Effects of Moralized Attitudes, Disgust, Anger and Receptiveness on Affective

Polarization: a Moderated Mediation Study

Mai I.A. Tenhunen, S4715810

Department of Psychology, University of Groningen

PSB3E-BT15: Bachelor Thesis

Group number: 23

Supervisor: dr. Namkje Koudenburg

Second evaluator: prof.dr.Arie Dijkstra

In collaboration with: Fabiënne Crone, Cynthia Zeimet,

Esmee Holvast, Rozemarijn van Staveren, Jasmijn Hoogland

January 8, 2023

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Abstract

Affective polarization has emerged as a salient issue across various social and political landscapes. Previous research has focused on how affective polarization is rooted in social identities and ideological divides, but due to the strength of moralized attitudes in influencing various forms of political and interpersonal behavior, we suggest that moralized attitudes might play a role in directly fostering affective polarization as well. Based on the understanding that moralized attitudes can elicit strong moral emotions, and that emotions can drive affective polarization, we consider that anger and disgust might serve as a mediating link in the relationship between moralized attitudes and affective polarization. We also explore whether conversational receptiveness might mitigate the experience of negative emotions, and thus indirectly reduce the experience of affective polarization. To investigate these research questions, we conducted an experimental study *(N=146),* where participants discussed a polarizing statement, refugee intake to the Netherlands, with someone who either disagrees or agrees with them on the statement. We found a strong, positive effect of moralized attitudes on levels of affective polarization in both conditions, and a mediating effect of disgust for this relationship, but no indication for a mediating role of anger or a moderating role of receptiveness. We conclude that moralized attitudes predict affective polarization, and that this relationship is partially mediated by the experience of disgust towards another's viewpoint. Results are discussed in terms of their implications for both practice and for current theory on the emergence of affective polarization.

Keywords: affective polarization, moralized attitudes, disgust, anger, receptiveness

Effect of moralized attitudes on affective polarization

Disagreement and engagement with divergent viewpoints are core components of a functioning democracy as well as social life in general. Yet, Western societies are increasingly characterized by the transformation of these benevolent manifestations of public disagreement into hostile structural divides (Koudenburg & Kashima, 2021; Webster et al., 2022), as well as dislike and hostility towards outgroup members - a type of polarization referred to as *affective polarization* (Iyengar et al., 2019).

While research has proposed that conversations between people of different viewpoints can function as a kind of "antidote" to the process of polarization by facilitating the tolerance towards differing views and increased liking towards one's outgroup (Santoro & Broockman, 2022; Caluwaerts & Reuchamps, 2014), research has also identified several barriers and boundary conditions for these beneficial aspects (Koudenburg & Kashima, 2021). Sometimes engagement with different viewpoints results in increased polarization (Bail et al., 2018), and this is especially found to be the case when initial viewpoints of people are more extreme (MacKuen et al., 2010), for example when these views are rooted in one's core values, rather than mere differences in opinion (Enders & Lupton, 2020). Following this line of research, we consider that *moralized attitudes*, as particularly strong opinions rooted in core moral beliefs, will foster increased affective polarization in outgroup discussions. Furthermore, outgroup discussions compared with ingroup discussions tend to be characterized by higher incidence of negative emotions (Hwang & Kim, 2016), and especially so in the presence of extreme value-based opinions. The incidence of strong negative emotions during disagreeing conversation has been shown to increase negative appraisals of outgroup members (deJong,

2024), and thus could contribute to affective polarization. Yet, some research suggests that if disagreeing conversations encompass conversational diplomacy behaviors, such as *conversational receptiveness,* i.e., the perception that one's conversation partner is willing to engage with diverging viewpoints, the harmful effects of negative emotions can be mitigated to some extent (Nguyen & Fussel, 2015).

In the current study, we aim to synthesize these diverse trends and consider that in the context of a discussion with a disagreeing outgroup member, people who already hold strong, moralized attitudes can experience more negative emotions, such as anger and disgust, towards the other person's viewpoint, and these taken together, might strengthen the experience of affective polarization. Yet, even if moralized attitudes and negative emotions are present, we consider that if conversation partners perceive the other as being receptive to their point of view, some of these negative effects might be mitigated and the experience of affective polarization indirectly reduced.

Affective polarization

While research has identified and focused on various different types of polarization, recently there has been a growing emphasis on affective, rather than ideological or opinion-based polarization (Iyengar et al., 2019). Affective polarization is generally understood as a form of intergroup differentiation that increases social (and even physical) distance between groups by evaluating co-partisans, or ingroup members, in favorable terms and seeing those who hold opposing views more negatively (Renström et al., 2023). In essence, affective polarization represents the like of one`s political ingroup and dislike of one`s political outgroup (Iyengar et

al., 2019; Tappin & McKay, 2019). There is increasing concern regarding the rise of affective

polarization across different political landscapes such as in the U.S, Sweden, and the

Netherlands, as well as across different issues, such as immigration and refugees, which is also

the focus of the current study (Renström et al., 2023; Santoro & Broockman, 2022; Harteveld,

2021). Affective polarization is a particularly prevalent topic due to concerns that the animosity

that accompanies affective polarization towards outgroup members might not be contained into

political contexts, but extend to attitudes and behavior outside of it as well (Iyengar et al., 2019;

Webster et al., 2022).

Various different mechanisms have been proposed to explain the emergence of affective

polarization. The one that has been most influential in literature is the social identity theory,

which posits that affective polarization emerges from the reinforcement of partisan identities,

such as Republican or Democrat in the U.S context (Iyengar et al., 2019). Yet some studies also

note that social identity does not adequately capture the emergence of affective polarization in

different settings (Rudolph & Heterington, 2021), and indeed, recently various alternative

avenues for affective polarization have been proposed. Renström et al., (2023) have proposed a

mediation model, whereby affective polarization emerges when people react with anger to an

ingroup threat. Another commonly endorsed view is that affective polarization is closely related

to divergences in ideology (Webster & Abramowitz, 2017; Rogowski & Sutherland, 2015).

Moreover, some have emphasized how affective polarization can be driven by divergences in the

core values of individuals, rather than identities or ideologies (Enders & Lupton, 2020). In

similar vein, a limited amount of research has investigated the relationship between moral

conviction and particularly, the use of morally salient frames as an antecedent and an exacerbator

to affective polarization (Clifford, 2018; Simonsen & Bonikowski, 2022). Yet to our knowledge, only one study so far has explicitly proposed moral conviction as a predictor of affective polarization (Garret & Bankert, 2018). In the current study, we aim to fill this gap in research by proposing an explicit link between moralized attitudes and affective polarization.

Attitude moralization

Moralized attitudes are strong attitudes grounded in one's core beliefs of right and wrong, and they can be clearly distinguished from other (strong) attitudes (Skitka & Morgan, 2014). Moralized attitudes compared with non-moralized attitudes are seen as being more "substantive"; they are seen as universal, objective truths (Skitka & Morgan, 2014; Kovacheff et al., 2018) that grant social legitimacy to act on one's moral convictions (Skitka & Morgan, 2014). Attitudes that have become moralized are seen by actors as reflecting their core values (D'Amore et al., 2021), and some have even suggested that morality above other factors forms the essence of identity (Strohminger & Nichols, 2014; Hartman et al., 2022). As a particularly strong attitudinal form, moralized attitudes have been proposed to explain various forms of political action and attitudes (Simonsen & Bonikowski, 2022). While some of these effects have beneficial consequences, such as increasement of political engagement (Skitka & Morgan, 2014), more attention has been given to the host of negative implications moralized attitudes have been linked with. Moralized attitudes are accompanied with strong negative emotions such as anger, contempt and disgust (Kovacheff et al., 2018; Ryan, 2014; Clifford, 2018) towards those who hold different (moral) views; they provoke hostile opinions and even actions (Ryan, 2014; Simonsen & Bonikowski, 2022). Moreover, as posited by the influential social-intuitionist model (Haidt, 2001) moralized attitudes often result in quick, automatic reactions and judgments, which have been shown to

reduce the quality of conversation with disagreeing others (Hwang & Kim, 2016). The negative implications of moralized attitudes on conversational quality is further evidenced by studies that connect moralized attitudes with reduced willingness to compromise and consider the viewpoints of those who disagree with oneself (Ryan, 2016). We consider that moralized attitudes might have a similar effect in the context of our study as well.

Finally, whilst most research on moralized attitudes has focused on how attitudes become moralized (D'Amore et al., 2021; Clifford, 2018; Skitka & Morgan, 2014), they also note that once attitudes become rooted in moral conviction, they tend to be long-lasting and hard to change. Thus we consider it might be informative to shift our focus from processes of attitude moralization into how existing moralized attitudes impact the process of affective polarization, and on how the negative moral emotions that accompany moralized attitudes might further impact this relationship.

Anger and disgust

Anger and disgust are strong other-condemning moral emotions (Haidt, 2001), which have been linked with both moralized attitudes and polarization, yet the exact nature of the association between them remains unclear. Some have suggested that moralized attitudes are rooted in these emotional responses (Garrett & Bankert, 2018; Schnall et al., 2008), and that attitudes become moralized through experiences of strong anger and disgust (Wineski & Skitka, 2017). Yet, some studies have also failed to replicate these results (Wineski et al., 2020) and some findings indicate that moralized attitudes seem to elicit, rather than merely be preceded by, these emotions (Brandt et al., 2015). Disgust and anger may occur as a function of moralized attitudes for example, in response to intergroup conflict (Halevy et al., 2015). The current study will expand

on this line of research by considering that moralized attitudes can elicit feelings of anger and/or disgust in people, when engaging in a polarizing conversation with an outgroup member.

In addition to being linked with moralized attitudes, disgust and particularly, anger, have also been shown to be important agents in influencing political behavior, for better and for worse. Individuals who experience strong emotions might be more politically active (Valentino et al., 2008; Skitka & Morgan, 2014), but on the other hand, these emotions have been linked to increasing levels of polarization (Simonsen & Bonikowski, 2022). Anger has been shown to incite negative appraisals of outgroup members (Lu & Lee, 2018), and it has been demonstrated to exacerbate intergroup conflict and perceived polarization (Huber et al., 2015; Webster et al., 2022). This relationship has been found both on a general, and more issue-specific level, such as the corona vaccine mandates (Nguyen et al., 2022). Anger has also been shown to function as a mediator between selective media information consumption and affective polarization (Lu & Lee, 2018), as well as between ingroup threat and affective polarization (Renström et al., 2023). Building on this line of research, we consider that anger might have a similar mediating effect in the context of our study. We consider anger towards the other person's viewpoint might occur as a function of existing moralized attitudes during a polarizing conversation topic.

Disgust as a particularly strong moral emotion has received considerable attention in moral psychology research, and it is considered to be a particularly strong emotion that has often been found to be a stronger predictor of interpersonal outcomes than other emotions (Wineski & Skitka, 2016). However, compared with anger, the relationship between disgust and (affective) polarization has received less attention in literature. Evidence suggests that feelings of disgust can lead to more negative appraisals of outgroup members (Brenner & Inbar, 2014), and

specifically, it has been shown to predict negative attitudes towards immigrants (Hodson & Costello, 2007). Furthermore, disgust is linked with viewing outgroup members in inhumane terms (Rozin et al., 1999), and has been shown to facilitate dehumanization of outgroup members (Buckels & Trapnell, 2013; Hodson & Costello, 2007). Dehumanization of outgroup members is also seen as a characteristic of increasing social and moral distance between groups i.e., affective polarization (Harel et al., 2020; Tappin & McKay, 2019; Cassese, 2019). Thus we consider it might be informative to explore whether the experience of disgust might play a role in the relationship between moralized attitudes and affective polarization.

Conversational quality

On a more hopeful note, drawing on the well-known theories of intergroup contact, it is generally thought that interaction between disagreeing groups can have a plethora of positive consequences. These include, but are not limited to; increased understanding and tolerance of others (Koudenburg & Kashima, 2021), improvement of the coherence of opinions and argumentation (Yeomans et al., 2020), cooperation towards common goals (Yeomans et al., 2020), willingness to engage in future conversations (Stromer-Galley & Muhlberger, 2009), and decreasing affective polarization (Santoro & Broockman, 2022; Itzchakov et al., 2023).

On the other hand, as Yeomans et al., (2020) note, much of the work based on this understanding that discussions amongst disagreeing groups are beneficial, overlook that mere contact might not suffice to facilitate these positive consequences, but that attention should be paid to the quality of the interaction as well. Efforts to define or to understand the conditions under which contact can have positive consequences for intergroup relations have focused on aspects such as; group composition (Caluwaerts & Reuchamps, 2014); on how the expression of

everyday diplomatic skills such as responsiveness and ambiguity can shelter from conflict, at least in in - person conversations (Roos et al., 2021), and the role of "conversational receptiveness" i.e., the perceived willingness of one`s conversation partner in engaging with divergent viewpoints (Yeomans et al., 2020). The latter is of particular interest for our study, since conversational receptiveness has been shown to facilitate the bridging of the gap between ingroup and outgroup members (Minson & Chen, 2021), and by extension, might then reduce levels of affective polarization. Furthermore, conversational receptiveness has been shown to mitigate the experience and expression of negative emotions during a conversation (Nguyen & Fussell, 2015; Minson & Chen, 2021), and we consider that it might mitigate the experience of anger and disgust in our study. While these features of "good" conversations might not have enduring effects on affective polarization (Yeomans et al., 2020), still there consistently seems to be at least some support for the role of good quality conversations in mitigating negative factors of the interactions of disagreeing groups (Itzchakov et al., 2023), and thus it is of interest for our current study.

The current study

The current study aims to expand on the existing body of research by integrating the notions of affective polarization and attitude moralization, as well as anger, disgust and conversational receptiveness under one model (illustrated in figure 1 below) in order to understand the effect that moralized attitudes have on affective polarization. Participants will discuss a polarizing topic (refugee intake to the Netherlands) with a disagreeing "outgroup" member or an agreeing "ingroup" member, via a chat box. We investigate the following hypotheses;

Hypothesis 1: People who hold moralized attitudes will experience more affective polarization, regardless of the condition

Hypothesis 2: The relationship between moralized attitudes and affective polarization is mediated through anger and/or disgust, and further moderated by condition, so that the effects of mediation are stronger in the disagreement condition compared with the agreement condition.

Hypothesis 3: In the disagreement condition, conversational receptiveness will moderate the effect of disgust and anger, so that those who perceive their conversation partner to be more receptive will experience less anger and/or disgust which in turn will be associated with lower levels of affective polarization.

Figure 1

Illustration of the proposed model [1]

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[1] *Condition and receptiveness as moderators are explored in different analyses, illustrated together for clarity*
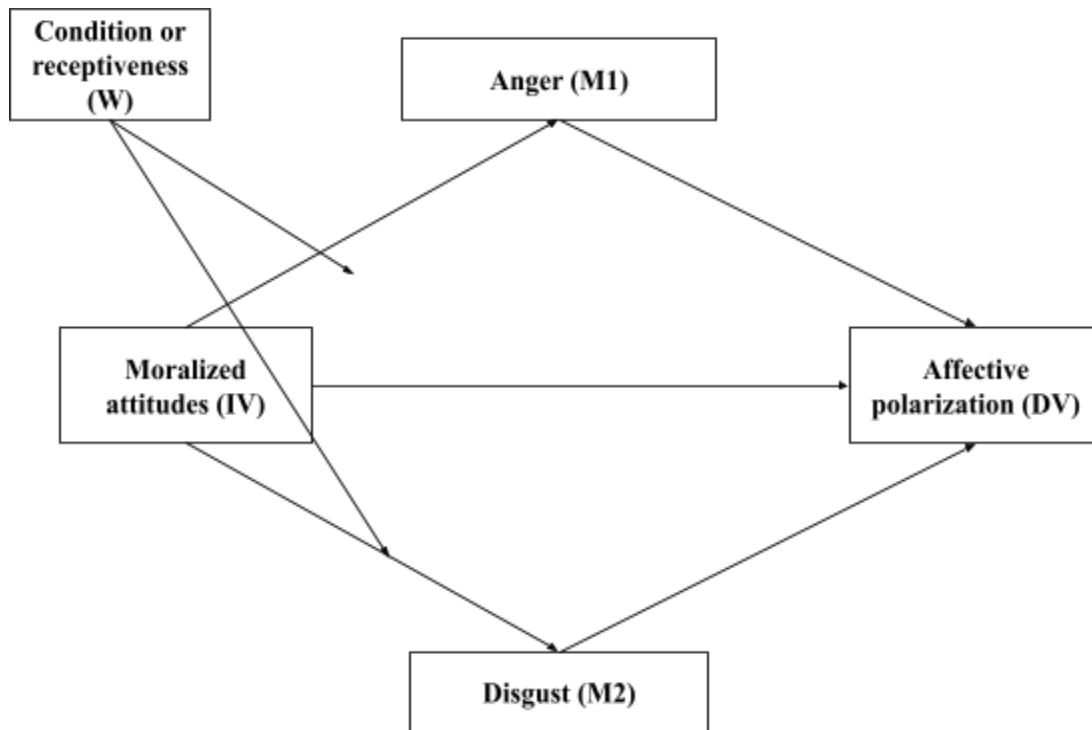
Methods

Participants

A total of 146 participants were included in the study (M_{age} = 30.4 years, SD = 10.1, range =

18-71, 40.4% female, 57.5% male, and 2.1% others). Most of our participants were sampled

from the paid online platform Prolific Panel ($n=141$), and an additional five participants, who

did not receive compensation for their participation, were recruited from the networks of the

research team. Our recruitment criteria included fluency in Dutch, for the conversation and

experiment were conducted in Dutch, and being at least 18 years old. While most participants

had Dutch nationality (94.5%), participants also held other nationalities, namely, Azerbaijani,

Greek, Indonesian, Polish, Surinamese, and Turkish (5.5%). Participants were excluded if they

did not engage in a (meaningful) conversation regarding the statement (n = 42),or did not give

consent (*n=19*). Prior to data collection, a power analysis was conducted to detect a small to medium effect (*F* = .09) with a power of 80%, in a regression model with two independent variables and a moderator. After correcting for the dependence of participants by employing the design effect, the analysis ultimately yielded a required minimum sample size of 108. However, due to multiple hypotheses, the highest number of participants needed was 200, but before exclusions, we ultimately arrived at 170 participants.

Research Design and Procedure

We used a between-groups experiential design where participants were divided into one of two conditions; one in which they were discussing with a person who agrees with them, and one in which they are discussing with someone who disagrees. The experiment took place on a computer, where participants filled in a Qualtrics questionnaire. Participants were given information about the study, such as the motivation behind our research - which was stated to be to obtain information about how people have conversations about social topics with others who agree or disagree with them on the topic - what they can expect from the experiment, how their data will be used and who to contact for further information. Participants were asked to provide consent of participation, after which they filled in our premeasures. These included demographic questions, measures of personality traits, and questions regarding their reading habits. During the questionnaire, each participant was introduced to the discussion statement ("The Netherlands should take in more refugees than it does now.") The participants were asked to report their opinion regarding the statement, the strength of this opinion and whether or not they thought their opinion was grounded in their core moral beliefs. After these measures, the experimental

manipulation was introduced. Each participant was instructed to have a 10 minute [2]discussion with another participant about their opinion on the statement. Discussion partners were assigned to each other by Chatplat, where the discussions took place. Participants were reminded to not disclose any identifying information, and adhere to the statement prompt in their discussion. We also encouraged them to remain patient in case it takes a while before another participant joins the chat. After the ten-minute chat, each participant continued by answering the post-measures. The post-measures included harmony, empathy, conversational receptiveness, future intentions, negative emotions, polarization perception, incrementality beliefs, affective polarization, knowledge, post- attitude and post-moralisation. The end of the questionnaire consisted of multiple manipulation checks. All materials were in Dutch. Participants who were recruited via Prolific Panel were compensated with 3GBP in Prolific credits for the expected 20 minute duration of the study, and the remaining five participants received no compensation. The study was approved by the ethical committee of the Faculty of Behavioural and Social Sciences at the University of Groningen.

Measures

Manipulation checks

Pairing. We included a manipulation check to ensure that all participants were paired to another participant in order to have a conversation. People could indicate whether or not they were paired, and whether or not their conversation partner was responsive.

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[2] *The first ~20 participants partook in an 8- minute conversation, but this timeframe was deemed too short, and thus time was adjusted to 10 minutes.*

Statement as topic of conversation. Another check was added to secure that conversations were being held about the given statement. Participants could reply with either yes or no. These answers were also manually validated in the conversations.

Descriptive measure

Vote on Election Day. Lastly, an additional descriptive question was added to inquire about the participants` voting preferences during the Dutch elections that were held at around the same time as the experiment.

Measures for the moderated mediation model

We are interested in investigating the relationship between moralized attitudes (IV) and affective polarization (DV), and particularly, whether anger (M1) and disgust (M2) might have a mediating effect on this relationship, depending on the condition in which the participants are in. Furthermore, we wanted to explore whether in the disagreement condition, conversational receptiveness might moderate the levels of anger and/or disgust experienced by the participants. To explore this, 8 measures were included in the research. With the exception of affective polarization, which was measured through a sliding scale, all measures used a 7-point Likert scale, ranging from 1= *very weak* to 7= *very strong*. For our independent variable, moralized attitudes, a single-item measure "How strongly are your opinions about refugees rooted in your core moral beliefs", was adapted from Skitka (2010). For affective polarization, the outcome variable, a feeling thermometer was adapted (Iyengar et al., 2019). Participants were asked to use two separate sliders, which both ranged from 0 (cold) to 100 (warm) to indicate how they feel towards those that agree and those that disagree with them about the statement. For the mediating variables, anger and disgust, each was measured with a single-item measurement adapted from

the Discrete Emotions Questionnaire (Harmon-Jones, 2016), where participants were asked to report to what extent they experienced anger/ disgust towards the viewpoint of the other person while they were discussing. And finally, for conversational receptiveness, three items were adapted from the conversational receptiveness scale of Yeomans et al., (2020), which were reliable with $\alpha = 0.712$. The items were: "On this issue, my partner seems like a person who values interactions with people who hold strong views opposite to their own", "On this issue, my partner seems generally curious to find out why other people have different opinions than they do.", and "My partner seems to feel that this issue is just not up for debate". The last item was reverse coded.

Assumptions

To begin with data analysis, we checked for the assumptions of multiple linear regression, namely, independence, linearity, homoscedasticity and multicollinearity. Two outliers were identified, but they were deemed to be "true" outliers and not influential, and were not removed from further analysis. To test for independence of residuals, the Durbin-Watson test was employed, and the resulting value was 2.006, indicating no violation of the assumption.

To assess normality, the Shapiro-Wilks test was conducted, which yielded a score of $p=0.06$, indicating no major violation of normality. Furthermore, to assess linearity, normality and homoscedasticity, graphical checks were conducted, which are located in the appendix. A scatter plot was created between the unstandardized and standardized residuals, and a P-P plot and a histogram were created. There seems to be no major violation of these assumptions, as residuals seem to follow a straight line and there are no clear patterns in the scatterplot. To check for multicollinearity, the Variance Inflation Factor (VIF) and the tolerance factor were computed,

and there seems to be no significant violation of the multicollinearity assumption as all values fell within the acceptable range of VIF<4. Our values were as follows:(Disgust, Tolerance =.596, *VIF*=1.67; Anger, Tolerance=.578, *VIF*=1.73; Morality, Tolerance=.904, *VIF*=1.10; Receptiveness, Tolerance=.991, *VIF*=1.10). Additionally, our preliminary analysis included descriptive statistics and a closer inspection of the associations between our variables, via a Pearson correlation matrix. Unexpectedly, we find receptiveness to not be significantly correlated with any of the other variables. The specific values are included in Table 1 below.

Table 1

Descriptive statistics and correlations

	Agree		Disagree		1	2	3	4	5
	M	SD	M	SD					
1 Morality	3.92	1.40	4.61	1.44	–	.38*	.25**	.30**	.002
2 Afpol	32.2	28.2	39.6	25.6		–	.273**	.230**	.003
3 Disgust	2.60	1.45	2.9	1.66			–	.632**	-.002
4 Anger	3.61	1.54	3.53	1.83				–	-.004
5 Recept	3.47	0.81	3.66	0.78					–

Note: *p < .05; ** < .01 (two-tailed significance)

Results

To examine the hypotheses, we employed models 7 and 4 from the PROCESS macro platform (Hayes, 2013) on SPSS. For all following analyses, we yielded 5000 bootstrapping samples, with confidence intervals set at 95%. The pathways of the model are represented in Figure 2.

Moralized attitudes

We used model 7 to investigate the relationship between moralized attitudes (IV) and affective polarization (DV), which we inferred from the complete model that included anger (M1), disgust (M2) and condition (W). Moralized attitudes had a direct, positive and large effect on levels of affective polarization, with (B=6.15, t=4.33, p<.001, LLCI=3.34, ULCI=8.96). This effect seems to not be significantly dependent on the condition, as the confidence intervals for the interaction term for condition and moralization includes zero (B=-0.057, LLCI=-0.65, ULCI=0.87). Thus, we find support for our first hypothesis, moralized attitudes are associated with higher levels of affective polarization, regardless of the condition.

Mediation analysis

To investigate whether anger and/or disgust might serve as mediators in the relationship between moralized attitudes and affective polarization, we used model 4, with moralized attitudes as IV, affective polarization as DV, anger as M1, and disgust as M2.

Anger

Moralized attitudes had a significant direct effect on levels of anger (B=.339, t=3.72, p=<.001, LLCI= .159, ULCI= .520), but anger did not have a significant direct effect on affective polarization (B=2.08, t=1.437, p=0.15, LLCI=-0.78 ULCI=4.98). Furthermore, we found no indication for the mediating role of anger whereby moralized attitudes would predict affective

polarization through the experience of anger (B= 0.7, LLCI= -0.24, ULCI= 1.92), as the confidence interval includes zero. We thus reject the hypothesis that anger would serve as a mediator between moralized attitudes and affective polarization.

Disgust

Moralized attitudes significantly predicted disgust with (B=0.26, t=3.05, p=0.002, LLCI=0.92, ULCI=0.43). A significant direct effect of disgust on affective polarization was also found (B=3.35, t=2.35, p=0.0197, LLCI=0.54, ULCI=6.16). Furthermore, the indirect effect whereby moralized attitudes would influence affective polarization through disgust, was also found significant with (B=0.88, LLCI=0.638, ULCI=1.93). This mediation is partial, rather than complete, as the direct effect of moralized attitudes on affective polarization was observed to be significant even with the mediator present (B=6.2, t=4.38, p<.001, LLCI=3.44, ULCI=8.97). So, we find partial confirmation for our second hypothesis, whereby moralized attitudes influence affective polarization through disgust, but not through anger.

Anger and disgust moderated by condition

We used model 7 with moralized attitudes (IV), anger (M1), disgust (M2), and condition as a moderator (W), to examine whether the mediating effect of anger[3]/disgust on affective polarization would depend on the condition. There is no direct significant effect of condition on anger (B=-0.29, t=-0.33, p=0.74, LLCI=-2.04, ULCI=1.45), nor for disgust (B=-0.19, t=1.07, p=0.234, LLCI=-0.78, ULCI=2.63). There is no evidence of moderating effect of condition on the mediation of anger of (B=-0.05, LLCI=-0.65, ULCI=-0.87). Similarly, the mediation of disgust is also not moderated by condition (B=-0.61, LLCI=-2.62, ULCI=0.45). Thus we reject

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[3] *While anger is not a mediator in our model, we will still include it in further analysis for exploratory purposes*

the hypothesis that the condition would moderate the mediating effects of anger and disgust, as indirect effects of moralized attitudes on affective polarization through anger and disgust did not vary significantly depending on the condition the participant was in. The specific values can be inspected in Table 2 below.
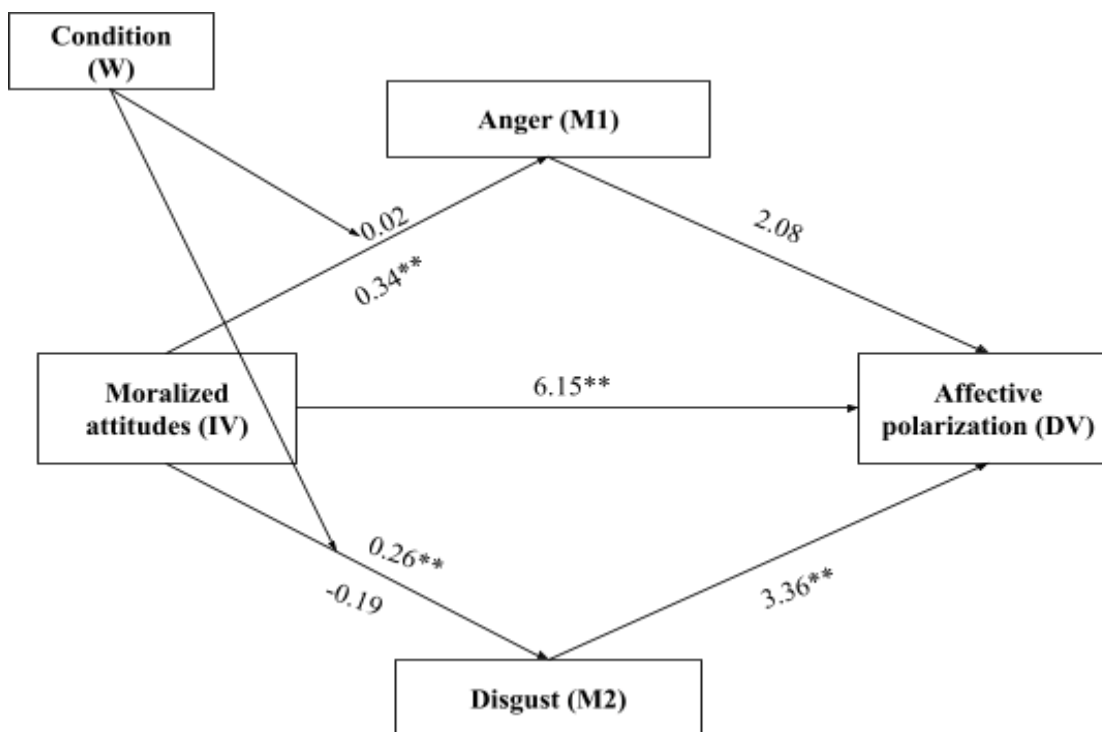
Table 2

Conditional indirect effects of moralized attitudes on affective polarization through anger/disgust, depending on the condition

	Agree				Disagree			
	Indirect effect	SE	LLCI	ULCI	Indirect effect	SE	LLCI	ULCI
Anger	0.11	0.69	-1.29	1.52	0.15	0.70	-1.17	1.78
Disgust	0.46	0.53	-0.54	1.64	1.08	0.74	-0.15	2.47

Figure 2

The moderated mediation model

Receptiveness as a moderator

Finally, to investigate the last hypothesis, we used model 7 with moralized attitudes (IV)

affective polarization (DV), anger (M1) and disgust (M2), and receptiveness as a moderator (W)

We only inspected the data set for the disagreement condition for this analysis ($n=59$). There is

no direct effect of receptiveness on anger ($B=0.11$, $t=0.47$, $p=0.63$, LLCI=-0.36, ULCI=0.59),

and no indirect effect for receptiveness moderating the mediation of anger ($B=-0.27$, LLCI=-

1.91, ULCI=1.36). Receptiveness also does not have a direct effect on disgust ($B=0.23$, $t=0.84$,

$p=0.401$, LLCI=-0.31, ULCI=0.77), and it does not moderate the mediation effect of disgust

($B=1.66$, LLCI=-1.34, ULCI=5.29).

Despite the statistical insignificance of this moderation, the size of the moderating effect of

conversational receptiveness on the mediation of anger and disgust does appear to vary at

different levels of conversational receptiveness, with higher levels of receptiveness being related

to stronger effects. Specific values at different levels of conversational receptiveness can be

viewed in Table 3 below.

Table 3

Conditional indirect effects of moralized attitudes on affective polarization through anger/disgust at different levels of conversational receptiveness

Mediator	Moderator (receptiveness)	Indirect effect	SE	LLCI	ULCI
Anger	Low	-0.59	1.03	-2.87	1.40
	Medium	-0.81	1.00	-2.74	1.35
	High	-1.02	1.29	-3.54	1.81
Disgust	Low	-0.32	1.633	-3.70	2.89
	Medium	0.97	1.05	-1.03	3.18
	High	2.27	1.77	-0.77	6.17

Note: low levels refer to -1SD below the mean, medium is the mean, high levels refer to +1SD

above the mean.

Discussion

In this study, we explored the relationship between moralized attitudes and affective

polarization and specifically how anger, disgust and conversational receptiveness influence this

relationship in the context of a conversation with either a disagreeing or an agreeing partner.

Whilst most research on affective polarization has focused on social identity theory (Iyengar et

al., 2019), our study was focused on exploring the avenue of research that has received far less

attention: the role of moralized attitudes on affective polarization. We hypothesized that moralized attitudes would predict higher levels of affective polarization, regardless of whether participants discussed with someone who agrees or disagrees. We further drew from research on moral psychology that shows that moralized attitudes can incite anger and disgust (Wineski et al., 2020; Brandt et al., 2015) in the context of disagreeing conversations, and they also have been shown to drive affective polarization (Parsons, 2009). We hypothesized that the presence of these emotions might serve as a mediating link in the relationship between moralized attitudes and affective polarization. Finally, we wanted to expand on the line of research that suggests that even in conversations characterized by disagreement and negative emotions, conversational diplomacy behaviors, specifically, conversational receptiveness, might have a mitigating effect on anger and disgust (Nguyen & Fussell, 2015), and thus be indirectly associated with lower levels of affective polarization.

Our findings support our first hypothesis, as moralized attitudes were found to be significantly related to higher levels of affective polarization, and this occurred regardless of whether participants were in a disagreeing or agreeing conversation. Our second hypothesis finds partial confirmation: disgust was shown to mediate the relationship between moralized attitudes and affective polarization, but no similar role was found for anger. We also did not find support for the moderating role of condition; the mediating effect of anger/disgust did not vary significantly depending on the condition in which the participant was in. Finally, we also did not find support for our last hypothesis, whereby in the disagreement condition, conversational receptiveness would moderate the effects of anger and disgust on affective polarization.

Theoretical Implications

Our findings complement previous research in the field of attitude moralization and affective polarization. Whereas previous research has found evidence for how attitudes become moralized in polarized contexts (D'Amore et al., 2021), and how moralized framing of political issues heightens partisan divides (Simonsen & Bonikowski, 2022), our study offers some new insight into this topic by explicitly linking existing moralized attitudes with higher levels of affective polarization. Furthermore, while our study by no means contradicts prevailing theories on how affective polarization is rooted in social identity (Iyengar et al., 2019) and ideological divides (Webster & Abramowitz, 2017), it does offer further support for the rather novel view that suggests moral conviction serves as a powerful predictor of affective polarization.

Our study also supports the view that in addition to facilitating attitude moralization, which has been well evidenced in research (Skitka & Morgan, 2014), disgust and anger can also emerge as a function of it. Moreover, our study offers further support for the view that disgust, compared with anger, is a stronger predictor of interpersonal outcomes (Rozin et al., 1999), and as our study showed it to be a direct predictor of affective polarization as well, this offers some initial support that while studies on affective polarization and negative emotions have focused mostly on anger, disgust might be a more insightful emotion to inspect further.

Furthermore, much previous research has investigated these relationships by inducing feelings of anger and disgust in experimental settings, by for example, showing disgusting images and then measuring polarization/ moralization (Wineski et al., 2020). Our study explored these variables in a more ecologically valid way, as emotions that naturally occur towards the

viewpoint of someone else during a conversation regarding a polarizing statement. This setting, in our view, reflects a scenario that finds echoes in many real-life situations.

Practical implications

Beyond theoretical implications, our findings can be of interest to different real-life contexts as well. Affective polarization has increasingly become a part of the political and social landscape in the Netherlands and beyond (Iyengar et al.,2019; Harteveld, 2021), and our findings indicate that the understanding of affective polarization should not be separated from the moral standpoints of individuals. One need not look far for contexts and situations in which questions of morality and polarization seem to be intrinsically intertwined; discussions regarding the current wars in Ukraine and Gaza, climate change, and immigration are only some examples of topics where fundamental differences of what individuals consider to be right and wrong can be drawn from to understand outgroup hostility and increasing divides among partisans. Our findings are grounded in an experiment that we believe closely reflects situations that many people might have to navigate in day-to-day life. Highlighting differences in moral conviction might provide a fruitful ground to draw from to induce feelings of dislike and distance towards outgroup members, and this is something that we should be mindful of, in everyday conversations as well as political debates.

Limitations and Future Directions

While we hope that our research provides some valuable insight into the study of polarization, it is not without its caveats. Some of these caveats pertain to the study design. More participants disagreed with the conversation statement than we expected, which we consider might be due to the phrasing of our statement. We might have yielded different results, had the statement been

formulated conversely i.e., "The Netherlands should not take in more refugees than it currently does". Furthermore, we did not inform participants in advance whether they were going to discuss with someone who agrees or disagrees with them, and initial explorative analysis into the contents of the conversations revealed that even amongst disagreeing participants, participants sometimes ended up agreeing. Making different group memberships salient has been shown to facilitate the experience of negative emotions in intergroup interactions (Mackie & Smith, 2018), and not making opinion differences known to participants might partially explain why we did not find significantly different results for the experience of anger and disgust depending on the condition.

In addition, while we don`t consider the online environment of our study to be a limitation in and of itself, it might have challenged the measurement of our moderating variable, conversational receptiveness. Previous research (see for example, Roos et al., 2021) has identified receptiveness among other conversational diplomacy behaviors as being limited in online discussions compared with face-to-face interactions. Thus, it might have been more challenging for our participants to signal and perceive conversational receptiveness in the computer mediated environment, which could partly explain the insignificant findings for conversational receptiveness in our model. A future study might investigate our model in a face-to-face environment to explore this.

Conclusion

In the societal and political landscape of an increasingly polarized world it remains essential to explore the mechanisms by which simple, beneficial forms of disagreement transform into dislike and even hostility and animosity towards those who disagree with you - affective

polarization. Previous work has focused on the role of social identity and ideology as major forces behind the emergence of affective polarization, and while our research by no means disconfirms these theories, it does provide insight into an important novel avenue through which to look at the emergence of affective polarization - moralized attitudes. As particularly strong, unyielding attitudes, they hold both promise and risk for political and social outcomes. While they can facilitate engagement in political discussion, they can, as we have shown in our study, also incite strong negative emotions such as disgust towards the viewpoints of others and exacerbate affective polarization, and thus their role in influencing the course of everyday interactions amongst different groups need to be carefully considered.

References

American Psychological Association. (n.d.). Apa style. American Psychological Association.

> https://apastyle.apa.org/

Bail, C. A., Argyle, L., Brown, T., Bumpus, J., Chen, H., Hunzaker, M. B. F., Lee, J., Mann, M.,

> Merhout, F., & Volfovsky, A. (2018). Exposure to Opposing Views Can Increase

> Political

> Polarization: Evidence from a Large-Scale Field Experiment on Social Media.

> https://doi.org/10.31235/osf.io/4ygux

Brandt, M. J., Wisneski, D. C., & Skitka, L. J. (2015). Moralization and the 2012 U.S.

> presidential election campaign. Journal of Social and Political Psychology, 3, 211-237.

> https://doi.org/10.5964/jspp.v3i2.434

Brenner, C. J., & Inbar, Y. (2014). Disgust sensitivity predicts political ideology and policy

> attitudes in the Netherlands. European Journal of Social Psychology, 45(1), 27–38.

> https://doi.org/10.1002/ejsp.2072

Buckels, E. E., & Trapnell, P. D. (2013). Disgust facilitates outgroup dehumanization. Group

> Processes & Intergroup Relations, 16(6), 771–780.

> https://doi.org/10.1177/1368430212471738

Caluwaerts, D., & Reuchamps, M. (2014). Does Inter-Group Deliberation foster inter-group

> appreciation? evidence from two experiments in Belgium. Politics, 34(2), 101–115.

> https://doi.org/10.1111/1467-9256.12043

Cassese, E. C. (2019). Partisan dehumanization in American politics. Political Behavior, 43(1), 29–50. https://doi.org/10.1007/s11109-019-09545-w

Clement, L. M., & Bradley-Garcia, M. (2022). A step-by-step tutorial for performing a moderated mediation analysis using process. The Quantitative Methods for Psychology, 18(3), 258–271. doi:10.20982/tqmp.18.3.p258

Clifford, S. (2018). How emotional frames moralize and polarize political attitudes. Political Psychology, 40(1), 75–91. https://doi.org/10.1111/pops.12507

D'Amore, C., van Zomeren, M., & Koudenburg, N. (2021). Attitude moralization within polarized contexts: An emotional value-protective response to dyadic harm cues. Personality and Social Psychology Bulletin, 48(11), 1566–1579. https://doi.org/10.1177/01461672211047375

de Jong, J. F. (2024). Cross-partisan discussions reduced political polarization between UK voters, but less so when they disagreed. *Communications Psychology*, *2*(1). https://doi.org/10.1038/s44271-023-00051-8

Enders, A. M., & Lupton, R. N. (2020). Value Extremity contributes to affective polarization in the US. *Political Science Research and Methods*, *9*(4), 857–866. https://doi.org/10.1017/psrm.2020.27

Garrett, K. N., & Bankert, A. (2018). The moral roots of Partisan Division: How moral conviction heightens affective polarization. British Journal of Political Science, 50(2), 621–640. https://doi.org/10.1017/s000712341700059x

Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral

    judgment. Psychological Review, 108(4), 814–834. https://doi.org/10.1037/0033-

    295X.108.4.814

Halevy, N., Kreps, T. A., Weisel, O., & Goldenberg, A. (2015). Morality in intergroup conflict.

    Current Opinion in Psychology, 6, 10–14. https://doi.org/10.1016/j.copsyc.2015.03.006

Harel, T. O., Jameson, J. K., & Maoz, I. (2020b). The normalization of hatred: Identity, affective

    polarization, and dehumanization on Facebook in the context of intractable political

    conflict. Social Media + Society, 6(2), 205630512091398.

    https://doi.org/10.1177/2056305120913983

Harmon-Jones, C., Bastian, B., & Harmon-Jones, E. (2016). The Discrete Emotions

    Questionnaire: A new tool for measuring state self-reported emotions. PLOS ONE, 11(8).

    https://doi.org/10.1371/journal.pone.0159915

Harteveld, E. (2021). Fragmented foes: Affective polarization in the multiparty context of the

    Netherlands. Electoral Studies, 71, 102332.

    https://doi.org/10.1016/j.electstud.2021.102332

Hartman, R., Hester, N., & Gray, K. (2022). People see political opponents as more stupid than

    evil. Personality and Social Psychology Bulletin, 49(7), 1014–1027.

    https://doi.org/10.1177/01461672221089451

Hayes, A. F. (2013). Process macro for SPSS, SAS, and R. The PROCESS macro for SPSS,

    SAS, and R. https://www.processmacro.org/index.html

Hodson, G., & Costello, K. (2007). Interpersonal disgust, ideological orientations, and

dehumanization as predictors of intergroup attitudes. Psychological Science, 18(8),

691–698. https://doi.org/10.1111/j.1467-9280.2007.01962.x

Huber, M., Van Boven, L., Park, B., & Pizzi, W. T. (2015). Seeing red: Anger increases how

much Republican identification predicts partisan attitudes and perceived polarization.

PLOS ONE, 10(9). https://doi.org/10.1371/journal.pone.0139193

Hwang, H., Kim, Y., & Kim, Y. (2016). Influence of discussion incivility on deliberation: An

examination of the mediating role of moral indignation. *Communication Research*, *45*(2),

213–240. https://doi.org/10.1177/0093650215616861

Itzchakov, G., Weinstein, N., & Leary, M. (2023). Listening to Understand: The Role of

High-Quality Listening on Speakers' Attitude Depolarization During Disagreements.

Journal of Personality and Social Psychology. https://doi.org/10.1037/pspa0000366

Iyengar, S., Lelkes, Y., Levendusky, M., Malhotra, N., & Westwood, S. J. (2019). The origins

and consequences of affective polarization in the United States. Annual Review of

Political Science, 22(1), 129–146. https://doi.org/10.1146/annurev-polisci-051117-

073034

Koudenburg, N., & Kashima, Y. (2021). A polarized discourse: Effects of opinion differentiation

and structural differentiation on communication. Personality and Social Psychology

Bulletin, 48(7), 1068–1086. https://doi.org/10.1177/01461672211030816

Kovacheff, C., Schwartz, S., Inbar, Y., & Feinberg, M. (2018). The problem with morality:

Impeding progress and increasing divides. Social Issues and Policy Review, 12(1),

218–257. https://doi.org/10.1111/sipr.12045

Lu, Y., & Lee, J. K. (2018). Partisan information sources and affective polarization: Panel

Analysis of the mediating role of anger and fear. Journalism & Mass

Communication Quarterly, 96(3), 767–783. https://doi.org/10.1177/1077699018811295

MacKuen, M., Wolak, J., Keele, L., & Marcus, G. E. (2010). Civic engagements: Resolute

partisanship or reflective deliberation. *American Journal of Political Science*, *54*(2),

440–458. https://doi.org/10.1111/j.1540-5907.2010.00440.x

Minson, J. A., & Chen, F. S. (2021). Receptiveness to opposing views: Conceptualization and

Integrative Review. Personality and Social Psychology Review, 26(2), 93–111.

https://doi.org/10.1177/10888683211061037

Nguyen, C. G., Mayer, S. J., & Veit, S. (2022). The impact of emotions on polarization. Anger

polarizes attitudes towards vaccine mandates and increases affective polarization.

Research & Politics, 9(3), 205316802211165.

https://doi.org/10.1177/20531680221116571

Nguyen, D. T., & Fussell, S. R. (2015). Effects of conversational involvement cues on

understanding and emotions in instant messaging conversations. Journal of Language and

Social Psychology, 35(1), 28–55. https://doi.org/10.1177/0261927x15571538

Parsons, B. M. (2009). Social networks and the affective impact of political disagreement.

Political Behavior, *32*(2), 181–204. https://doi.org/10.1007/s11109-009-9100-6

Renström, E. A., Bäck, H., & Carroll, R. (2023). Threats, emotions, and affective polarization.

Political Psychology. https://doi.org/10.1111/pops.12899

Rogowski, J. C., & Sutherland, J. L. (2015). How ideology fuels affective polarization. Political Behavior, 38(2), 485–508. https://doi.org/10.1007/s11109-015-9323-7

Roos, C. A., Koudenburg, N., & Postmes, T. (2021). Dealing with disagreement: The depolarizing effects of everyday diplomatic skills face-to-face and online. New Media & Society, 24(9), 2153–2176. https://doi.org/10.1177/1461444821993042

Rozin, P., Haidt, J., & McCauley, C. R. (1999). Disgust: The body and soul emotion. Handbook of Cognition and Emotion, 429–445. https://doi.org/10.1002/0470013494.ch21

Rozin, P. (1999). The process of moralization. Psychological Science, 10(3), 218-221. https://doi.org/10.1111/1467-9280.00139.

Rudolph, T. J., & Hetherington, M. J. (2021). Affective polarization in political and nonpolitical settings. *International Journal of Public Opinion Research*, *33*(3), 591–606. https://doi.org/10.1093/ijpor/edaa040

Ryan, T. J. (2014). Reconsidering moral issues in politics. The Journal of Politics, 76(2), 380–397. https://doi.org/10.1017/s0022381613001357

Ryan, T. J. (2016). No compromise: Political consequences of moralized attitudes. *American Journal of Political Science*, *61*(2), 409–423. https://doi.org/10.1111/ajps.12248

Santoro, E., & Broockman, D. E. (2022). The promise and pitfalls of cross-partisan conversations for reducing affective polarization: Evidence from randomized experiments. Science Advances, 8(25). https://doi.org/10.1126/sciadv.abn5515

Simonsen, K. B., & Bonikowski, B. (2022). Moralizing immigration: Political framing, moral conviction, and polarization in the United States and Denmark. Comparative Political Studies, 55(8), 1403–1436. https://doi.org/10.1177/00104140211060284

Skitka, L. J. (2010). The psychology of moral conviction. Social and Personality Psychology Compass, 4(4), 267–281. https://doi.org/10.1111/j.1751-9004.2010.00254.x

Skitka, L. J., & Morgan, G. S. (2014). The social and political implications of moral conviction. Political Psychology, 35(S1), 95–110. https://doi.org/10.1111/pops.12166

Strohminger, N., & Nichols, S. (2014). The essential moral self. Cognition, 131(1), 159–171. https://doi.org/10.1016/j.cognition.2013.12.005

Stromer-Galley, J., & Muhlberger, P. (2009). Agreement and disagreement in group deliberation: Effects on deliberation satisfaction, future engagement, and decision legitimacy. Political Communication. https://www.tandfonline.com/doi/full/10.1080/10584600902850775

Tappin, B. M., & McKay, R. T. (2019). Moral polarization and out-party hostility in the US political context. Journal of Social and Political Psychology, 7(1), 213–245. https://doi.org/10.5964/jspp.v7i1.1090

Valentino, N. A., Gregorowicz, K., & Groenendyk, E. W. (2008). Efficacy, emotions and the habit of participation. Political Behavior, 31(3), 307–330. https://doi.org/10.1007/s11109-008-9076-7

Webster, S. W., Connors, E. C., & Sinclair, B. (2022). The social consequences of political anger.

The Journal of Politics, 84(3), 1292–1305. https://doi.org/10.1086/718979

Wisneski, D. C., & Skitka, L. J. (2017). Moralization through moral shock: Exploring emotional

antecedents to moral conviction. Personality and Social Psychology Bulletin, 43(2),
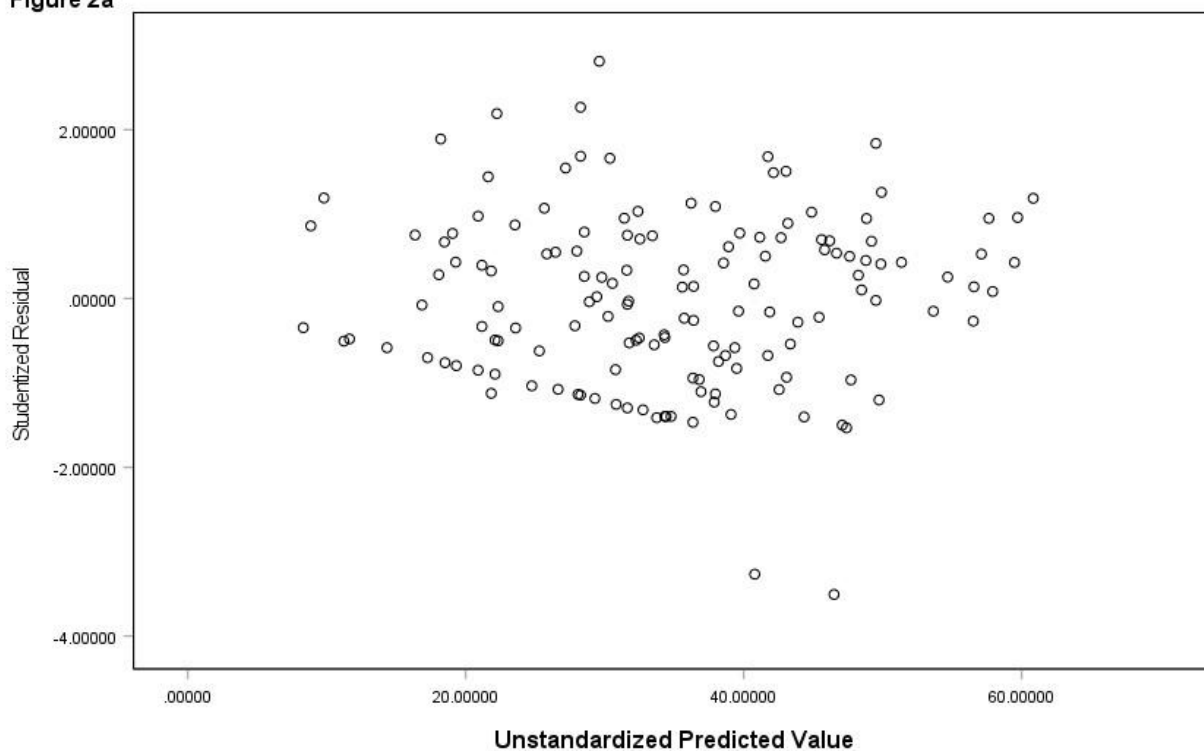
139–150. https://doi.org/10.1177/0146167216676479

Yeomans, M., Minson, J., Collins, H., Chen, F., & Gino, F. (2020). Conversational receptiveness:

Improving engagement with opposing views. Organizational Behavior and Human

Decision Processes, 160, 131–148. https://doi.org/10.1016/j.obhdp.2020.03.011

Appendix

Figure 2a

Histogram

Dependent Variable: affect pol_

Mean = 1.08E-16
Std. Dev. = 0.986
N = 146

Regression Standardized Residual

Normal P-P Plot of Regression Standardized Residual

Dependent Variable: affect pol_

Observed Cum Prob
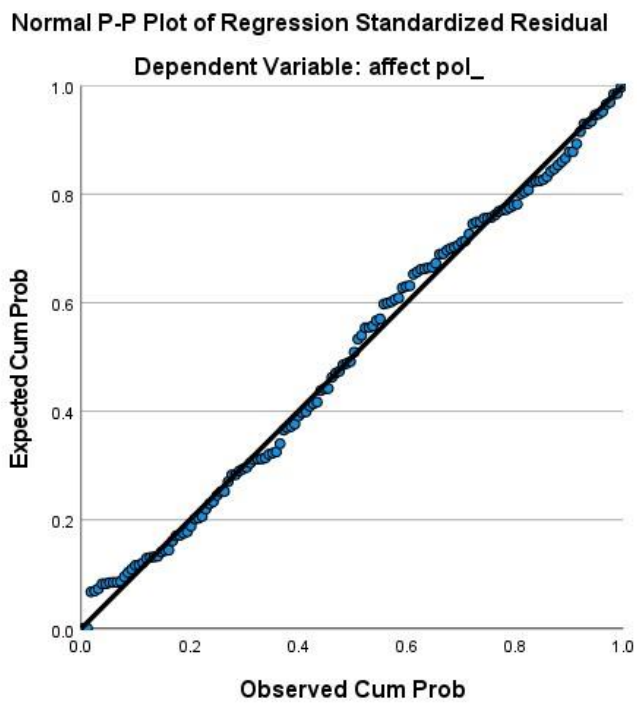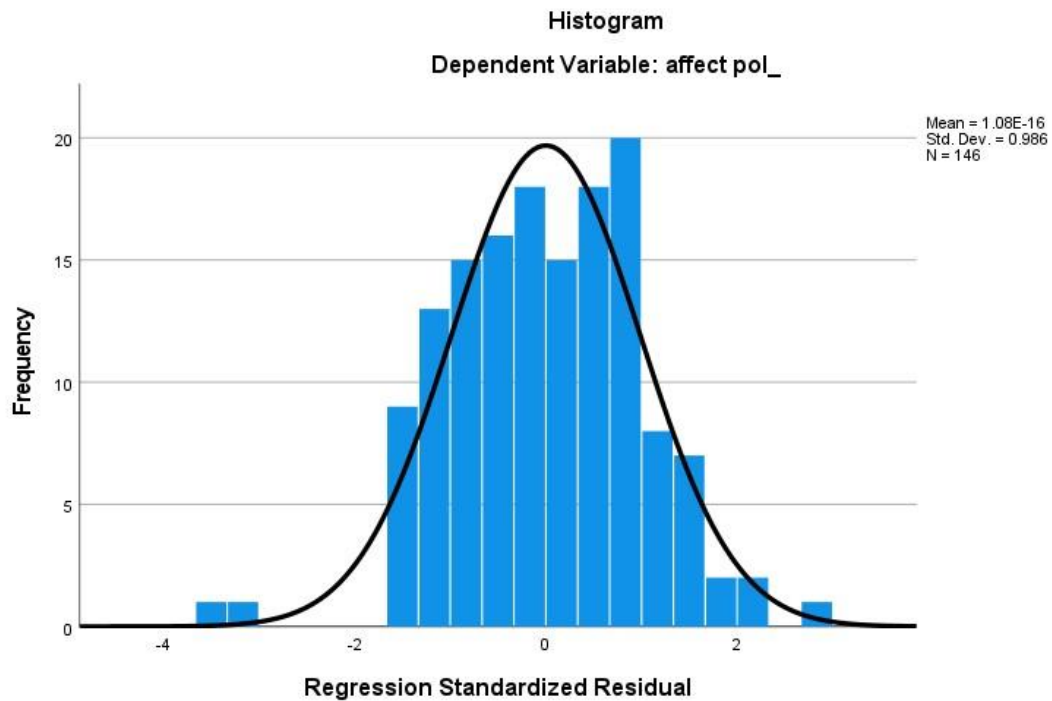
Frequencies for Conditions

Agree/Agree vs Disagree/Disagree