

**What is the Effect of Personalized Information on Social Media Profiles of  
Conservatives on Affective Polarization Among Left-Leaning People ?**

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PSB3E-BT15: Bachelor Thesis

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### **Abstract**

Previous research has shown that online intergroup interaction is an important factor for affective polarization and that information about outgroup members can play an influential role. Therefore, we investigated further the specific effect of individuating information on created social media profiles, hypothesizing their mitigating effect on trust (H1), warmth (H2), social distance (H3), and personality ratings (H4), all measures of affective polarization. In this paper, we investigated a left-leaning sample and its affective polarization towards conservatives. We sampled 238 left-leaning participants via convenience sampling across different platforms. The comparison by a two-sample t-test between a group receiving no information and a group receiving information about outgroup members did not lead to significant results. The exploratory analysis of contrasts showed a significant difference between stronger identification as left-leaning and higher scores on affective polarization. Limitations of this study are the merely non-mandatory collection of demographics and their non-analyzed influence. For further research we recommend investigation of individuating information in online interactions and affective polarization, considering participants' characteristics such as demographics and their strengths of social identity in the analysis.

*Keywords:* affective polarization, social identity, individuating information, social media

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## **What is the Effect of Individuating Information on Social Media Profiles of Conservatives on Affective Polarization Among Left-Leaning People?**

Around the world, the interplay of political and societal division has been growing over the past decades. The common ground shared between different parties is increasingly shrinking, causing broad partitions between different political parties and their supporters. These processes foster political instability through decreases in effective decision-making, agreeableness, and harmonic cooperation in democracies (Törnberg et al., 2021). Two prominent examples of political division are the United States' splitting political landscape between "Democrats" and "Republicans" as well as the United Kingdom's polarization between "Leaver" and "Remainer", following its withdrawal from the EU, "Brexit" (Wallenfeldt, 2024). These events and movements are contributors to, as well as symptoms of, *affective polarization* (AP), which refers to "the degree to which political partisans dislike, distrust, and avoid the other side" (Wilson et al., 2020, p. 4) with specific interest in the emotionally charged nature of political division (Wilson et al., 2020). In scientific research, it is often measured through assessing its affective components such as trust towards the outgroup, and social distance, rated in terms of comfortableness with proximity with outgroup members, as well as the perceived warmth of outgroup members (Wojcieszak & Warner, 2020). This affective polarization between different parties influences the political discourse and climate of political debates, as well as the general acceptance of public behavior in political domains or is observable through a concerningly higher tolerance of vicious behavior. Additionally, on an individual level, political identity is a target of discrimination and an influential factor on personal perception of others (Marchal, 2021). To get to an understanding of the development of affective polarization it is not only important to observe its phenomenological appearance but also to understand its theoretical background.

## Social Identity Theory

*Social Identity Theory* (SIT) is highly relevant for understanding Affective Polarization because it provides a framework to explain how individuals categorize themselves and others into ingroups and outgroups. This categorization is a fundamental aspect of AP, where strong identification with one's own group, for example, a political party, leads to negative perceptions and emotional responses towards outgroups. SIT highlights how these group dynamics contribute to the emotional and attitudinal divides seen in affective polarization (Tajfel, 1970; Dovidio et al., 2010). In political contexts, this results in intensified loyalty to one's own party and increased hostility towards opposing groups (West & Iyengar, 2020)

Although groupings can have pragmatic reasons, they also lead to group-based stigmatization and discrimination due to the perceived "otherness" of outgroups. Experiments show that already small artificially induced differences can lead to clear ingroup favoritism and discrimination towards the outgroup (Tajfel, 1970), trying to secure their social identity and positively differentiate it. This often leads to bias and stereotyping of the outgroup (Dovidio et al., 2010), influencing political attitudes and decisions, especially in polarizing debates such as Brexit (Hutchings & Sullivan, 2019).

Whilst the smallest differentiation is already enough to create this "us" versus "them" narrative (Tajfel, 1970), in situations of intergroup competition or conflicting contact, the social identity of political identity becomes especially salient rather than personal differences and identities (Marchal, 2021). Therefore, the individual only gets perceived as part of a group, fostering interchangeability among the group members, which is referred to as *depersonalization*.

The concept of depersonalization refers to a situation where individuals downplay personal differences in interactions with in- and outgroup members, leading to increased similarity between ingroup- and heightens differences between outgroup members.

Depersonalization shifts focus from individual characteristics and emphasizes shared group

identities, not necessarily reducing self-awareness or leading to uninhibited behavior; rather, it emphasizes social identity, prompting individuals to conform to group norms (Lee, 2006).

Because of the lack of physical interaction and the anonymity in the online space, a group member is not exposed to differences within the group, whilst the group identity is overly present and group influence increases (Lee, 2006). All the other more personal factors about a person e.g. having the same family status become less salient (Bliuc et al., 2018) and the focus is on merely the own identity of a certain group member (Lee, 2006). This is where our study is designed to provide research on the effects of exposure to a more "personal" outgroup interaction, as "the lack of individualizing information" (Lee, 2006, p. 427) increases the influence of the group (Lee, 2006). Thus, individuating information potentially broadens the perspective of individuals beyond their social group memberships to include individual characteristics. Such interactions are happening more and more in the online space (Tucker et al., 2018) and on social media, therefore fostering opportunities to further investigate affective polarization and the influence of individuating information in online profiles.

### **Social Media and Social Identity**

Effective drivers of these processes in a political context include social media (Wilson et al., 2020), as well as the consumption of partisan media and unfavorable campaigns (Iyengar & Westwood, 2015). Whilst both are important drivers of polarization of political discourse, the focus of this paper lies on social media as a realm of affective polarization. When in-person interactions are avoided by different polarized camps, the crosscutting contact that groups have with each other in other spaces becomes more important and influential (Tucker et al., 2018) Therefore, social media is an important realm, creating an environment conducive to affective polarization (Bail et al., 2018).

A prominent feature of online political discussions is the lack of a clear counterpart with whom the user is having a conversation, whilst in an offline conversation one can see a

partner's reactivity and their social cues regardless of the topic (Ho & McLeod, 2008).

Therefore, typically on social media, there is a high degree of anonymity between users.

Whilst for example Facebook usually entails profiles with more information, platforms that are often used for political discussions such as Twitter or Reddit are far more anonymous for users (Tucker et al., 2018). The *Social Identity Model of Deindividuation Effects* (SIDE) suggests that these interactions through online conversations can enhance the prominence of group identity and increase adherence to group norms. This effect occurs due to the limited individuating information available in online interactions, which increases identification with the group (Lee, 2006).

A further characteristic of online political conversations is that everyone can spread news without a specific target, reaching large groups of users. There is no specific predetermined target for news, compared to traditional TV or newspapers, but algorithms provide people with specific up-to-date events and information. This feature entails the danger of the rise of echo chambers, online realms, in which users only receive news according to their political views and are only in contact with people sharing these views. They are developed through algorithms that provide people with information that is according to their political perspective, determined by their previous watch history, an identified risk for polarization (Goyal & Goyal, 2023).

On the other hand, is there a growing amount of research on the topic of exposure to different views on social media. It is important to look at these interactions because it has been shown that many of these are coined by intergroup hostility and therefore also offer an environment for polarization (Bliuc et al., 2020).

One property of online discussions is the often highly political content and more potentially conflicting conversations. In addition, there are frequent presentations with distorted attitudes, fostering conversations with high emotionality (Marchal, 2022), which are important interactions to analyze in the scope of affective polarization.

An observed phenomenon in online conversations between opposing camps is that in case one's personally perceived ingroup picture is negatively perceived by the outgroup counterpart, further interaction between cross-cutting camps is unlikely to follow (Marchal, 2022), increasing the gap of contact between different camps and furthering affective polarization. However, simultaneously findings show that positive interactions between liberal and conservative-leaning people on Reddit had a depolarizing effect (Marchal, 2022).

To investigate further the properties of such depolarizing interactions, according to Wojcieszak and Warner (2020), intergroup contact on social media can decrease affective polarization through imagining their counterpart as a person that they have something in common with. Increased perception of commonalities encourages the question of whether this is due to the perceived more “personal side” rather than the prominent and sole vision of an anonymous outgroup member, leading back to the potential effect of availability of individuating information of outgroup members (Lee, 2006).

It is important to explore the dynamics through decreased anonymity further, considering that online environments form an important realm of affective polarization with the potential of being a driver to increase or medium to decrease polarization , and investigate methods and environments shaping more positive outgroup attitudes further within polarized online communities.

### **Aims of the Study**

Given the impact of social media and intergroup interactions on affective polarization, it is crucial to identify applicable mitigating factors, thus this study aims to uncover these factors to better understand and reduce polarization, fostering more harmonious intergroup relations. A limitation in previous research on affective polarization is the lack of clear discrimination between different forms of polarization, which our study tackles by precisely focusing on affective polarization (Kubin & Von Sikorski, 2021).



As aforementioned, there is the effect of depersonalization once a group member identifies themselves with their group and vice versa transfers this perception to the other person of them primarily being a group member (Lee, 2006). In an online environment where oftentimes there is no further information available besides the person's political group membership shown through their comments, their group and political identity are overly salient.

I hypothesize that the exposure to personalized information on profiles diminishes the salience of outgroup membership and works against depersonalization, showing a decrease in affective polarization, compared to interaction of people with anonymous profiles. This decrease in affective polarization should be reflected on its basis elements of trust, willingness for cooperation, and perceived warmth towards the outgroup members.

These considerations are leading to the following research hypotheses:

H1: Availability of personal information about conservative outgroup members on social media profiles increases perceived warmth among participants

H2: Availability of personal information about conservative outgroup members on social media profiles reduces affective polarization in terms of increased measured trust among participants

H3: Availability of personal information about conservative outgroup members on social media leads to a higher comfort having social interactions with conservatives

H4: Availability of personal information about conservative outgroup members on social media profiles leads to more positive personality ratings among participants

## Methods

### Participants

The ethical committee of the Faculty of Behavioral and Social Sciences of the University of Groningen approved this study. After that, we advertised it via email, posters, social media as well as handing out flyers. Our sample of participants was self-selected based on the necessary criteria of being at least 18 years old and identifying as left-leaning, including participants that scored 5 (*somewhat agree*), 6 (*agree*), and 7 (*strongly agree*) on our integrated political left-leaning identity measure. The total sample size consisted of 456 participants, from which 134 were excluded due to being under 18 years old, refusing to consent to data processing, not identifying as politically left-leaning as well as failing the manipulation screen. Finally, not all participants of our final 322 participants completed every measure (see Table 1, Appendix A). This study was part of a bachelor thesis project combining multiple individual hypotheses which determined the number of participants in the individually used conditions, for this study adding up to 238 participants. These included only participants from two of three conditions the "Profile without Information" condition and the "Profile with Individuating Information" condition. This subset comprises participants 238 with 119 in each condition. Out of these 159 agreed to share their gender and age, whilst none disclosed their nationality (Table 2, Appendix A). The power analysis conducted for this subset of the study revealed a required sample size of  $N_1=86$  and  $N_2=86$  participants to detect a Cohen's effect size of 0.5 with 90% power in a two-sample *t*-test.

### Measures

#### *Political Social Identity*

We measured participants' political social identity via the Single Item measure of Social Identification. Group membership was measured on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) (Postmes et al., 2012,). We included a politically

left-leaning sample to invoke group membership by exposing them to opposing ideologies, and for methodological ease.

### ***Affective Polarization***

All affective polarization measurements were adapted from Wojcieszak and Warner (2020) and each individual AP measure was treated as a separate dependent variable. In order to measure affective polarization (AP) we utilized measures investigating outgroup trust, a personality rating, a feeling thermometer and a social distance scale.

**Other-Focused Trust.** To measure trust we used a 5-item questionnaire indicating whether participants viewed the person whose profile they were presented with as trustworthy, kind, honest and helpful on a Likert-scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) ( $\alpha = 0.9$ ). This scale was adapted from Zhang (2021), who showed other-focused trust to be distinct from a general propensity to trust.

**Feelings Thermometer.** The use of a “feelings thermometer” assessed outgroup feelings that asked participants to rate their feelings regarding conservatives on a scale from 0 (*very unfavorable*) to 100 (*favorable*).

**Personality Rating.** A personality rating measurement assessed to what extent participants perceived conservative as intelligent, honest, hypocritical, selfish and mean. Participants evaluated their perception of conservatives reaching from 1 (*strongly disagree*) to 7 (*strongly agree*) ( $\alpha = 0.48$ ). This can be an indication for low attention, because in that section items were asked in a reversed manner.

**Social Distance Scale.** A social distance measure asked participants to specify how comfortable they feel to interact with a conservative in different contexts including interactions with a conservative through marriage, friendship, neighborhood or colleagues from a scale of 1 (*very uncomfortable*) to 6 (*very comfortable*) ( $\alpha = 0.9$ ).

## Stimuli

We presented participants with two different cultivated Twitter profiles named “Alexxxxx5665”, as gender-neutral and not politically stereotypical name, used in similar research (Koetke et al, 2023). The participants saw screenshots of their profiles and tweets posted by the two different versions of “Alexxxxx5665”. The first profile was without information, the second one with individuating information. The first version of the profile “Alexxxxx5665”, the baseline condition, used as an experimental control, included no information in the biography and no added profile picture in the foreseen spot. The second condition contained individuating information, adding the experimental condition, their bio showed a collection of emojis: books, an island with an umbrella, a dog sticking his tongue out, and a blue frisbee. We chose this selection of individuating information based on research about the most commonly used biography information on social media (Semertzidis et al., 2013). The artificially created profile picture showed the back of an androgynous person with long hair, a backpack and a hat against a lush valley, not reinforcing a suggested gender, to neither reinforce nor break with typical stereotypes. The profile picture was generated using artificial intelligence via the website “Fotor” (Fotor, n.d.).

Depending on the condition, participants encountered one of the profiles, posting two images with texts, supposedly written by the person in the profile. Both the posts were created thematizing gender discrimination. We chose this topic because it is across different countries a characteristic topic that divides the views of conservatives and liberals (and left-leaning) people. Considering our study was designed to be available for people from different nations, it was important to evoke reactions to a topic that was not specific for one country. We created the tweets by creating a baseline of disagreement with liberal ideology, namely, progress and equality (Jost, 2021). There were two different conditions considering the phrasing of the tweets, based on moral and amoral statements, however, they were not relevant to our research in this study and not further analyzed.

## **Procedure**

Participants began the study by giving consent for participation in the study after reading through information about the confidentiality of their data and the purpose of the study. Consequently for consenting participants over 18 years the content of the actual study began with the randomized exposure to the social media profile and the different items, targeting affective polarization in terms of outgroup personality ratings, perceived warmth, social distance, and trust. The survey included a section targeting people's need for cognition, which included an attention check, however, the need for cognition score was not a variable analyzed in this study. However, in that section participants reacted to an attention check. Lastly, there was a voluntary question targeting people's demographics. After they completed the study of 10-15 minutes, participants could see the debriefing as well as the information about the accessibility of their data and had the option to re-consent.

## **Design**

We used an experimental design with the independent variable, profile information. Profile information was distributed into two conditions: individuating information, and no information. Content of shared information was distributed into neutral content and moral content, which was controlled for in the study however not part of the analysis. Our dependent variable was affective polarization, which was measured through other-focused trust, outgroup feeling, trait evaluation, and social distance. The four hypotheses were tested with a two-sample t-test comparing the two profile types of no information and individuating information. We conducted an additional exploratory analysis in the frame of the current study with a contrast analysis after conducting a univariate analysis of variance (ANOVA) to investigate whether differences between the two profile conditions varied based on the strength of reported left-leaning identification, which ranged from "somewhat agree" to "strongly agree".

There were two different phrasings of the tweets, based on moral and amoral statements as part of another study's conditions, however, they were not relevant for our research and therefore whilst not controlled for, not further analyzed.

## **Results**

According to the four hypotheses, the groups were tested with an independent two-sample t-test. The variables that the groups were compared on were "other focused trust" as (Trust) of liberals towards conservatives (H1) "perceived warmth" (Warmth) of conservatives (H2) "social distance" (Social Distance) towards conservatives (H3) and "personality rating" (Personality) in H4. These four variables were used to measure affective polarization as an overarching concept, each consistent of the means of the aforementioned items

### **Descriptive Statistics**

The sample ( $N= 238$ ) was divided into two groups, created through dummy coding. They were consistent with experimental Group A ( $N= 119$ ) exposed to a profile with individuating information and Group B ( $N= 119$ ) exposed to a profile without individuating information. The descriptive analysis determined their means and standard deviations for the four variables "Trust" (H1), "Warmth" of conservatives (H2) "Social Distance" (H3), and "Personality Rating" (H4), presented in Table 1, containing the variables means, standard deviations, sample sizes as well as missing data. Considering the sample size, it is important to mention that the data set for "Trust" has 36 and 34 missing responses which are more than twice as many missing responses as on the other variables (Table 1).

### **Correlations**

To investigate the strength between the dependent variables we assessed the correlation between them. The dependent variables were significantly positively correlated with each other, indicating that as one variable increases, the others tend to increase as well. The strength of correlations varied per variables, starting with a small correlation between "Trust" and "Personality" ( $r = .19$ ) and "Warmth" and "Personality" ( $r = .25$ ). Whilst between

“Trust” and “Social Distance” ( $r = .44$ ), “Personality” and “Social Distance” ( $r = .51$ ) and “Warmth” and “Trust” ( $r = .46$ ) we had moderate correlations. A strong correlation was found between “Warmth” and “Social Distance” ( $r = .68$ ), all correlations were at a significance level of  $p < .001$  (Table Appendix B).

*Table 3*

*Descriptive Statistics Dependent Variables*

		n	Missing	M	SD
Warmth	no info	104	15	41.29	28.25
	info	105	14	38.98	29.09
Trust	no info	85	34	3.19	1.01
	info	83	36	3.24	1.04
Personality	no info	105	14	4.51	0.9
	info	106	13	4.53	0.77
Social Distance	no info	105	14	3.4	1.22
	info	106	12	3.59	1.24

### **Preliminary Analysis**

To be able to conduct a two-sample t-test the data analysis required the conduction of assumption checks, to ensure that the used statistical method was applicable for our data set. The samples were two independent samples meeting the assumption of independence, due to our randomized experimental design of two separate groups measured at one singular point of the time. However, due to convenience sampling based on availability our sample is at risk for overrepresentation and skewed results.

The Shapiro-Wilk test investigated the normality assumption and showed that all four variables “Trust”, “Perceived Warmth”, “Social Distance” and “Personality Rating” violated that assumption with their p- values being all below a level of  $p = .05$  (See Table 4, Appendix B). Due to the big sample sizes across the conditions (Table 1, Appendix A), the t-test test is robust against violation of the normality assumption across all conditions based on the *Central Limit Theorem* (Moore et al., 2016, pp. 395-399). The normality assumption violation is also observable in the QQ- plots, where the distribution of data does not follow the linearity of the graph, and shows for “Warmth” and “Trust” an s- shape, indicating skewness (Graph 1-8, Appendix B)

We checked the homoscedasticity assumption with Levene’s test (Table 5, Appendix B), which showed that the assumption of the equality of variances was met ( $p_{focused\ trust} = .44$ ,  $p_{warmth} = .83$ ,  $p_{social\ distance} = .86$ ,  $p_{personality} = .72$ ).

Table 4

*Test of Normality (Shapiro-Wilk)*

		W	p
trust	no info	0.93	< .001
	info	0.93	< .001
personality	no info	0.95	0.001
	info	0.98	0.150
SD	no info	0.97	0.017
	info	0.96	0.004
warmth	no info	0.94	< .001
	info	0.92	< .001

*Note.* Significant results suggest a deviation from normality.



## Hypothesis Testing

For the main analysis, we conducted a two-sample t-test (Table 6, Appendix B) to examine the difference between the groups with exposure to individuating information in the profile and no information. The effect size calculated with Cohen's  $d$  was small to very small for all variables showing through the  $d$ - values of  $d_{\text{trust}} = 0.15$  and the same effect size of  $d_{\text{warmth, personality rating, and social distance}} = 0.14$  for the variables warmth, personality rating, and social distance.

The p-values for all the variables were higher than  $p = .05$  and therefore insignificant across all hypotheses ( $p_{\text{warmth}} = .56$ ,  $p_{\text{personality}} = .85$ ,  $p_{\text{social distance}} = .24$ ,  $p_{\text{trust}} = .76$ ). Therefore, there was no significant difference displayed in the  $t$ -tests between the participants exposed to a profile with individuating and no information in terms of scoring on the variables of trust ( $t_{\text{Trust}} = -0.30$ ), personality rating ( $t_{\text{Personality}} = -0.19$ ), social distance ( $t_{\text{SD}} = -1.18$ ) and perceived warmth ( $t_{\text{Warmth}} = 0.58$ ).

The Cronbach's alpha of  $\alpha = 0.48$  for the personality rating scale is remarkably low, showing low internal consistency of the measure.

## Exploratory Analysis

After conducting the main analysis, we decided to add an exploratory analysis to investigate possible interactions within our experimental design within reported identification as left-leaning and profile condition on affective polarization.

We analyzed the possible influence of the degree of left-leaning identification “somewhat agree (5)”, “agree (6)”, and “strongly agree (7)” on scoring the variables perceived warmth, social distance, personality rating, and trust.

## Preliminary analysis

Before applying an ANOVA, we tested if the assumptions for conducting this analysis were met by our data. The assumption of the homogeneity of data was investigated in a

QQ- plot of the residuals and is not violated, recognizable by the data points that fall along the linear regression line, see graph 5 (Appendix C). Levene's test, tested equality of variances, shows that the assumption of equal variance is met as well ( $p = 0.14$ )

### **Main analysis**

The ANOVA showed that the different degrees of self-identification had significant differences among scores for the variables, personality ( $p_{\text{personality}} = < .001$ ,  $F_{\text{personality}} = 11.04$ ), warmth ( $p_{\text{warmth}} = < .001$ ,  $F_{\text{warmth}} = 10.79$ ), and social distance ( $p_{\text{SD}} = < 0.001$ ,  $F_{\text{SD}} = 8.960$ ). The variable trust had no significant effect in the ANOVA ( $p_{\text{trust}} = 0.334$ ,  $F_{\text{trust}} = 0.616$ ), see Table 7 (Appendix C). Based on this we investigated the contrasts, the overall contrast between individuated and no info condition was not significant ( $p = 0.94$ ), however, the simple contrast between group identity and profile condition showed that there were significant results for participants in the anonymous and individuating information profile condition in the (5) - (7) comparisons. There were significant results in comparison between identification as – “somewhat agree (5)” – and “strongly agree (7)” when exposed to the no information there were significant profile ( $p_{\text{personality}} = < .001$ ,  $p_{\text{warmth}} = .004$ ,  $p_{\text{personality}} = < .001$ ). There was a significant difference in warmth and personality seen in the condition of individuating information ( $p_{\text{personality}} = .002$ ,  $p_{\text{warmth}} = 0.01$ ,  $p_{\text{SD}} = .00$ ). On the variable trust, there were no significant differences across conditions. The contrasts between “agree” and “strongly agree” as well as “somewhat agree” were not significant under no profile condition. (Table 8- 20, Appendix C)

### **Discussion**

Based on Social Identity Theory (SIT; Tajfel, 1970) and the depersonalization framework (Lee, 2006) we theorized that exposure of left-leaning individuals to a conservative outgroup member accompanied by personal information would decrease affective polarization. To test this assumption, we examined four hypotheses:

Left-leaning participants show increased warmer feelings towards conservatives introduced with individuation information compared to conservative individuals introduced without individuation information (H1).

Left-leaning participants show higher trust towards conservatives when accompanied with individuation information (H2).

Left-leaning participants feel more comfortable with having social contact with conservatives when presented with individuating information (H3).

Conservatives presented together with individuation information get higher attribution of negative personality traits “personality rating” (H4).

In line with the SIDE model, these effects should occur due to the reduced salience of group membership and increased personalization, leading to less affective polarization, and reversing the effect of depersonalization of outgroup members.

The t-test, comparing the “individuating” and “no information” profiles indicated no significant differences for all the variables of affective polarization and no significant relationship between affective polarization of participants and the availability of information in social media profiles.

Additionally, we carried out an exploratory ANOVA of our data to compare possible differences and interactions within the conditions of individuating information and instances when no information was presented about the conservative person. We compared the degree of left-leaning self-identification in terms of “somewhat agree”, “agree”, and “strongly agree” to find out to what extent the degree of left orientation affected the scoring on perceived warmth, social distance, personality rating, and trust. The ANOVA and further contrast analysis showed that degree of group identity had significant effects on the dependent variables except trust. There was a significant contrast in the no-information profiles condition between people who “somewhat agree” to be left-leaning and “strongly agree”. This indicates less perceived warmth, higher social distance, and more negative personality ratings

among strongly identifying people compared to less extreme left-leaning identifiers, exposed to both conditions, whilst there were no significant results for trust.

Regarding our exploratory findings, it is important to put them into the theoretical and scientific context of social identity research, whilst investigating previous scientific background of affective polarization can furthermore be insightful when looking at differences and commonalities, especially regarding our insignificant results.

### **Previous Research**

In our study, items addressing perception of the general outgroup were mixed with items addressing the specific outgroup individual, which is important to consider in light of research that found significant differences between the effectiveness of reduction of discrimination towards a coherently perceived group and more individuated members (Wilder, 1978). Our study did not find a significant difference in stereotype reduction, yet it addressed a mixture of both different targets, each evolving different levels of polarization; this might play a factor in our studies' insignificance.

Another aspect that could have played a role is that the profile name that we used was "Alex". This is a name that works for males and females, creating ambiguity concerning the gender of the person behind the profile name. Previous research by Koetke et al., 2023 has shown that exposure to ambiguous people leads more to the recall of negative stereotypes than profiles with specific individuating information. This insight is important for our study, considering that our individuating information profile was created ambiguously, which may have caused a bias in the answers, presented similarly in, Koetke et al., 2023.

Our exploratory results are interesting in light of previous research on social identity theory by Tajfel (1970). People who identified stronger as left-leaning scored higher on affective polarization measured than people who were only "somewhat" left-leaning, being stronger affiliated with their group and scoring higher on affective polarization in our study. Previous research (e.g. Lee, 2006) found similar effects, indicating that extremity of group

identification affects receptiveness for online polarization, also across party lines (Brown & Hohman, 2022).

### **Theoretical Implications**

Our results indicate that the simple assumption of individuating information as a mitigating factor does not account for the complexity of social identity. Individuating information alone did not change the perception of the outgroup and feelings towards them when compared to members with no information. Possibly there was too little individuating information to weigh against the group membership. Whilst individuating information was theorized to have an effect on mitigating depersonalization, there was no significant difference towards affective polarization. Affective polarization as a construct is complex and cannot only be influenced through individual information. Affective polarization also manifests itself to varying degrees in people who identify more or less strongly as part of their group, indicating different levels of social identity.

### **Practical Implications**

Our results suggest that when applying an intervention to reduce affective polarization, it is not enough to solely expose someone to an outgroup person with individuating information without active interaction.

These findings suggest that different audiences need more individual applications, based on the strengths of their social identity. A person who has been identified as strongly left-leaning cannot be assumed to profit from the same intervention against affective polarization as someone who only identifies as “somewhat” left-leaning.

Furthermore, solely individuating information online did not seem to decrease the effect of depersonalization in online discourse (Lee, 2006). Additionally, before applying measures it is important to assess people's perception to what extent information is significantly individualizing to have an externally valid approach to individualizing information in combination with a multidimensional approach regarding the degrees of identity.

## **Limitations**

The methods used, the composition of the sample, and variables not taken into account likely affected this study's outcome, therefore there are several limitations in our research.

Firstly, we did not consider potential moderating effects of demographic variables such as age, nationality, or gender. The lack of accounting for gender differences is especially important in the light of previous research showing gender differences in AP and exposure to individuating information (Lee, 2006), particularly under the consideration that we used the topic of gender equality as a polarizing statement, which may have led to different reactions between men and women. Furthermore, through the lack of exploration of the effects of nationality and age as well, we are limited to draw conclusions about the external validity of our study and differences among nationalities. A further external validity concern is that we used a profile picture generated by the AI, which may have been detected by the participants and may have led to lower external validity.

Lastly, our study only investigated the effect of affective polarization among left-leaning participants, leading to the question of how affective polarization is possibly showing differently among conservatives, offering ground for different studies. Remarkably, none of these significant effects were detected for trust. However, trust also did have more missing data points than the other variables and this lack of data may have led to a bias in the analyses.

## **Future Research**

Contrary to the findings from previous studies and our hypotheses, our data cannot support that individualizing information could counteract the depersonalization or affective polarization of a political outgroup member, yet further exploration of these variables are crucial.

Future research could address our limitations and should consider gender, age, and other demographic variables in future studies. Additional important aspects could be, for

example, nationality and previous engagement with outgroup people. An interesting aspect of our study is the finding that the degree of self-identification with a political orientation can make a difference: the significant differences measured in the dependent variables of perceived warmth and personality rating suggest that future studies should consider the degree of identification with a particular group as an independent variable.

Regarding our study, the question remains open as to what extent the personalized information about the fictitious outgroup person was a suitable and sufficiently effective stimulus for the study groups. Therefore, investigation of the type, content, and perception of the personalized information which counteracts depersonalization and stereotyping should also be a field for future studies.

Finally, with regard to reducing affective polarization, the question of the effectiveness of approaches emerges and whether personalization through information should be utilized compared to other approaches such as reducing intergroup bias through contact, this is important to explore different approaches (e.g. Dovidio et al., 2017). Affective polarization is a complex interplay of the different mechanisms of deindividuation and social identity, which implies that an approach to limiting affective polarization therefore must be a multidimensional one.

## **Conclusions**

The purpose of this study was to explore the effect of individuating information in online profiles on affective polarization towards outgroup members. We specifically focus on the affective polarization among left-leaning participants towards conservatives.

In spite of previous research that indicated promising effects, we could not find significant results in our study for any of the four hypotheses assessing affective polarization in terms of our four variables: trust (H1), perceived warmth (H2), social distance (H3), and personality rating (H4) towards the conservative, introduced either with or without individualizing information. Based on these results we could neither reject nor support the hypothesized

mitigating effect of individuating information in online profiles in comparison to profiles with no information.

However, our exploratory comparison analysis, found that people with stronger group identity had higher scores on our affective polarization measures of personality rating, social distance and perceived warmth than people who were only “somewhat” agreeing to be left-leaning, when exposed to the profile with no individuating information as well as when exposed to profile with individuating information, showing on personality rating as well as warmth.

These results indicate that individuating ambiguous information on online profiles is not enough of an intervention to reduce affective polarization towards the outgroup among left-leaning and points towards a complex interplay in affective polarization in terms of social identity strength, and deindividuation.

The urgency of investigating affective polarization is clear looking at general political movements of growing disparities between parties and (Törnberg et al., 2021) recent political events such as Brexit as well as the upcoming 2024 elections in the United States.

Intergroup interventions online are promising starting points to foster a decrease in affective polarization, to avoid further divides politically and socially. Therefore, research on affective polarization online and the influence of individuating information is an important contribution not only scientifically but also socially.



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## Appendix A

### Descriptives

Table 1

*Sample Size of each AP Measure*

Measure	<i>n</i>
Other-Focused Trust	168
Feelings Thermometer	209
Personality Rating	211
Social Distance Scale	211

Table 2

*Frequencies of Age and Gender*

Demographic	<i>n</i>	%
<b>Gender</b>		
Male	77	48.43
Female	80	50.31
Other	2	1.26
Missing	79	-
<b>Age</b>		
18-24	57	35.85
25-34	61	38.36
35-49	31	19.49
50-64	9	2.51
65 or older	1	0.62
Missing	79	-

Table 3

*Descriptive Statistics Dependent Variables*

		n	Missing	M	SD
Warmth	no info	104	15	41.29	28.25
	info	105	14	38.98	29.09
Trust	no info	85	34	3.19	1.01
	info	83	36	3.24	1.04
Personality	no info	105	14	4.51	0.9
	info	106	13	4.53	0.77
Social Distance	no info	105	14	3.4	1.22
	info	106	12	3.59	1.24

Table 4

*Pearson's Correlations*

Variable		Trust	Personality	Social Distance	Warmth
Trust	Pearson's r	—			
	p-value	—			
Personality	Pearson's r	- .39	—		
	p-value	< .001	—		
Social Distance	Pearson's r	.44	- .47	—	
	p-value	< .001	< .001	—	
Warmth	Pearson's r	.46	- .52	.68	—
	p-value	< .001	< .001	< .001	—

## Appendix B

### Hypothesis Testing

Table 5

*Test of Normality (Shapiro-Wilk)*

		W	p
Trust	no info	.93	< .001
	info	.93	< .001
Personality	no info	.95	.001
	info	.98	.15
Social Distance	no info	.97	.02
	info	.96	.004
Warmth	no info	.94	< .001
	info	.92	< .001

*Note.* Significant results suggest a deviation from normality.

Table 6

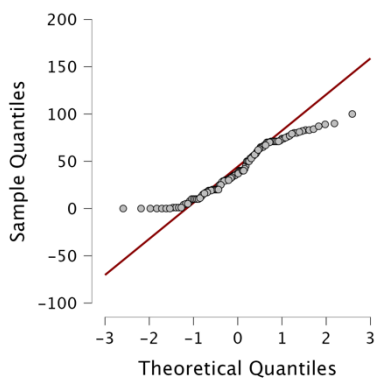
*Test of Equality of Variances (Levene's)*

	F	df <sub>1</sub>	df <sub>2</sub>	p
Trust	0.60	1	166	.44
Personality	0.87	1	209	.35
Social Distance	0.03	1	209	.86
Warmth	0.05	1	207	.83

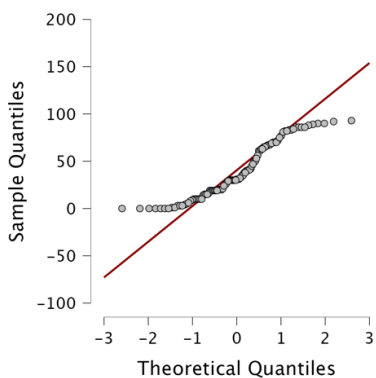
## Graphs 1

*Warmth Q-Q Plots*

no info



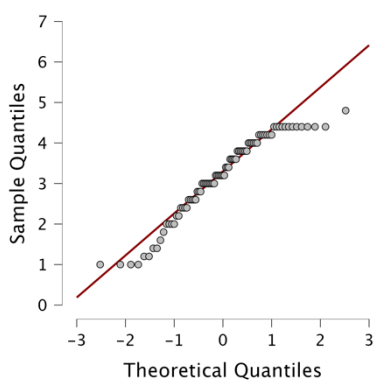
individuated info



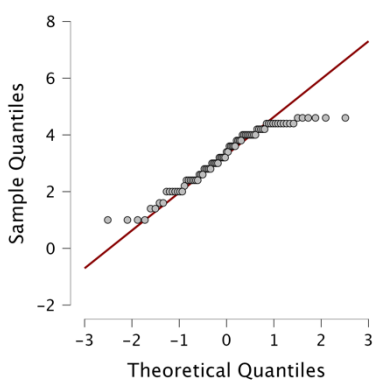
## Graph 2

*Trust Q-Q Plots*

no info



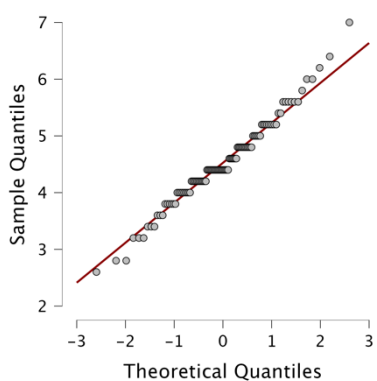
individuated info



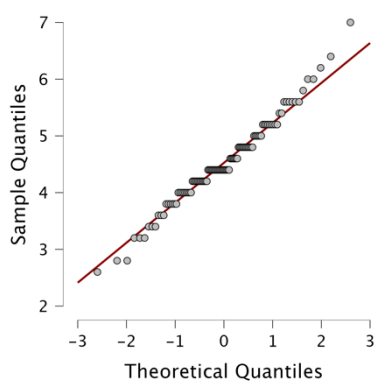
## Graph 3

*Personality Q-Q Plots*

no info



individuating info

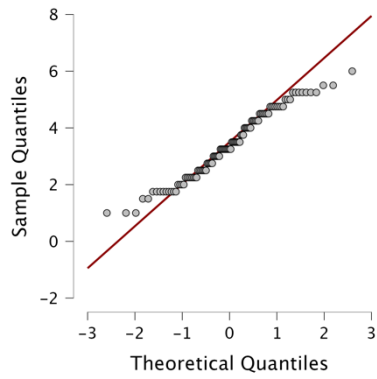




Graph 4

*Social Distance QQ-Plot*

no info



individuated info

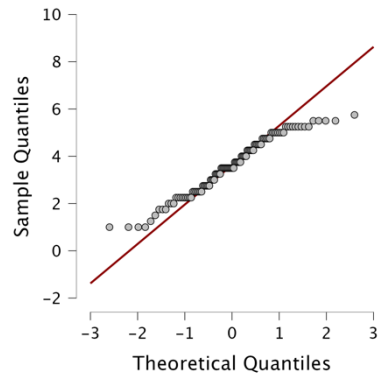


Table 7

*Independent Samples T-Test*

	t	df	p	Cohen's d	SE Cohen's d
Trust	-0.30	166	.76	-0.05	0.15
Personality	-0.19	209	.85	-0.03	0.14
Social Distance	-1.18	209	.24	-0.16	0.14
Warmth	0.58	207	.56	0.08	0.14

*Note.* Student's t-test.

## Appendix C

### Exploratory Analysis

Table 8

*Test for Equality of Variances (Levene's)*

F	df1	df2	p
1.690	5.000	205.000	0.138

Graph 5

*ANOVA QQ-Plot*

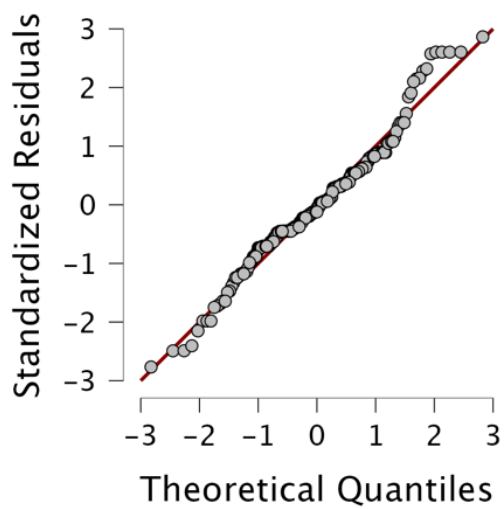


Table 9

*Simple Contrast Personality - Group Identity*

Comparison	Estimate	SE	df	t	p
6 - 5	0.26	0.14	205	1.82	.07
7 - 5	0.68	0.15	205	4.51	< .001

Table 10

*Simple Contrast Personality - Group Identity \* Profile\_type*

Comparison	Estimate	SE	df	t	p
1	0.25	0.2	205	1.30	.19
2	0.83	0.20	205	4.16	< .001
3	0.12	0.23	205	0.47	.64
4	0.38	0.19	205	2.01	.05
5	0.63	0.20	205	3.11	.002

Table 11

*Simple Contrast Coefficients Personality - Group Identity \* Profile\_type*

Group ID	ProfileType	C1	C2	C3	C4	C5
5	No info	-1	-1	-1	-1	-1
6		1	0	0	0	0
7		0	1	0	0	0
5	Individuated info	0	0	1	0	0
6		0	0	0	1	0
7		0	0	0	0	1

\*C1=Comparison 1, C2=Comparison 2...

Table 12

*Simple Contrast Trust - Group Identity*

Comparison	Estimate	SE	df	t	P
6 - 5	-0.14	0.23	162	-0.64	.52
7 - 5	-0.26	0.24	162	-1.10	0.27

Table 13

*Simple Contrast Trust - Group Identity \* Profile\_type*

Comparison	Estimate	SE	df	T	p
1	-0.19	0.28	162	-0.68	.50
2	-0.42	0.31	162	-1.33	.18
3	-0.07	0.39	162	-0.19	.85
4	-0.17	0.28	162	-0.61	.55
5	-0.18	0.30	162	-0.61	.54

Table 14

*Simple Contrast Social Distance- Group Identity*

Comparison	Estimate	SE	df	t	p
6 - 5	-0.19	0.21	205	-0.90	.37
7 - 5	-0.84	0.22	205	-3.78	< .001

Table 15

*Simple Contrast Social Distance - Group Identity*

Comparison	Estimate	SE	df	t	p
6 - 5	-0.19	0.21	205	-0.90	.37
7 - 5	-0.84	0.22	205	-3.78	< .001

Table 16

*Simple Contrast Social Distance - Group Identity \* Profile\_type*

Comparison	Estimate	SE	df	t	p
1	-0.09	0.29	205	-0.32	.74
2	-1.06	0.30	205	-3.56	< .001
3	0.143	0.35	205	0.41	.68
4	-0.146	0.28	205	-0.53	.60
5	-0.486	0.31	205	-1.61	.11

Table 17

*Simple Contrast Coefficients Social Identity - Group Identity \* Profile\_type*

Group ID	ProfileType	C1	C2	C3	C4	C5
5	No info	-1	-1	-1	-1	-1
6		1	0	0	0	0
7		0	1	0	0	0
5	Individuated info	0	0	1	0	0
6		0	0	0	1	0
7		0	0	0	0	1

*\*C1=Comparison 1, C2=Comparison 2...*

Table 18

*Simple Contrast Warmth - Group Identity*

Comparison	Estimate	SE	df	t	p
6 - 5	0.67	4.96	203	0.14	0.89
7 - 5	-17.79	5.22	203	-3.41	< .001

Table 19

*Simple Contrast Warmth - Group Identity \* Profile\_type*

Comparison	Estimate	SE	df	T	p
1	3.41	6.75	203	0.51	.61
2	-20.54	6.98	203	-2.94	.004
3	-2.01	8.06	203	-0.25	.80
4	-4.07	6.48	203	-0.63	.53
5	-17.03	7.03	203	-2.42	.02

Table 20

*Simple Contrast Coefficients Warmth- Group Identity \* Profile\_type*

Group ID	ProfileType	C1	C2	C3	C4	C5
5	No info	-1	-1	-1	-1	-1
6		1	0	0	0	0
7		0	1	0	0	0
5	Individuated info	0	0	1	0	0
6		0	0	0	1	0
7		0	0	0	0	1

\*C1=Comparison 1, C2=Comparison 2...