

**Investigating Human's Need for Cognition in its Relationship to Affective Polarization
on Twitter**

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Abstract

The rise of social media platforms changed political communication drastically, leading to an increase in *affective polarization* (AP) worldwide. Posing a threat to liberal democracies and cohesion in society, the underlying mechanisms of AP must be thoroughly understood, especially in the context of social media, which has been found to foster AP significantly. In addition to possibly mitigating the harm that AP poses to society, individual differences in AP tendencies must be investigated comprehensively. Drawing on previous literature emphasizing the importance of humans' *Need for Cognition* (NFC), this thesis examines the link between NFC and AP on Twitter and is guided by the research question: The importance of individual differences on affective polarization: Is humans' need for cognition associated with their tendency to engage in affective polarization?

While examining a sample of left-leaning participants, it is hypothesized that individuals high in NFC report fewer negative feelings towards conservatives when consuming stereotypical conservative content on Twitter. Linear regression analysis is employed to assess the relationship between NFC and AP. The findings do not suggest a strong, significant relationship between the two variables. The insignificant results of this research underscore the importance of further research on NFC to either rule it out as a personality trait associated with affective polarization or find consistent evidence for a significant association.

Keywords: Social media, affective polarization, need for cognition, political content.

The Importance of Individual Differences on Affective Polarization: Is Humans' Need for Cognition Associated with Their Tendency to Engage in Affective Polarization?

“The most potent force in American politics is us versus them”. This quote by the journalist Ezra Klein illuminates a deeply ingrained political division polarizing the society of the U.S. With the beginning of the digital age and the rise of social media, this political division is further exacerbated (Iyengar et al., 2019). One psychological phenomenon indicating political division is defined by the term *affective polarization* (AP). AP describes the feeling of acrimony towards opposing political parties and is expressed through less trust in and negative personality evaluations of outgroups (Druckman & Levendusky, 2019; Wojcieszak & Garrett, 2018; Wojcieszak & Warner, 2020). Interestingly, the correlation between AP and actual ideological stances is rather low (Iyengar et al., 2019). This emphasizes the threat that AP poses to democracies while suggesting that AP is driven by negative attitudes towards outgroups rather than by actual political opinions.

The overwhelming amount of political content on social media demands constant processing and evaluation of arguments. Accordingly, cognitive processes are critical in forming opinions about political issues (Santos et al., 2022). Cohen et al. (1955) first described humans' need for cognition (NFC) which is defined as a trait that reflects a person's tendency to enjoy engaging in extensive cognitive activity (Cacioppo et al., 1983).

Despite a growing amount of research on AP, the extent to which individual differences in NFC affect outgroup hostility online is largely unknown. This thesis aims to provide new insight into this relationship. In the following, I will examine the origins of AP by reflecting on social-psychological group processes and connecting them to the online environment. Additionally, the importance of NFC when consuming political content online will be emphasized. Lastly, I will explain the studies focus on Twitter and why the platform is

especially vulnerable to AP. All things considered, this thesis aims to illuminate NFC as an important human characteristic affecting AP online.

Understanding Affective Polarization through Social Identity

Affective polarization is fostered through the creation of political in and outgroups. Hence, the formation of in and outgroups is crucial to retrace the origins of AP. The intertwined concepts of social identity theory (SIT) and self-categorization theory (SCT) provide a solid theoretical framework that helps to explain how and why political outgroups are established. The SCT argues that people form groups based on social information such as sex, gender, or race (Turner, 1987). In a political context, the social information that builds the foundation for self-categorization processes includes political stances and ideologies. Creating a strong collective narrative, self-categorization promotes the salience of a social identity from which individuals derive parts of their personal identity (Tajfel, 1978). Both social and personal identity are crucial concepts that give reason to the question of who we are and where we belong. As a result, a strong social identity that positively influences personal identity satisfies psychological needs while enhancing overall well-being (Kyprianides et al., 2019). Yet, the salience of social identity can have negative effects on intergroup processes. Social identity theory and its extension to the SCT further emphasize the notions of ingroup favoritism and outgroup derogation, which describe the tendency to hold favorable attitudes towards members of the ingroup and negative attitudes towards political outgroups. Both psychosocial mechanisms exacerbate have been shown to drive AP further (Wojcieszak et al., 2021).

How Deindividuation Affects Affective Polarization

Further examination of the link between social identity theory and AP demands consideration of deindividuation effects. Deindividuation theory represents an important

concept that sheds light up on the question of why people engage in antinormative behavior when identifiability decreases (Festinger, 1952). Elaborating on the theories of Le Bon that described the altered behavior of individuals in groups (Le Bon, 1895), Festinger defined deindividuation as the lack of self-awareness when perceiving oneself as part of a group. Being driven by the absence of accountability and the diffusion of responsibility, deindividuation decreases self-regulation and rationality in contexts, in which individuals perceive themselves as difficult to identify. Representing such a context, social media fosters antisocial behaviour by lowering identifiability (Siegel et al., 1986).

In conclusion, social-psychological theories, particularly SCT, SIT, and deindividuation theory, provide a robust framework for retracing the origins of AP online while highlighting how group processes promote acrimony and negativity towards opposing parties.

Explaining Affective Polarization on Twitter

Social media can be considered a beneficial tool that provides enhanced access to political information and fosters political engagement. Yet, social media platforms have been found to promote AP by representing a context that promotes the salience of social identity (Törnberg et al., 2021; Siegel et al., 1986). Different mechanisms of social media platforms highlight social identity online. Firstly, algorithms ensure users are being presented with political content that tends to match their own opinions. This mechanism results in the creation of echo chambers, which can be described as online spaces that make sure users are presented with content that does not refute but reinforces their personal belief biases. Supporting this notion, Sirola et al. (2021) indicate that social media attracts like-minded individuals to form online isolated groups that increase conformity. As a result, users are unlikely to get in touch with different-minded people and rather communicate with their

personal ingroup only. Secondly, supported by deindividuation theory, sharing political content anonymously decreases responsibility while users' tendency to engage in antisocial behavior increases (Kim et al., 2023).

This is especially relevant, as a significant number of X-users (formerly referred to as Twitter) stay anonymous when posting content. Moreover, anonymous users share more content compared to identifiable users (Peddinti et al., 2014). Due to its popularity in public debates over politics, Twitter became an important source for social scientists analyzing political attitudes (Jungherr, 2015). Approximately one-third of tweets entail political content, while engagement on Twitter peaks during U.S. election periods (Mitchell & Mitchell, 2024). The brevity of tweets incentivizes extreme statements and does not leave room for constructive exchange of thoughts, which fosters emotionally loaded discussions prone to misunderstanding. This misunderstanding can result in mistrust and anger towards members of the political outgroup. Supporting this notion, out-group animosity was particularly successful at generating engagement on Twitter through the enhanced sharing of outgroup tweets (Rathje et al., 2021). Deindividuation theory provides possible explanations for acrimony and anger between political groups on Twitter, while the platform can be considered the perfect breeding ground for AP.

Understanding the Importance of Humans' Need for Cognition Online

As stated before, NFC describes the enjoyment of engaging in effortful cognitive activities. To grasp the importance of NFC online, it is essential to understand that we rely heavily on cognitive processes while consuming and evaluating online content. NFC has been linked to critical thinking as well as overall political interest and the evaluation of political facets (Bougher & Lau, 2020). Another factor that stresses the importance of NFC concerns its relation to information seeking. NFC has been positively linked to information-seeking,

which describes an individual's motivation to collect diverse information about a topic. High NFC individuals are likely to educate themselves about political content that does not align with their own opinions but rather challenges personal viewpoints (Fortier & Burkell, 2014).

On social media, people are likely to engage in less critical-analytical thinking due to the enhanced salience of social identity (Van Stekelenburg, 2013). As discussed before, these mechanisms lead to antisocial behavior and AP toward political outgroups. Although NFC is unlikely to inhibit AP tendencies, high NFC can enhance awareness about the effects of a highlighted social identity on fostering AP through deindividuation and decreased self-regulation.

Especially on social media, consuming diverse political content is hindered by mechanisms such as anonymity and personalized algorithms. Therefore NFC stands out as a characteristic that possibly acts against the effects of these mechanisms while motivating users to inform themselves comprehensively. Santos et al. (2022) showed that when individuals engaged in the thinking processes of an outgroup, attitudes towards this outgroup improved. These findings support the notion that cognitive processes influence our way of perceiving outgroup members. Hence, examining the relationship between NFC and AP online could possibly illuminate NFC as a personality trait that diminishes AP tendencies.

Overview of the Present Study

The nature of social media fosters outgroup hostility by hindering objective public debates and promoting the salience of social identity as well as deindividuation effects. Although researchers increasingly investigate AP online, it remains unclear which human characteristics perchance influence the tendency to engage in AP. Previous findings highlight the necessity of critical analytical thinking in responsibly consuming political content online. A study by Kakinohana and Pilati (2023) found that people with high NFC are more likely to

consider different viewpoints, leading to enhanced cognitive reflection. Accordingly, NFC poses as a personality trait that potentially influences AP tendencies on Twitter by promoting a critical and balanced evaluation of political content. While examining the relationship between NFC and AP on Twitter, the study will be guided by the research question: The importance of individual differences on affective polarization: is humans' need for cognition associated with their tendency to engage in affective polarization on Twitter?

The study assesses AP scores on four dimensions: social distance, other-focused trust, feeling thermometer, and personality rating. I specifically hypothesize that:

H1) Compared to individuals with low NFC, individuals with high NFC scores display lower social distance scores towards the political outgroup.

H2) Compared to individuals with low NFC, individuals with high NFC scores display higher other-focused trust toward the political outgroup.

H3) Compared to individuals with low NFC, individuals with high NFC scores feel more favorable towards the political outgroup.

H4) Compared to individuals with low NFC, individuals with high NFC scores evaluate the personality of the political outgroup as more positive.

Examining four distinct dimensions of AP aims to achieve a nuanced understanding of how individual differences in NFC relate to the four mechanisms driving AP. Besides, research has confirmed them as reliably indicating AP (Levendusky, 2018; Wojcieszak & Garrett, 2018; Wojcieszak & Warner, 2020). The study focuses on a left-leaning sample that is asked to indicate their feelings toward conservatives. Research by Hennes et al. (2012) supports the consideration of a left-leaning sample by finding individuals who perceive themselves as liberal to score higher on the need for cognition scale. Participants are presented with variations of political content, including different levels of personal

information and types of shared content on Twitter. Although This thesis is part of a larger project examining the influence of moral content and stereotypical information on AP this study specifically investigates the impact of NFC on AP. Ultimately, this research contributes to the broader quest to enhance our understanding of how AP relates to NFC when engaging in political discussions on Twitter.

Methods

The ethical committee of the Faculty of Behavioral and Social Sciences at the University of Groningen approved the study, after which we advertised it via social media, posters, and flyers.

Participants

Our sample of participants was self-selected based on the necessary criteria of 1) being at least 18 years old, and 2) identifying as left-leaning. The final dataset included an effective sample size of 322 participants after excluding several participants due to reasons including being underage, refusing to give consent for data processing, not identifying as politically left-leaning, or failing to progress past the manipulation screen (Appendix A, Table 1). While no one of our participants chose to report their nationality, 244 participants agreed to share their age and gender, resulting in 124 females (50.8%) and 114 male participants (46.7%), while 6 participants identified as other/non-binary (2.46%). Regarding our participant's age, a proportion of 34.43% indicated an age between 18 and 24. 11.07% reported an age between 25 and 34. 20.49 % of participants were between 35 and 49, and 5.3% of participants reported an age between 50 and 64. Only one person was 65 or older (Appendix A, Table 2). Power analysis revealed a required sample size of 86 participants to detect an effect size of 0.5 (Cohen's d) with 90% power and an alpha level of $\alpha = .05$.

Measures

Group Identification

We measured participants' political 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 AP dimensions were assessed as separate dependent variables. To measure the dimensions of AP, we utilized questionnaires investigating the perceived social distance to conservatives, the trustworthiness of conservatives, favorable feelings towards conservatives, and the perception of their personality traits.

Other-Focused Trust. To measure other focused trust, we used a 5-item questionnaire by Zhang, (2021) 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*) ($\alpha = 0.9$). A high Cronbach α supports the application of the scale while reflecting on high internal consistency, which suggests that the scale reliably measures other focused trust.

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

Personality Rating. A personality rating assessed to what extent participants perceived conservatives as intelligent, honest, hypocritical, selfish, and mean. Participants evaluated their perception of conservatives, reaching from 1 (*strongly disagree*) to 7 (*strongly agree*)

agree) ($\alpha = 0.48$). Importantly, a Cronbach α of 0.48 indicates low internal validity which suggests that the rating possibly assesses a variety of unrelated factors while not reliably measuring the variable of interest. Hence, the results should be interpreted with caution.

Social Distance Scale. The 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*) ($\alpha = 0.9$).

Need for Cognition

We investigate NFC as an independent variable, which we hypothesize is associated with affective polarization. A 6-item questionnaire by De Holanda Coelho et al. (2018) was used to measure participants' need for cognition (NFC). People indicated their level of agreement with six questions asking about their tendency and enjoyment in engaging in effortful cognitive activities. The level of agreement was measured on a scale ranging from 1 (*extremely uncharacteristic*) to 5 (*extremely characteristic*). With a Cronbach α of 0.66, the scale displays high internal consistency, which further supports the application of the NFC measurement.

Stimuli

Participants were presented with three different AI-generated Twitter profiles with varying information that either entailed a username only, a generic bio with emojis, or a bio that reflected conservative stereotypes (Nadeem, 2023). All three profiles were presented in combination with a gender-neutral username.

Participants were introduced to these profiles along with comments reflecting either moral or neutral stances on a political issue. More precisely, across all conditions, participants encountered two images in combination with a comment written by the owner of the profile

referencing the images. The first image was that of a gender-neutral bathroom door sign, while the second was a statistic conveying that there has been “little to no progress in closing the gender wage gap in the United States over the past decades” (*Equal Pay Day: There Has Been Little Progress in Closing the Gender Wage Gap*, n.d.).

In the moral tweet condition, all profiles included the aforementioned images with the text “We can’t try to accommodate everyone this is unnatural” accompanying the image of the gender-neutral bathroom sign and “This is fair, women should not be forced to abandon their natural duties” accompanying the gender wage gap graphic. In the neutral tweet condition, all profiles contained the text “I don’t like this” and “I don’t think this is a problem” for the gender-neutral bathroom image and the wage gap image consecutively. We created the moral tweets by reflecting common conservative moral foundations (Hackenburg et al., 2023). Since there is no manipulation of “moral content” in current research, we closely referenced the Moral Foundations Dictionary (MFD) by associating specific words with their corresponding moral foundations (Hopp et al., 2020).

Natural tweets were assembled by creating a baseline of disagreement with liberal ideology, namely, progress and equality (Jost, 2021). The topic of discrimination was chosen on the basis of gender because it is, across different countries, a characteristic topic that divides the views of conservatives and liberals (and left-leaning) people.

Procedure

First, participants were informed about the purpose and content of the study, followed by information about the confidentiality of their data and contact information. Sequentially for consenting participants over 18 years old, the content of the actual study began with the randomized exposure to the social media profile and the AP targeting questions. After rating the profiles on four dimensions of AP, participants answered questions to assess their need for

cognition and had to react to an attention check. Lastly, participants were asked to report demographic details, including age, gender identity, and nationality, for exploratory purposes. After completing the study, which took about 10 minutes, participants were debriefed about the purpose of the study and could enter a raffle for a chance to win a 15€ Amazon gift. The data from the research is accessible to the participants at their request.

Design

As mentioned before, this thesis is part of a larger project combining multiple individual hypotheses. While the broader project looks at moral content and stereotypical information, this specific thesis leaves content and stereotypical information unconsidered. I examine NFC as the independent variable of interest, while AP serves as the dependent variable, which was measured through a) social distance, b) other-focused trust, c) overall favorable feelings towards conservatives, and d) the evaluation of their personality traits. Linear regression analysis is applied to assess the relationship between the IV and the DV.

Results

Descriptive statistics

The presented descriptive statistics build the basis for investigating the relationship between NFC and AP on Twitter. NFC scores indicated a moderate average, which suggests that participants generally enjoy engaging in effortful cognitive activities. In comparison to NFC, scores on the dimensions of AP present greater variability. This indicates that participants perceived a) social distance, b) other focused trust, c) favorable feelings towards conservatives, and d) the evaluation of their personality traits with great variation. High variation in scores provides the foundation to examine if differences in NFC are somehow associated with AP tendencies. Importantly, demographic information about the sample can be found in Appendix A, Table 2.

Table 1*Descriptives Statistics for NFC and four dimensions of AP*

	<u>Valid</u>	<u>Missing</u>	<u>Mean</u>	<u>Std. deviation</u>	<u>Minimum</u>	<u>Maximum</u>
NFC	312	144	3.60	0.58	2.000	5.000
Social distance	322	134	3.57	1.23	1.000	6.000
Other focused trust	254	202	3.26	1.02	1.000	5.000
Personality rating	322	134	5.58	1.04	2.75	8.75
Feeling thermometer	320	136	41.43	28.78	0.000	100.000

Linear regression analysis

Linear regression examines the effects between NFC and four distinct scales reflecting different components of AP. Accordingly, four separate linear regression models were conducted, with each model representing one dimension of AP. To draw valid and reliable conclusions from this analysis, several assumptions were tested in advance. Results of the Shapiro-Wilk test investigating normality presented a significant deviation from normality for NFC ($p = .016$) and each subscale of AP ($p < .001$). Yet, it is important to acknowledge that linear regression is relatively robust to violations of normality, particularly with larger sample sizes. Therefore, proceeding with linear regression analysis is acceptable. Linearity was visually inspected through scatterplots, with every scatterplot presenting significant deviations from linearity (Figures 1-4, Appendix B). This points out the probability of inaccurate predictions and misleading coefficients. Lastly, homoscedasticity was checked by visually inspecting the residuals in a predicted vs. residual plot. For the four regression models, the residuals are randomly scattered around the horizontal line, suggesting no violation of homoscedasticity (Figures 5-8, Appendix B).

Hypotheses testing

Social Distance

Prior to data collection, I hypothesized that the need for cognition (*NFC*) is negatively related to social distance and therefore affective polarization (H1). A significant regression was not found ($F(1, 309) = 2.34, p = .13$). The R^2 was .008, indicating that *NFC* explains approximately 0.8% of the variance in social distance. The regression equation is:

$$\text{Social distance} = 3.59 - 0.18 \text{ NFC scores}$$

That is, for each unit increase in *NFC*, the predicted social distance decreases by -0.18 units. The regression analysis presents a weak, negative and insignificant relationship between *NFC* and social distance. Unfortunately, the hypothesis could not be confirmed by the analysis, which suggests that other factors likely play a more prominent role in influencing social distance.

Other Focused Trust

Simple linear regression analysis was conducted to evaluate the extent to which *NFC* could predict other focused trust. A significant regression was not found ($F(1, 309) = 0.47, p = .50$). The R^2 was .002, indicating that *NFC* explains only 0.2% of the variance in social distance. The regression equation is:

$$\text{Other focused trust} = 3.3 + 0.08 \text{ NFC scores}$$

The equation expresses that for each unit increase in *NFC*, the predicted other focused trust increases by approximately 0.08 units. Overall linear regression analysis suggests *NFC* has little to no influence on other focused trust in the examined context.

Feeling Thermometer

A significant regression was found ($F(1, 309) = 8.57, p = .004$). The R^2 was .03, indicating that NFC explains only 3% of the variance in social distance. The regression equation is:

$$\text{Feeling thermometer} = 42.0 - 8.16 \text{ NFC scores}$$

Accordingly, for each unit increase in NFC, the predicted score on the feeling thermometer decreases by approximately -8.16 units. Although linear regression analysis presents a weak negative association between NFC and the scores on the feeling thermometer, NFC seems to have little to no influence on favorable feelings in the examined context.

Personality Rating

Between personality rating and NFC, A significant regression was found ($F(1, 309) = 8.70, p = .003$). The R^2 was .03, indicating that NFC explains only 3% of the variance in personality rating. The regression equation is:

$$\text{Personality rating} = 5.56 + 0.29 \text{ NFC scores}$$

Accordingly, for each unit increase in NFC, the predicted score on the personality rating increases by approximately 0.29 units. NFC has a weak influence on how individuals perceive the personality of an outgroup.

Discussion

Theoretical and Practical Implications

This study aimed to confirm the hypothesis that high NFC participants would report less AP against conservatives compared to participants with low NFC scores. However, results present inconsistent and weak support for this assumption throughout the four

dimensions of AP. Contrary to H3, a weak negative association between NFC and scores on the feeling thermometer was found to be significant, with high NFC participants evaluating their feelings towards conservatives as less favorable. In line with H4, the analysis suggested a weak positive relationship between NFC and personality rating, indicating that high NFC individuals are more likely to evaluate conservatives as overall more positive regarding personality traits such as intelligence, honesty, kindness, selfishness, and being hypocritical. Yet, low internal consistency ($\alpha = 0.48$) suggests the scale does not reliably measure perceived personality traits. Therefore, results must be interpreted with caution. Analysis of other focused trust and social distance did not reveal any significant associations with AP.

Although some studies support the notion that cognitive processes are associated with affective polarization (Cacioppo et al., 1983), the body of research on this notion is inconsistent. Saveski et al. (2021) investigated AP reduction through perspective-taking. The researchers found that while participants were exposed to opposing content, their understanding of different views on political issues did not increase. This suggests that information-seeking is not necessarily an enhanced understanding of opposing views.

Another possible explanation for the lack of significant findings suggests the effect of additional influences on AP. A low proportion of variance explained supports the assumption that the relationship of NFC to AP might not be as profound as this study assumed. Various factors that remained unconsidered in this study might impact how we feel about people different from us. E.g.: previous studies suggest that economic and social factors pose important factors influencing AP. Brewer (1968) investigated determinants of social distance and successfully confirmed high educational–economic advancement of the outgroup as contributing to social distance. The importance of considering social factors in relation to AP

has been further stressed by Albada et al. (2021), who conclude that perceived cultural distance is associated with negative attitudes toward an outgroup.

Furthermore, the theoretical framework that builds the foundation for this study might be unsuitable. Deindividuation theory can be considered a fundamental contribution to the understanding of group phenomena. Nevertheless, researchers question the implications of the theory due to inconsistent evidence and the evolving understanding of deindividuation. A new understanding of deindividuation is considered by the social identity model of deindividuation effects (SIDE model), which proposes the importance of anonymity rather than accountability. The SIDE model explains how anonymity alters people's behavior by enhancing the salience of social identity in the online environment (Reicher et al., 1995). Social identity therefore increases conformity to the perceived social norms of the group. An investigation of the effects of deindividuation on polarization in the context of computer-mediated communication underlines the implications of the SIDE model (Lee, 2006). The SIDE model should be considered a construct that refines the implications of deindividuation theory while explaining the effects of anonymity online more accurately and precisely. Overall, socio-psychological constructs such as the SIT and the SIDE model emphasize the importance of our collective identity encouraging various group phenomena, suggesting that general group processes drive affective polarization more than NFC.

Although the study does not present strong evidence that could be acted upon, it remains urgent to educate people about the threats of online communication. Especially the consumption of political content demands careful evaluation and awareness of polarizing mechanisms.

Limitations of the Study

Several limitations of the study impair the credibility of the weakly significant relationships between NFC and different dimensions of AP. Reflecting on flawed data next to the violation of linearity and normality assumptions highlights the inaccuracy of results. Further impacting the credibility of the findings, inconsistent response patterns on the other focused trust scale reflect low statistical power.

Reflecting on the examined sample, the study considered only left-leaning participants.

Although it has been shown that liberals display higher levels of NFC (Hennes et al., 2012), this does not mean NFC is a personality trait only found in left-leaning individuals. Similarly, research shows that AP tendencies are not limited to members considering themselves left-leaning (Brick & Van Der Linden, 2024). Concerning data collection, the study relied on self-reports assessing AP tendencies. This leaves open the question of whether people's indications of AP reflect on their actual behavior. Further elaborating on some methodological limitations, Druckman and Levendusky (2019) argue that the dimensions measuring AP correlate with one another except for social distance. People who display AP towards members of the political outgroup are still likely to feel comfortable engaging with them as friends or neighbors. It is suggested that measuring social distance to assess AP tendencies should be avoided.

Recommendations for Future Research

Future investigations should enhance the generalizability of results by examining NFC on the right political spectrum in relation to AP online. Doing so could either further suggest that NFC is unrelated to AP or find consistent evidence for a significant association. Next, forthcoming study designs need to control for third variables and improve the estimation of AP by not only relying on self-reports entirely. An assessment of AP that reliably captures

actual behavior can enhance the validity of AP measurements significantly. Another point that should be addressed in further investigation concerns the importance of critically examining influences on AP. Future research should further elaborate on the impact of economic and social variables on AP online.

Regarding further considerations of NFC, individuals high in NFC may be likely to be more aware of the consequences of deindividuation and general group processes. While there is little to no existing research about this presumed relationship, further investigations are needed. Finally, although NFC might not alter AP, it remains a personality trait crucial for the critical evaluation of political information. Hence, examining if and how NFC could be fostered in individuals presents a final suggestion for future research.

Conclusion

In an attempt to give an answer to the research question: The importance of individual differences on affective polarization: is humans' need for cognition associated with their tendency to engage in affective polarization on Twitter? The present thesis conducted a study investigating unequal levels of AP in response to individual differences in NFC. I examined the relationship between the NFC and the four dimensions of AP using simple linear regression analyses. While the analyses presented some weak trends, only a very small percentage of the relationships between NFC and the AP scales were found to be statistically significant. First, a weak positive association between NFC and personality ratings was found, implying that high NFC participants assessed conservatives as overall more positive compared to participants low in NFC. Low internal consistency questions the credibility of this finding. Secondly, a weak negative link between NFC and scores on the feeling thermometer shows that high NFC participants have overall more unfavorable feelings towards conservatives in comparison to low NFC participants. However, low internal

consistency and a small variance explained in both dimensions signal low credibility of results. For social distance and other focused trust, no significant association with NFC is determined. Consequently, the analysis results in inconsistent implications about the association between NFC and AP on Twitter.

Further investigations should examine the influence of socioeconomic factors and group processes on AP online. In addition to that, research designs can improve a) the validity of measuring AP by avoiding the use of self-reports and b) the generalizability of findings by considering a more diverse sample. Finally, since high NFC is likely to enhance awareness about the effects of group processes, subsequent inquiries should scrutinize the influence of NFC on polarization tendencies.

Despite several limitations of the study, NFC plays a vital role in information-seeking and analytical decision-making. NFC does not appear to directly impact AP but the trait seemingly promotes people's motivation to engage in a comprehensive evaluation of arguments. Since research has suggested active communication with different-minded people to act as a buffer against AP the potential of promoting NFC warrants further investigation.

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Appendix A

Table 1

Sample Size of each AP Measure

Measure	<i>n</i>
Other-Focused Trust	254
Feelings Thermometer	320
Personality Rating	322
Social Distance Scale	322
Need for Cognition	312

Table 2

Frequencies of Age and Gender

Demographic		<i>n</i>	%
Gender			
Male		114	32
Female		124	34
Other		6	2
Missing		116	32
Age			
18-24		84	23
25-34		96	27
35-49		50	14
50-64		13	4
65 or older		1	1
Missing		116	32

Appendix B

Figure 1

Scatterplot for Testing Linearity Assumption Check for Social Distance

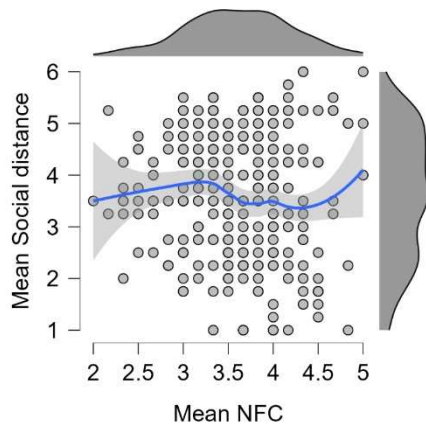


Figure 2

Scatterplot for Testing Linearity Assumption Check for Other Focused Trust

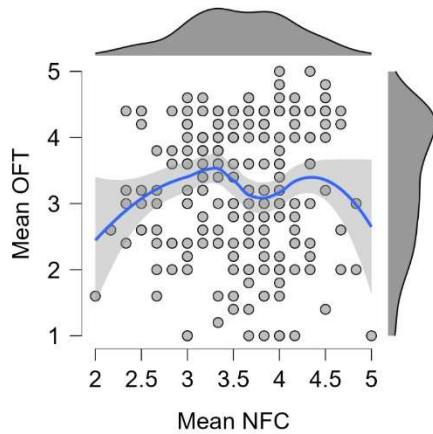


Figure 3

Scatterplot for Testing Linearity Assumption Check for Personality Rating

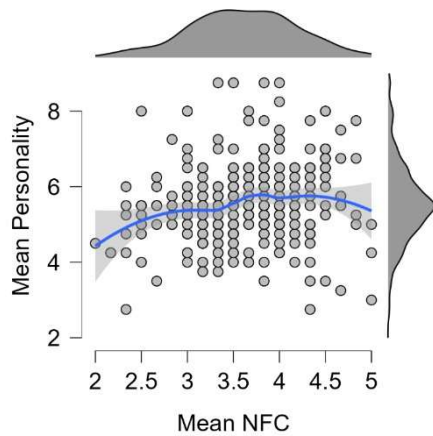


Figure 4

Scatterplot for Testing Linearity Assumption Check for the Feeling Thermometer

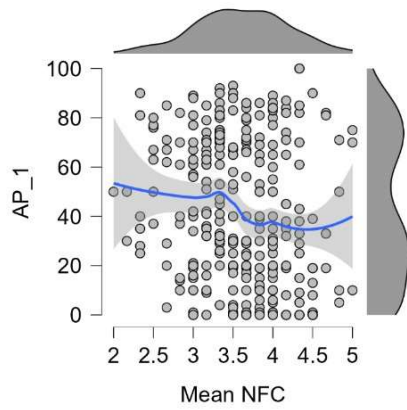


Figure 5

Residual vs. Predicted Plot for Testing Homoscedasticity for Social Distance

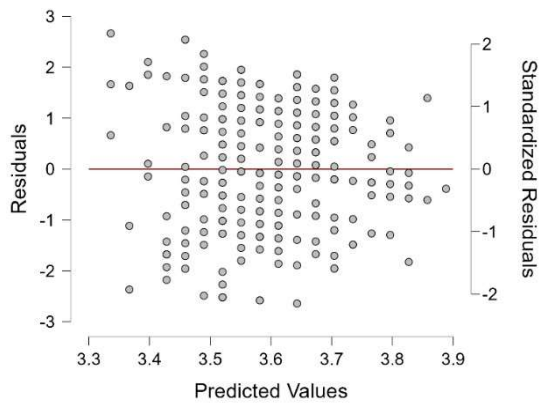


Figure 6

Residual vs. Predicted Plot for Testing Homoscedasticity for Other Focused Trust

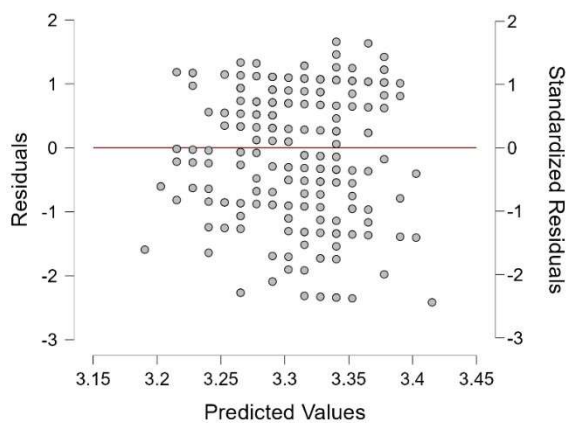
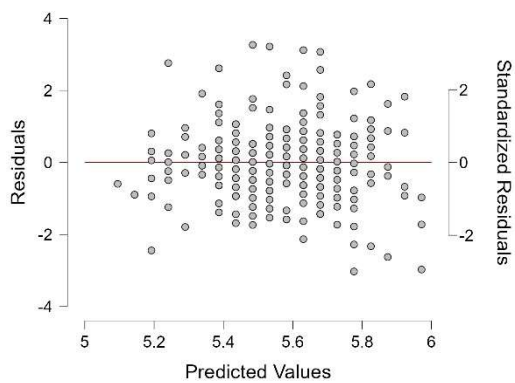


Figure 7

Residual vs. Predicted Plot for Testing Homoscedasticity for Personality Ratings

**Figure 8**

Residual vs. Predicted Plot for Testing Homoscedasticity for Feeling Thermometer

