding. Finally, participants indicated their evaluation of the sending party and their intention to vote for the sending party. The overall control questions regarding prior knowledge of the party and attitude congruency were answered before participants were debriefed.

3.5. Sample

A total of 404 participants were recruited via the online panel provider respondi.com (incentivized participants) and the online platform surveycircle.de (no incentive, reciprocity principle). We removed 18 participants who failed the quality checks (16 wrongly indicated prior awareness of the party and two did not understand the content of all three ads). Although 81 participants did not answer the attitude congruency control question according to the manipulation, we did not exclude these participants. As one of the theoretical models that led to our hypotheses differentiates unconscious and conscious processes and depicts effects of prior attitudes only on the former (Lodge & Taber, 2013), we argue that the manipulation must not have been perceived consciously. The final data set consisted of 368 participants (194 females, 1 diverse) aged between 20 and 69 years ($M = 44.7$, $SD = 15$). In terms of highest educational attainment, the majority of participants had a secondary school certificate (40.3%), a university degree (30.4%), or a university entrance qualification (22.8%). Furthermore, 47.8% of participants were employees, 17.4% were students, and 14.4% were retired. All participants indicated using at least two social media platforms. Facebook (99.2%) was used most frequently, followed by YouTube (93.7%) and Instagram (66.8%).

4. Results

Unless mentioned otherwise, we used mean scores to test our hypotheses. Statistical analyses were conducted using IBM SPSS Statistics and the PROCESS tool (Hayes, 2017) for moderation analysis. Prerequisites for the main analysis were met and are reported in the Supplementary Files.

4.1. Attitude Congruency and Extraversion

We hypothesized that ad evaluation, party evaluation, and voting intention would be higher when ads matched participants’ prior attitude position (H1) and were communicated in an extraverted rather than introverted manner (H3). To test these group differences,

a MANCOVA was conducted. Political interest, attitude position, and the moderating variables attitude strength and level of extraversion were included as covariates. The dependent variable ad evaluation, $F(3, 360) = 44.39$, $p < .001$, partial $\eta^2 = .270$, differed significantly between all groups. The results of the Bonferroni-corrected post-hoc analysis regarding the mean differences in ad evaluation (H1a, H3a) between all manipulation groups are shown in Table 1.

Regarding all group differences, the ad evaluation was significantly more positive following attitude-congruent ads compared to attitude-incongruent ads (H1a), thus supporting our hypothesis. The assumed differences following the reception of extraverted messages (H3a) compared to introverted messages were only found when there were also differences in attitude congruency; therefore, this hypothesis was rejected. Furthermore, party evaluation differed significantly between the manipulation groups, $F(3, 360) = 8.49$, $p < .001$, partial $\eta^2 = .066$. Pairwise comparisons using Bonferroni-corrected post-hoc analysis are shown in Table 2.

Party evaluation was significantly more positive following attitude-congruent ads compared to attitude-incongruent ads. The only exception was found for the introverted message, which showed no significant difference when confirming or challenging prior attitudes. Therefore, H1b was accepted. The assumed differences following the reception of extraverted messages in comparison to introverted messages (H3b) were again only

found when there were also differences in attitude congruency; this hypothesis was therefore rejected.

Finally, there were significant differences between the manipulation groups regarding voting intention, $F(3, 360) = 9.71$, $p < .001$, partial $\eta^2 = .075$. The results of the Bonferroni-corrected post-hoc analyses are shown in Table 3.

Attitude-congruent or attitude-incongruent messages (H1c) were followed by significantly higher voting intentions when the message was extraverted but not when it was introverted (H3c). Accordingly, H1c was accepted, as attitude-congruent microtargeted ads led to a higher intention to vote for the sending party. Interestingly, there was also a significant difference between extraversion and introversion for incongruency, insofar as voting intention was higher when the attitude incongruency came with an introverted messaging style. Even though, there was a significant difference between extraverted and introverted message style (and attitude incongruent), other than expected the introverted message led to a higher intention to vote. Therefore, H3c was not confirmed.

4.2. Moderation by Attitude Strength

In H2, we assumed that attitude strength would moderate the effect of attitude congruency on ad evaluation, party evaluation, and voting intention. To test this hypothesis, we conducted a moderation analysis using dummy coding, including political interest and

Table 1. Pairwise comparison of ad evaluation between manipulation groups.

(I) Manipulation group	(J) Manipulation group	MD (I–J)	SE	95% CI	
				LL	UL
Extraversion/congruent	Extraversion/incongruent	.9*	.1	.65	1.18
	Introversion/congruent	.1	.1	–.20	.34
	Introversion/incongruent	.8*	.1	.50	1.05
Extraversion/incongruent	Introversion/congruent	–.8*	.1	–1.10	–.58
	Introversion/incongruent	–.1	.1	–.40	.13
Introversion/congruent	Introversion/incongruent	.7*	.1	.44	.98

Notes: MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit; * $p < .05$.

Table 2. Pairwise comparison of party evaluation between manipulation groups.

(I) Manipulation group	(J) Manipulation group	MD (I–J)	SE	95% CI	
				LL	UL
Extraversion/congruent	Extraversion/incongruent	.6*	.1	.23	.92
	Introversion/congruent	.1	.1	–.26	.44
	Introversion/incongruent	.4*	.1	.04	.74
Extraversion/incongruent	Introversion/congruent	–.5*	.1	–.82	–.15
	Introversion/incongruent	–.2	.1	–.53	.16
Introversion/congruent	Introversion/incongruent	.3	.1	.24	1.03

Notes: MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit; * $p < .05$.

Table 3. Pairwise comparison of voting intention between manipulation groups.

(I) Manipulation group	(J) Manipulation group	MD (I-J)	SE	95% CI	
				LL	UL
Extraversion/congruent	Extraversion/incongruent	.6*	.2	-.49	.31
	Introversion/congruent	-.1	.2	-.22	.60
	Introversion/incongruent	.2	.2	-.02	.88
Extraversion/incongruent	Introversion/congruent	-.7*	.2	-1.11	-.34
	Introversion/incongruent	-.5*	.2	-.84	-.05
Introversion/congruent	Introversion/incongruent	.3	.2	-.13	.68

Notes: MD = mean difference; CI = confidence interval; LL = lower limit; UL = upper limit; * $p < .05$.

attitude position as covariates, and with bootstrapping (5,000 samples). The overall model was significant, $F(5, 362) = 32.46, p < .001$, predicting 30.93% of the variance. The interaction was significant, with a CI of 95%, $\Delta R^2 = 1.80\%$, $F(1, 362) = 7.87, p = .005$. The visual inspection of the regression slopes (Figure 1) shows that attitude strength moderated the effect on ad evaluation, insofar as the stronger the prior attitude, the more positive the evaluation of the ad in the attitude-congruent groups and the more negative the evaluation of the ad in the attitude-incongruent groups.

A second moderation analysis with the dependent variable party evaluation (H2b) was implemented following the same setup. The overall model was significant, $F(5, 362) = 7.30, p < .001$, predicting 9.18% of the variance. There was no significant interaction effect, $\Delta R^2 = .48\%$, $F(1, 362) = 1.43, p = .233$, meaning that attitude strength did not moderate the effect of attitude congruency on party evaluation. The test of the hypothesized moderation effect on voting intention (H2c) revealed an overall significant model, $F(5, 362) = 8.60, p < .001$, predicting 10.64% of the variance, but no significant interaction, $\Delta R^2 = .04\%$, $F(1, 362) = 1.20, p = .275$. Therefore,

H2 can partly be accepted: The stronger the prior attitude, the more positive the evaluation of the congruent ad, and the less positive the evaluation of the incongruent ad. However, there was no moderating effect of attitude strength on party evaluation and voting intention, as stronger attitudes did not result in higher evaluations of the party and higher voting intentions in the case of attitude congruency or lower party evaluations and voting intentions in the case of attitude incongruency.

4.3. Moderation by Extraversion

H4 focused on recipients' level of extraversion. Again, we used dummy coding to compare the attitude congruency manipulation. A moderation analysis was conducted with the dependent variable ad evaluation, the moderator extraversion, and the covariates political interest and attitude position (H4a). The overall model was significant, $F(5, 362) = 31.84, p < .001$, predicting 29.10% of the variance, but the interaction was not significant, $\Delta R^2 = .01\%$, $F(1, 362) = .44, p = .501$. Thus, extraversion did not moderate the effect of attitude congruency on ad evaluation.

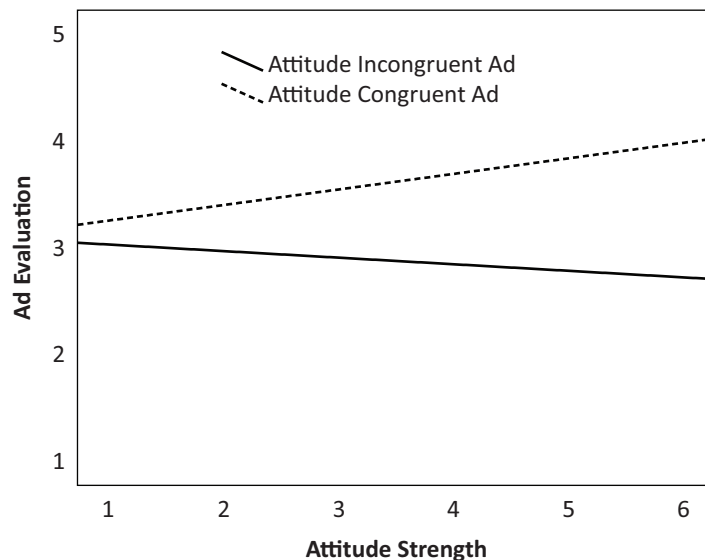


Figure 1. Regression slopes of the moderating effect of attitude strength.

The moderation analysis with the dependent variable party evaluation (H4b) was implemented following the same setup. The overall model was significant, $F(5, 362) = 7.92, p < .001$, predicting 9.46% of the variance, but there was no significant interaction, $\Delta R^2 = .01\%$, $F(1,362) = .39, p = .531$, meaning that extraversion did not moderate the effect of attitude congruency on party evaluation.

When testing whether extraversion moderated the effect of attitude congruency on voting intention (H4c), we found an overall significant model, $F(5, 362) = 8.70, p < .001$, predicting 9.48% of the variance, but no significant interaction, $\Delta R^2 = .01\%$, $F(1, 362) = .39, p = .530$. Therefore, extraversion did not moderate the effect of attitude congruency on voting intention and H4c was rejected.

Finally, we tested whether the level of extraversion moderated the effect of personalized messages on ad evaluation (H5a). The interaction was significant $F(5, 362) = 3.53, p = .004$, predicting 5.41% of the variance. Thus, the results showed that the level of extraversion significantly moderated the effect of personalized messages on ad evaluation, $\Delta R^2 = 1.75\%$, $F(1, 362) = 7.17, p = .008$. The moderating effect is visualized in Figure 2.

An overall model regarding party evaluation (H5b), $F(5, 362) = 2.98, p = .012$, predicted 4.03% of the variance, and voting intention (H5c), $F(5, 362) = 5.85, p < .001$, predicted 6.85% of the variance. Neither the interaction party evaluation, $\Delta R^2 = .27\%$, $F(1, 362) = 1.12, p = .292$, nor voting intention, $\Delta R^2 = .55\%$, $F(1, 362) = 2.05, p = .154$ was significant. Therefore, the H5 was partially supported, as we found a moderating effect of recipients' level of extraversion insofar as the higher the recipients' extraversion, the higher the effect of the extraverted message on ad evaluation, and the lower the recipient's extraversion, the higher the effect of the introverted message on the ad evaluation.

5. Discussion

The present study investigated the effects of microtargeting based on prior attitudes and personality traits on political reasoning. Specifically, we sought to gain a better understanding of how personalization strategies regarding extraversion and attitudes affect political reasoning by considering the theory of motivated reasoning (Kunda, 1990) and examined how such strategies might mobilize citizens to participate in an election by casting their vote. Therefore, we not only investigated extraverted and introverted messages as well as recipients' prior attitudes as a manipulation, but also examined recipients' level of extraversion as a moderating variable regarding ad and party evaluations as well as voting intention. Our aim was to enrich current findings on microtargeting by analyzing how persuasive messages are perceived to be when they match (or do not match) recipients' prior attitudes. Moreover, as extraversion is commonly measured as a metric construct, we wished to determine how this personality trait moderates the persuasive effects of different communication styles, in order to answer the question of what role different microtargeting strategies play within political campaigns.

5.1. Prior Attitudes and Attitude Strength

H1 focused on the different effects of attitude congruency and attitude strength. The results indicated that matching messages with prior attitudes constitutes an effective persuasive strategy. In line with our assumptions, based on the theory of motivated reasoning (Kunda, 1990), a political advertisement and the sending party were perceived more positively when the advertisement was in line with recipients' prior attitudes. As proposed by this theory, our finding can be explained by the motivation to come to a certain conclusion and

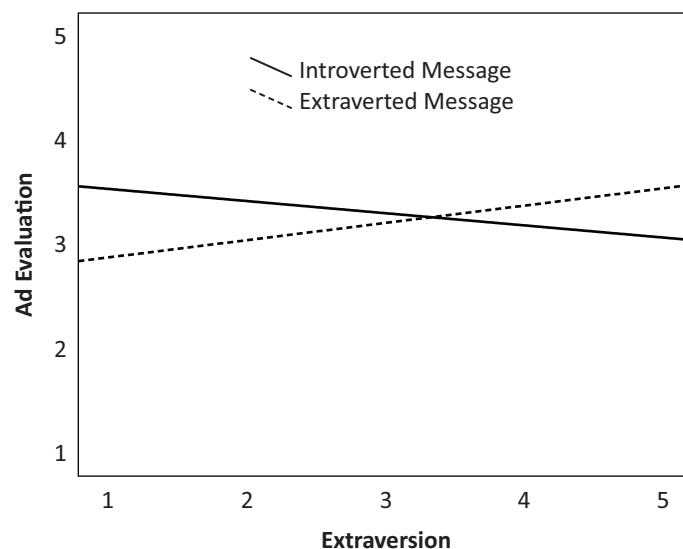


Figure 2. Regression slopes of the moderating effect of extraversion on ad evaluation.

avoid cognitive dissonance (Festinger, 1962). Our results confirm empirical findings (Lodge & Taber, 2013; Taber et al., 2009) that arguments (in our case microtargeted ads) are evaluated more positively when they match prior attitudes. When attitudes were challenged, we found less positive evaluations of ads and of the sending party, and a lower intention to vote for the party. Therefore, we were able to demonstrate that motivated bias might also occur in an OPM setting.

Additionally, our findings confirmed a moderating effect of recipients' prior attitude strength on ad evaluation. Accordingly, recipients with stronger prior attitudes evaluated an online political ad more positively when it was attitude-congruent, and in recipients with weaker prior attitudes, an online political ad with an attitude-incongruent message had a lower impact on the ad evaluation. This confirms previous research (Taber et al., 2009) showing that arguments are evaluated differently depending on the strength of prior beliefs, and updates the context of politically motivated reasoning to the social media advertising scenario of OPM. However, in terms of the overarching evaluation of the party and voting intention, we did not find the hypothesized moderating impact of attitude strength, meaning that while the attitude towards the information stimuli was affected, the attitude towards the sender and the behavioral intention to vote were not. One explanation for this might lie in the elaboration likelihood model (Petty & Cacioppo, 1986) when incoming information is processed via the peripheral route. Thus, the strength of the attitude affects the direct ad evaluation but not the following overall evaluation of the party or even the intention to vote.

In summary, our results add to the current understanding of the effects of new media on political campaigning and voter mobilization, as they underline the potential to engage citizens by targeting them with messages that are relevant to them. As outlined by Haller and Kruschinski (2020), OPM could thus be implemented in such a way that it mobilizes less politically interested persons and consequently increases political participation. In particular, smaller parties with fewer resources could benefit from OPM by communicating their positions more efficiently. Likewise, the presented findings underline a major concern regarding social media campaigning, which is the strategic exclusion of people with opposing views. As such, targeting strategies could also be misused by political actors and our findings emphasize the need for further political communication research in order to analyze political campaign practices.

5.2. Extraversion

When analyzing the effects of extraversion, we did not find that the extraverted communication resulted in a higher level of persuasiveness. Thus, our results are in contrast to previous findings that extraversion is more persuasive than introversion (Argyris et al., 2021; Oreg &

Sverdlík, 2013). However, the previous studies used individual people as senders of the information, whereas we focused on party communication. It may be the case that direct effects of personality are bound to human senders like political candidates, who represent a party and therefore shape the image of the party and thus the voting intention (Balmas & Sheafer, 2010).

In terms of the behavioral intention to vote, however, it emerged that information that was incongruent with recipients' prior attitudes led to a higher intention to vote for the party when the message was introverted rather than extraverted. The lower intention to vote for a party that does not reflect one's own opinion and communicates its message more strongly might be explained by the notion of reactance (Brehm, 1966), which occurs when people feel pressured to change their behavior, and has previously been found regarding online election campaigns (Marcinkowski & Došenović, 2021). Given that the intention to vote refers to an individual's behavioral intention, the extraverted counter-attitudinal message might be viewed as restricting individual freedom more strongly than introverted communication. Transferring this to political manipulation of the electorate might mean that weaker, more introverted communication may carry more potential for manipulation compared to a strong, extraverted persuasive appeal.

With regard to recipients' personality, the hypothesized moderating impact of recipients' extraversion on the effect of attitude-congruent messaging on the political reasoning variable was not found. This appears to contrast with previous research findings that advertising among a receptive audience influences political opinions and even votes (Zarouali et al., 2020). However, our experimental design differed from past research in one crucial aspect: Our targeting approach did not focus on recipients' extraversion or introversion, but rather on their approval or disapproval of the message. This implies that within a setting that addresses specific content of which an individual approves, a personalized message brings no additional persuasive effect. Nevertheless, when only considering the extraversion manipulation, the moderation analysis revealed a moderating effect on recipients' level of extraversion insofar as the higher a recipient's extraversion, the more positive the ad evaluation when seeing an extraverted message, and vice versa when confronted with introverted communication, which is in line with previous findings (e.g., Argyris et al., 2021; Zarouali et al., 2020).

Overall, personality-focused OPM appeared to have no direct persuasive appeal, whereas attitude congruency did. The inspection of group differences revealed that the extraversion manipulation had no significant effects on political reasoning, except for when recipients were confronted with attitude-incongruent information. Moreover, the moderating effects of attitude strength or extraversion did not pertain to the party evaluation or voting intention, but rather only referred to the ad evaluations. While this may provide support for the

assumption that political evaluations and votes might be immune to persuasive appeals, previous research found that repeated exposure did lead to changes in attitudes (Moreland & Zajonc, 1982). As our study included only three ads, which were shown once, we cannot derive any conclusions about the persuasive effects of micro-targeted ads with which recipients are confronted, for instance, throughout an entire campaign period.

5.3. Limitations and Further Research

As already indicated above, several limitations of this study need to be considered. This study included a set of three stimuli that were shown once, whereas advertising and political campaigns repeatedly use the same or similar arguments throughout campaign periods. While we chose an experimental setting that reduces the influence of confounding variables, this comes at the expense of external validity. Therefore, future settings should include long-term effects and more applied approaches, for instance using field studies, when investigating party evaluations and voting intentions. Moreover, the usage of different topics within the stimuli requires critical reflection. For instance, there may be an association between introversion and topics of the political left such as environmental policies (Schoen & Schumann, 2007). Therefore, future research should address different political topics. Additionally, while the stimuli were pretested to ensure a valid representation of extraversion and introversion within the messages, in order to create authentic-looking Facebook ads we needed to vary the wording between the personalization conditions. To ensure the validity of our findings, further research is needed.

Our results suggest that a target group's prior attitudes represent a major factor for political persuasion. Interestingly, our manipulation check revealed that some participants did not evaluate the ad content in accordance with the initially assessed attitude. This may indicate either that participants had little conscious awareness of their existing beliefs (Lodge & Taber, 2013) or that the manipulation was not precise (e.g., participants were not given the option to indicate no position). Therefore, further research is needed to replicate our results. Furthermore, as we only hypothesized moderating effects of attitude strength and extraversion level on the dependent variables, we cannot derive an underlying structure, which combines all measured constructs, from our results. Based on the present findings as well as previous research, future studies could aim to derive and combine hypotheses that can be analyzed within a structural equation model.

6. Conclusions

Reaching citizens with political campaigns, to engage them in open discourse, is an important part of democracies. Our findings support the assumption that information is filtered through existing beliefs, meaning that

we evaluate the sender positively when our attitudes are encouraged and negatively when they are challenged. But if OPM refrains from public discourse by avoiding those who disagree or even spreading misleading information to match differing attitude positions, campaigning becomes problematic. Our findings underline the potential to (mis-)use OPM to create persuasive campaigns. While the idea that attitudes and decisions can be manipulated by targeting personality is still an important concern that needs to be addressed, there may be a more pressing concern: Matching with individuals' prior attitudes, which might be derived from their social media data, seems to be not only a more practical but also a more persuasive method of political campaigning. Thus, when monitoring parties' or other political actors' communication on social media, research and public discourse might need to focus more on contradictory statements from the same sender as well as misinformation.

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Conflict of Interests

We have no conflicts of interest to declare.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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