









Enhancing National Identity Reduces Affective Polarization and Increases Political Tolerance

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Abstract: While knowledge about the consequences of affective polarization is robust, less is known about how to reverse this process, and the current paper aims to provide such an evidence-based explanation. We hypothesized that referring to the positive aspects of the common national identity may reduce affective polarization and increase political tolerance. We have conducted one cross-sectional ($N = 799$) and one experimental ($N = 827$) studies. The results revealed that only authentic, but not narcissistic, national identity was related to desirable outcomes (i.e., lower affective polarization and higher political tolerance). Furthermore, experimentally induced authentic national identity increased political tolerance and decreased affective polarization. We provide a framework on how to address affective polarization and political tolerance between political adversaries.

Keywords: common national identity, authentic national identity, affective polarization

Recent years brought significant geopolitical challenges, such as the COVID-19 pandemic, the Russian invasion on Ukraine, or the Israeli–Palestinian conflict. These geopolitical events and associated processes have raised concerns about threats to democracy (Carey et al., 2019). Thus, countering the harmful effects of negative attitudes (such as affective polarization) on one hand, while promoting positive attitudes (such as political tolerance) on the other is a socially important and timely relevant research task. At the same time, understanding how processes that contribute to democratic backsliding emerge and evolve requires looking beyond their surface-level expressions. Polarization, extremism, and populism are not spontaneous reactions to external crises, but rather unfold through dynamic interactions between sociopolitical events and underlying psychological processes. Leadership and public discourse play a catalytic role in this interplay, shaping how individuals interpret and respond to uncertainty or threat. Recent work adopting a social identity approach to crisis leadership shows that when leaders emphasize inclusive, superordinate group memberships – such as national belonging rooted in shared values and solidarity – they are more likely to foster unity

and resilience across group boundaries (Gleibs, 2025). This form of leadership promotes the belief that citizens are part of a shared effort and can act collectively, which enhances perceived efficacy and strengthens the sense of belonging and shared purpose (Haslam et al., 2021). Rather than treating individuals as passive recipients of top-down decisions, identity leadership frames them as engaged contributors working toward a common objective, which can help mobilize collective action (Haslam et al., 2021). In contrast, leadership that draws on narratives of perceived in-group disadvantage or external betrayal may activate defensive forms of identification, such as collective narcissism, which has been shown to intensify polarization (Marchlewska et al., 2025). In other words, political attitudes are not merely shaped by external events but are interpreted through psychological motives related to belonging. Thus, in this paper, we explore national identity as one of the psychological frameworks through which political conflict is experienced and managed. We also assume that national identity is not a uniform construct, and its impact depends on the form it takes (Cichocka, 2016). While some expressions of national identity may facilitate cohesion, tolerance, and resilience

in the face of political division, others may intensify conflict by amplifying perceived threats and intergroup hostility.

National Identity

Historically, national identity was considered to be simultaneously related to favoritism of the in-groups as well as to discrimination of the out-groups (Fromm, 1973; Tajfel & Turner, 1986). Modern approaches to national identity, however, differentiate between secure and nonsecure in-group identity (Cichocka, 2016; de Zavala et al., 2009; Marchlewska et al., 2022). Secure identity is related to a range of positive concomitants. For instance, those scoring high on secure identity also report more altruistic behaviors toward other members of their in-group, which is associated with simultaneous experiencing of lesser malicious envy toward these (Maciantowicz et al., 2024). In a similar vein, Molenda et al. (2023) found that such individuals are focused on managing the emotions of others mostly through prosocial approaches and are less willing to conspire against their in-group. Such results may potentially result from the fact that those who are securely identified with their nation also tend to have more secure attachment patterns in general, which may ease their overall adjusted functioning within the intergroup contexts (Marchlewska et al., 2022). In turn, the nonsecure identity is related not only to hostility toward out-groups but also to paradoxical feelings toward the in-group itself, which are underpinned by the fear of abandonment on one hand and eagerness to leave the in-group for personal benefits on the other (Cichocka, 2016; de Zavala et al., 2009; Marchlewska et al., 2020, 2022; Molenda et al., 2023). These two different approaches to national identity could be also interpreted in terms of authentic versus narcissistic national identity (R. Rogoza et al., in press). Whereas authentic identity may be seen as a genuine commitment to the nation (which is expressed in positive attitudes toward own nation as well as favorable perceptions of the out-groups), narcissistic identity might be considered a superficial threat-based commitment, expressed as a belief in the in-group's greatness, accompanied by a conviction that this group is not sufficiently appreciated by others, and thus, requires recognition (Marchlewska et al., 2020).

This approach build upon the theory of collective narcissism (Cichocka, 2016; de Zavala et al., 2009), solving some of its underlying challenges and empirical inconsistencies. For example, to conclude about the correlates of collective narcissism, researchers are forced to partial out its shared variance with in-group identity as otherwise, the zero-order relations differ from those found in

regression-based models (e.g., Biddlestone et al., 2022; Cichocka et al., 2016; Cislak et al., 2021; Marchlewska et al., 2022). As such, collective narcissism, as currently measured, may be considered as a blend of authentic and narcissistic identity as only after accounting for in-group identity it reproduces its opportunistic and superficial character (Biddlestone et al., 2022; R. Rogoza et al., in press). As such, authentic and narcissistic identity may be understood as conceptually the same construct as secure in-group identity and collective narcissism, however, without the necessity to partial out their shared variance. In line with some scholars (e.g., Górska et al., 2020), we treat authentic identity and narcissistic as distinct, although sometimes negatively correlated, constructs rather than opposite ends of a single continuum. While we rely on this distinction (Cichocka, 2016; Marchlewska et al., 2025), we also acknowledge ongoing theoretical debate over whether it fully captures the complexity of national identification. For example, some scholars suggest that national pride may contain both secure and defensive elements. Still, the authentic-narcissistic distinction remains a useful framework for capturing meaningful psychological differences (e.g., de Zavala et al., 2009; R. Rogoza et al., in press) and forms the basis for our current investigation. Narcissistic identity, in particular, may serve an existential function by defensively compensating for perceived threats – yet in doing so, it may fuel hostility and hinder social cohesion (Sullivan et al., 2010).

Perceptions of the Political Adversaries

Similarly to other types of group identification, in the context of ideologies and political parties, people may identify with certain ideologies and exhibit aversion toward outgroups and favoritism toward ingroup (Garzón-Velandia et al., 2024). Emotional divide between groups is marked by hostility and distrust based on group membership rather than personal traits (Iyengar et al., 2012). Most of the existing research focuses on evaluating the level of hostility across party lines, which is frequently referred to as affective polarization (Druckman & Levendusky, 2019). Affective polarization is not necessarily balanced; its manifestations often depend on the political context and may be asymmetric, particularly in multiparty systems with multiple parties of varying size and influence (Wagner, 2021). Affective polarization differs from ideological polarization by the fact it regards emotional instead of cognitive processes, and as a result of this, affective polarization may lead to hostility regardless of actual policy disagreement. Although affective polarization was initially introduced to describe the processes occurring between supporters of the Democrats and

Republicans in the USA (Finkel et al., 2020; Iyengar et al., 2012), it is also prevalent in other countries. For instance, affective polarization in some European countries, especially those from Central (e.g., Poland) and Southern (e.g., Greece) Europe is higher as compared to USA, while those in Northwestern Europe (e.g., the Netherlands) is lower (Reiljan, 2020; Turner-Zwinkels et al., 2025). Affective polarization could manifest itself in trivial behaviors, such as avoiding interactions with out-partisans (Lelkes, 2016), but also in a socially harmful manner, such as outright discrimination (Harteveld et al., 2022) or even support for political violence (Berntzen et al., 2023). Affective polarization is usually captured in the distinction between radical right versus mainstream parties, holds unique and homogenous negative views about out-partisans (Harteveld et al., 2022). Supporters of the radical right parties believe in their own exceptionalism, which is driven by nativism and right-wing populism, and leads to high levels of antipathy toward out-partisans (Gidron et al., 2019; Harteveld et al., 2022). Unsurprisingly, support for right-wing policies has been found to be positively related to narcissistic national identity, which is also underpinned by feelings of the unparalleled greatness (de Zavala et al., 2009; Marchlewska et al., 2022). Affective polarization undermines support for basic democratic principles such as constitutional protections and political tolerance and thus, could be considered a negative and destructive attitude (Kingzette et al., 2021).

These results, although attracting much more empirical attention, describe only one side of the coin regarding how out-partisans are perceived. The other side regards support for political voice and equality, including the rights to vote, express opinion, and protest (Carey et al., 2019). This positive attitude, which is referred to as political tolerance, assumes that all citizens, including political adversaries, deserve equal rights (Kingzette et al., 2021). Political tolerance plays a central role in the civic orientation and is considered a necessary condition for a thriving and successful democracy (Sullivan et al., 2010). In this vein, political tolerance may also be related to secure national identity, which has been found to be linked to empathy toward marginalized groups, more positive out-group attitudes, and support for democracy (Górska et al., 2020; Marchlewska et al., 2020, 2022). Public support for democratic values, including tolerance, reached its maxima at the beginning of the millennium, systematically eroding until today (Peffley & Rohrschneider, 2003). Current democratic societies are far from being tolerant – an investigation of 10 European countries revealed that on average, more than half of the respondents were willing to deny their most disliked group parliamentary representation (Stoempel & Ceka, 2022). As a result, current societies seem to suffer not only from increasing affective

polarization but also from decreasing political tolerance. Given their connections to national identity, within the current paper, we conducted an experimental intervention to assess the degree to which it is possible to simultaneously decrease the negative effects of affective polarization while catalyzing the positive effects of political tolerance by boosting authentic national identity.

How Could National Identity Reduce Affective Polarization and Increase Political Tolerance?

Fortunato and Stevenson (2013) provided robust arguments on how partisans perceived out-partisans forming a joint coalition. They claimed that these perceptions were the result of a simple heuristic model, which takes into account easily available cues about parties, while ignoring those which are not suitable for the heuristic inference – specifically, the heuristic assumes that “voters perceive parties serving together in the cabinet as more ideologically similar than otherwise identical parties that are not serving in cabinet together” (Fortunato et al., 2021, p. 460). As a result, while there might be (and usually are) some ideological differences between the parties forming a coalition, supporters of such jointly governing parties expressed warmer feelings toward each other as compared to the ones that may be based on their policy positions (Fortunato et al., 2021). This is somewhat in contrast to the results suggesting that individuals tend to like their own party more (Turner-Zwinkels et al., 2025), but being a part of a larger community seems to mitigate these effects (Fortunato et al., 2021).

This superficial paradox might be explained in terms of the common in-group identity model (Gaertner et al., 1993), postulating that recategorization from two groups (e.g., political adversaries) to a common in-group identity (e.g., nation) reduces out-group bias. A superordinate identity, incorporating similarities rather than differences between subordinate groups, leads to a greater perceived closeness between members of formerly distinct groups. In this way, recategorization leads to a generalization of in-group favoritism, so that it extends to an out-group. Such recategorization may lead to the feelings of indispensability, which reduce negative attitudes toward out-groups (Fluit et al., 2023; Verkuyten, 2024). Previous research demonstrated that activating common, national identity reduced bias toward immigrant, affective polarization, and perceived threat from political adversaries (Levendusky, 2018).

Within the current work, we stipulate that inducing authentic national identity as a superordinate identity associated with partisan identity evokes the coalition

heuristic and therefore leads to a decrease of affective polarization and an increase of political tolerance. Specifically, we expect that even in polarized and intolerant societies, there are some commonalities that could serve as a basis for initiating interactions between individuals with different political attitudes, because even if ideological differences are inevitable, frequently both parties might want to pursue the same goal – the nation wellbeing. In a similar vein, Turner-Zwinkels et al. (2025) empirically demonstrated that individuals tended to like out-groups (such as political adversaries) more if their belief systems could be considered as similar. Thus, bolstering authentic (but not narcissistic) national identity, which fosters similarity (M. Rogoza et al., 2025), may, evoke similar mechanisms as the recategorization and the coalition heuristic – through the demonstration that even individuals with different political ideologies are members of the same group (i.e., nation), and/which may result in a decrease in affective polarization, as well as an increase in political tolerance (Fortunato et al., 2021; Levendusky, 2018; Turner-Zwinkels et al., 2025).

Current Research

In this research project, we aimed to assess the relationship between different types of national identity (i.e., authentic vs. narcissistic), affective polarization, and political tolerance. For this purpose, we conducted two studies to increase robustness of our results: a cross-sectional Study 1, in which we expected that authentic national identity would be negatively related to affective polarization (Hypothesis 1a, H1a), but positively to political tolerance (Hypothesis 1b, H1b), whereas narcissistic national identity would be positively related to affective polarization (Hypothesis 2a, H2a), but negatively to political tolerance (Hypothesis 1b, H2b); and an experimental Study 2, assessing whether inducing authentic national identity in an experimental condition (vs. control condition) would lead to a decrease in affective polarization (Hypothesis 3a, H3a) and an increase in political tolerance (Hypothesis 3b, H3b). We induced authentic national identity by exposing participants to patriotic statements by well-known public figures who might be considered familiar authorities for the entire nation as such leaders may foster constructing a superordinate group identity (Gleibs, 2025; Haslam et al., 2021). Support of authorities is crucial to reducing intergroup biases (Pettigrew & Tropp, 2006). As authorities in the experimental manipulation emphasized the importance of collaboration or equality among citizens, it may enhance perceived similarity and activate superordinate authentic national identity.

All the analyses reported for both studies were conducted using Mplus v. 8.3 (Muthén & Muthén, 2017), using a robust maximum likelihood estimation procedure (i.e., Mplus MLR). The hypotheses presented within the manuscript were not pre-registered. Data, syntaxes, and supplementary materials are available at the OSF project site: <https://osf.io/sz9en/>.

Study 1

Method

Participants and Procedure

The first study was implemented utilizing a computer-assisted web interview (CAWI) methodology by an external research company also used in other academic studies. This study collected data from a total of 799 adult Polish respondents, comprising 386 women, 412 men, and one respondent of other gender identity, with ages ranging from 18 to 87 years ($M = 47.89$, $SD = 16.02$). The sample was quota-balanced to match Poland's adult population in terms of gender, age, and place of settlement size. The representation was strategically aligned with the latest data from the National Census of Population and Housing, conducted by the Central Statistical Office of Poland (Główny Urząd Statystyczny). The survey was administered in Polish, limiting the respondent pool to those for whom Polish is the native language.

Measures

National Identity

To measure national identity, we used the Complete Identity Scale (CIS, R. Rogoza et al., in press), which captures both authentic (sample item: "Even when things are not going well in Poland, my country is important to me") and narcissistic national identity (sample item: I can only cooperate with those Poles who are like me). Each scale consists of three items (see OSF for the items' content) on which Participants rated their agreement using a seven-point Likert-type response scale ranging from 1 (= *definitely disagree*) to 7 (= *definitely agree*).

Affective Polarization and Political Tolerance

For the purpose of this study, we developed a brief assessment of affective polarization and political tolerance. That is, we asked participants to what extent they agreed with the following statements: "People who support a different party than me do not care about their nation," and "People who support a different party than me do not think about our society's welfare," and "People who

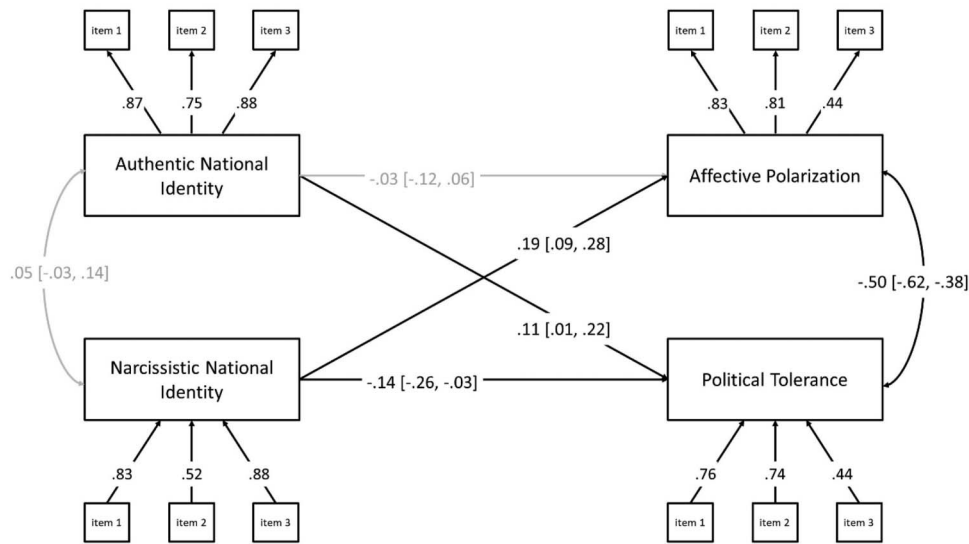


Figure 1. Structural equation model presenting how different types of national identity are related to political polarization and political unification. All results are corroborated by 95% confidence intervals. Grayed arrows reflect nonsignificant effects ($p \geq .05$).

support a different party than me should have limited voting rights” in regard to affective polarization and “People who support a different party than me are valuable members of society,” “People who support a different party than me have our society’s welfare in mind,” and “People who support a different party than me care about their close ones” in regard to political tolerance. Respondents were asked to indicate their level of agreement with each statement using a seven-point Likert scale, ranging from 1 (= *strongly disagree*) to 7 (= *strongly agree*).

Statistical Analyses

To test our expectations, we conducted a full structural equation model (SEM), in which we specified measurement models of authentic and narcissistic national identity, as well as political polarization and political unification. Therefore, all the analyses were carried out on latent variables, which is superior to comparing aggregate scores, because it allows for controlling for the measurement error (Kline, 2013). Within the analyzed model, whose graphical illustration is presented in Figure 1, we regressed political polarization and political unification on both forms of national identity. According to conventional standards, we deemed our model as well-fitted to the data

if the estimate of the Comparative Fit Index (CFI) was > .90, and the estimates of Root Mean Square Error of Approximation (RMSEA) and Standardized Root Mean Residual (SRMR) were < .08 (Byrne, 1994; Schermelleh-Engel et al., 2003).

Results

Descriptive statistics, estimates of internal consistency, and zero-order correlations between the study variables are presented in Table 1. The analyzed SEM model, whose graphical illustration together with the standardized estimates is presented in Figure 1, fitted the data well ($\chi^2_{(48)} = 242.71, p < .001, CFI = .916, RMSEA = .071 [90\% CI .062, .080], SRMR = .063$). The measurement part of the model yielded indices with acceptable strength (i.e., the strength of all factor loadings was > .30), thus, it could be assumed that the used items were good indicators of the underlying latent variables. Within the structural part of the model, which reflects the actual hypothesis testing, we did not find a significant relation between authentic national identity and affective polarization, but we found its positive relation to political tolerance (supporting H1b, but not H1a). In

Table 1. Descriptive statistics, estimates of internal consistency, and zero-order correlations (Study 1)

| Variable | M | SD | α | 1 | 2 | 3 |
|-----------------------------------|------|------|----------|------------------|----------------------|----------------------|
| 1. Authentic national identity | 3.89 | 0.92 | .87 | | | |
| 2. Narcissistic national identity | 2.57 | 0.99 | .78 | .05 [-.03, .12] | | |
| 3. Affective polarization | 3.38 | 1.42 | .72 | -.06 [-.14, .01] | .25*** [.04, .17] | |
| 4. Political tolerance | 4.23 | 1.28 | .68 | .09** [.01, .17] | -.14*** [-.23, -.06] | -.36*** [-.44, -.26] |

contrast, narcissistic national identity (although the effect sizes were modest) was positively related to affective polarization and negatively related to political tolerance (supporting both, H2a and H2b). These cross-sectional results provide initial support for our notion that how one identifies with a nation may be related to the perception of their political adversaries.

Study 2

Method

Participants

We recruited 860 participants via a Polish online research panel. Of this sample, we excluded the participants who did not pass the attention check ($n = 1$) or the elaboration task ($n = 33$). The remaining participants ($N = 827$; 430 women, 396 men, and one other, $M = 49.23$ years, $SD = 16.28$, range = 18–89 years) were included in the final analyses. After exclusion, 419 individuals were randomly ascribed to an experimental group (i.e., boosting authentic national identity condition) and 408 to the control group.

Procedure

This study was conducted in two parts, separated by a 3-day interval. Participants were informed that the study had two parts and that the goal of this research was to learn about their feelings and thoughts related to belonging to the Polish nation and to different ways of perceiving the world, as well as that their participation was voluntary and they could withdraw at any time. All participants issued informed consent. The first part of the study aimed to measure the initial levels of authentic and narcissistic identities (i.e., pretest phase; Time 1). Thus, after filling out a few basic demographic questions, the participants completed these measures. Then, they were thanked for their participation and invited to take part in the second phase (Time 2), which occurred 3 days later.

The second part of the study was experimental. Participants were again informed about the goal and the characteristics of the study, and they gave informed consent. Then, they were randomly divided into two conditions: experimental and control. In both conditions, participants were presented with six graphics, each including a few-sentence quote from a well-known Polish public figure (that might be considered as an authority), accompanied by a photograph and a short information about this person (please see the Supplementary Materials for a full presentation of the experimental manipulation). These individuals were selected based on

findings from previous qualitative research, in which participants indicated which public figures they considered to be patriotic authorities. They were balanced in terms of gender (three women and three men) and diversified in terms of age and field of activity (e.g., culture, science, entertainment) to increase the likelihood that each study participant could relate to at least one of them. In the experimental condition (i.e., aiming to induce authentic national identity), the quotes were chosen to reflect the assumptions of authentic national identity (e.g., quotes referred to ties with the Polish nation, building and improving the Polish community). The public figures presenting their views on Poland included, for example, such persons as a historian, a traveler, a politician, or a respected actor. In the control condition, those six quotes referred to a topic unrelated to national identity (i.e., music). The participants were presented with quotes from well-known musicians of different genres (e.g., pop, jazz, alternative), in which they were talking about their approach to creating and performing music. The public figures presenting their views included such persons as a composer, a jazz pianist, a singer, a multi-instrumentalist or a music producer.

Participants were asked to read all the statements carefully and choose one of the quotes they liked the most or that resonated with them the most. Then, to enhance the manipulation, they were asked to elaborate on the chosen quote (i.e., to describe the quote, as well as their feelings and thoughts related to this statement, in a few sentences). Participants' elaborations were read and assessed by two independent judges. Each judge assigned a score of 1 if the participant's description was appropriate (i.e., if it accurately referred to the quote's content, theme, or emotional charge) or a score of 0 if the response was irrelevant, incoherent, or appeared to be filler (e.g., a random string of letters or a pasted segment of unrelated text). All cases in which the two judges agreed were automatically approved or excluded based on their scores. In cases where the judges initially disagreed, they re-evaluated the response together and discussed it until they reached a consensus. Only participants whose responses were judged as appropriate were included in further analyses. After that, the respondents were asked to complete the measures of authentic and narcissistic identity (i.e., a posttest phase), affective polarization, and political tolerance. In the end, they answered a simple attention check question (regarding the topic of the quotes presented in the manipulation). Finally, they were carefully debriefed (i.e., we explained the study's overall goal and informed them that some of the presented content included subjective opinions that might not be in accord with the current state of knowledge) and thanked them for participating.

Measures

National Identity

We used the same measure as in Study 1, $\alpha_{\text{pretest}} = .87$, $M_{\text{pretest}} = 5.57$, $SD_{\text{pretest}} = 1.31$; $\alpha_{\text{posttest}} = .87$, $M_{\text{posttest}} = 5.60$, $SD_{\text{posttest}} = 1.28$ for authentic, and $\alpha_{\text{pretest}} = .8$, $M_{\text{pretest}} = 3.36$, $SD_{\text{pretest}} = 1.57$; $\alpha_{\text{posttest}} = .87$, $M_{\text{posttest}} = 3.21$, $SD_{\text{posttest}} = 1.58$ for narcissistic national identity.

Affective Polarization and Political Tolerance

We also used the same measure as described in Study 1. Its internal consistency reached $\alpha = .76$ ($M = 3.10$, $SD = 1.46$) for affective polarization and $\alpha = .74$ ($M = 4.46$, $SD = 1.37$) for political tolerance.

Statistical Analyses

As previously noted, comparing aggregated scores is accompanied by uncontrolled measurement error (Kline, 2013). Thus, within the reported analyses, we estimated latent scores, which account for this source of unexplained variance. To test whether experimentally induced authentic national identity resulted in a decrease of affective polarization (H3a) and an increase in political tolerance (H3b), as well as to assess whether the compared conditions differed in the pretest and the posttest, we conducted the measurement invariance analysis (also referred to as multigroup confirmatory factor analysis; Kline, 2013). In this type of analysis, we estimated three models with sequentially increasing level of restrictiveness, referred to as configural, metric, and scalar. Establishing configural invariance, which is achieved by reaching an acceptable fit to the data (i.e., CFI > .90, RMSEA, and SRMR < .08), is a prerequisite for testing further models. Within the metric model, we constrained factor loadings to be equal across compared groups. The model is considered invariant if the difference in CFI and RMSEA does not exceed .010 and the difference in SRMR does not exceed .030 (Chen, 2007). Achieving metric invariance allows for a meaningful comparison of correlates of the tested construct across compared groups. In the scalar model, in addition to constraining factor loadings, we also constrained item intercepts to be equal across compared groups. The model is considered invariant at the scalar level if the difference in CFI and RMSEA does not exceed .010 and the difference in SRMR does not exceed .010 (Chen, 2007). Although we report three approximate fit indices, we primarily rely on CFI, as RMSEA tends to be artificially biased in models with a low number of degrees of freedom (Kenny et al., 2014), which is the case of the current study. Establishing scalar invariance allows for meaningful comparisons of latent means of the analyzed construct across groups (Cieciuch et al., 2018). It is worth noting that in comparisons of latent means, the latent mean of the first group is always set to 0 (i.e., it is a reference

group) to which the latent means of the second group are compared.

Results

Invariance Testing (Test of Hypothesis 3)

The results of the invariance tests are presented in Table 2. All the approximate fit indices of all analyzed models (except for RMSEA for the attitudes toward adversaries scale for the configural model) exceeded the threshold of a good model fit. According to CFI and SRMR, we provided evidence of full scalar invariance of all analyzed scales. According to RMSEA, however, we slightly exceeded the acceptable threshold for metric models of the posttest of complete national identity scale, as well as between the pretest and the posttest in both experimental and control groups. Given the small number of degrees of freedom of the analyzed models (cf., Kenny et al., 2014), we proceed with interpreting differences in latent mean scores.

We expected that inducing authentic national identity could diminish the level of affective polarization and increase the level of political tolerance. We found support for these hypotheses (H3a and H3b), as the experimental condition simultaneously scored slightly lower on affective polarization ($Z = -.16$ [95% CI: $-.31, -.01$], $p = .034$) and higher on political tolerance ($Z = .24$ [95% CI: $.08, .40$], $p = .004$). We did not find differences between control and experimental conditions at the pretest in their levels of authentic ($Z = .03$ [95% CI: $-.11, .18$]; $p = .646$) and narcissistic national identity ($Z = -.14$ [95% CI: $-.29, .01$], $p = .066$). During the posttest, however, we found that the experimental group scored slightly higher than the control group on authentic national identity ($Z = .13$ [95% CI: $.00, .27$], $p = .053$), while there were no differences between study conditions regarding narcissistic national identity ($Z = -.05$ [95% CI: $-.20, .11$]; $p = .542$). Across time, although the effect sizes were rather weak, we found that while in the experimental condition, authentic national identity increased ($t_{(418)} = -3.16$; $p = .002$; $d = -.16$) and narcissistic national identity decreased ($t_{(418)} = 3.43$; $p < .001$; $d = .17$), no significant effects were found for the control condition, neither for authentic ($t_{(407)} = 1.62$; $p = .106$; $d = .08$) nor narcissistic national identity ($t_{(407)} = 1.02$; $p = .307$; $d = .05$).

Discussion

The ongoing geopolitical events resulted in the polarization of the democratic societies to the extent which raised concerns about the future of these democracies (Carey

Table 2. Model fit indices of the tested measurement invariance models

| Group | Model | $\chi^2_{(df)}$ | CFI | RMSEA | SRMR | Δ CFI | Δ RMSEA | Δ SRMR |
|--|------------|-----------------------|------|-------|------|--------------|----------------|---------------|
| National identity – pretest | Configural | 51.10 ₍₁₆₎ | .974 | .073 | .027 | | | |
| | Metric | 48.96 ₍₂₀₎ | .979 | .059 | .027 | .005 | .014 | .000 |
| | Scalar | 53.06 ₍₂₄₎ | .979 | .054 | .028 | .000 | .005 | .001 |
| National identity – posttest | Configural | 33.13 ₍₁₆₎ | .986 | .051 | .029 | | | |
| | Metric | 32.85 ₍₂₀₎ | .990 | .039 | .031 | .004 | .012 | .002 |
| | Scalar | 45.37 ₍₂₄₎ | .983 | .046 | .035 | .007 | .007 | .004 |
| Affective polarization and political tolerance | Configural | 65.74 ₍₁₆₎ | .941 | .087 | .041 | | | |
| | Metric | 70.09 ₍₂₀₎ | .940 | .078 | .045 | .001 | .009 | .004 |
| | Scalar | 77.68 ₍₂₄₎ | .936 | .074 | .047 | .004 | .004 | .002 |

et al., 2019). Political approaches, such as populism and extremism, which pose a direct threat to the internal functioning of these societies are simmering (Guriev & Papaioannou, 2022). As a result of these threatening processes, instead of political amalgamation, we are observing affective polarization, which intensifies the level of hostility across party lines (Druckman & Levendusky, 2019; Lelkes, 2016). This process of dividing societies occurs regardless of the political systems, either dichotomic (e.g., USA) or plural (e.g., Poland), as ultimately there are parties who are governing and parties who are in the opposition, which ultimately leads to the choice to identify between *us* and *them* (Finkel et al., 2020; Górska et al., 2020; Iyengar et al., 2012). The process of such differentiation may lead to interpreting those, who identify differently as an out-group, which can intensify polarization (Marchlewska et al., 2022; Tajfel & Turner, 1986). The goal of the current project was to assess whether this process could be reversed. That is, we hypothesized that recollection of the common authentic in-group identity (Gaertner et al., 1993) between political adversaries could reduce affective polarization between them.

To address this goal, we adopted a notion that political adversaries, regardless of their different views, shared the common goal of serving the nation. On this basis, we expected that referring to the common authentic national identity might reduce affective polarization, as well as increase political tolerance between political adversaries. This hypothesis was tested across two studies. First, we conducted a cross-sectional study, in which we assessed the relationships between different forms of national identity (i.e., authentic and narcissistic) to affective polarization and political tolerance. The results revealed that authentic national identity was positively related to political tolerance but unrelated to affective polarization, while narcissistic national identity was positively related to affective polarization but negatively to political tolerance. These results, even if the relative strength of the observed effect sizes were modest in nature, emphasize the importance of differentiating between

two types of national identity (Cichocka, 2016). Existing research, as well as the results reported within the current paper, revealed that there are qualitative differences between these, which could be briefly summarized that authentic national identity is genuine, benign, and constructive, while narcissistic national identity is superficial, malicious, and destructive for the democracies' functioning (Cichocka, 2016; de Zavala et al., 2009; Górska et al., 2020; Maciantowicz et al., 2024; Marchlewska et al., 2020, 2022; Molenda et al., 2023; R. Rogoza et al., in press). Thus, this emphasizes that with the aim to reduce affective polarization and increase political tolerance, it is necessary to bolster the authentic national identity, while avoiding the narcissistic national identity, as exceptionalism and glorification of one's nation might result in the opposite (Gidron et al., 2019; Hartevelde et al., 2022; Roccas et al., 2008).

Authentic national identity could be potentially evoked in many different ways. Within the current work, we assumed that the support of authorities plays a pivotal role in reducing intergroup biases (Pettigrew & Tropp, 2006). We forged this idea into action through designing an experimental manipulation, which through the words of well-known public figures, emphasized the importance of collaboration and equality among nationals, making common authentic national identity salient. The analyses revealed that the participants who were randomly assigned to experimental and control conditions did not differ in their initial level of authentic and narcissistic national identity. The implementation of the experimental manipulation resulted in a simultaneous slight increase in political tolerance and decrease in affective polarization within the experimental condition. This supported our expectation and revealed a possible mechanism leading to the recategorization to a common national identity (Gaertner et al., 1993). That is, even if there are ideological differences between political adversaries, recognizing that, at the end of the day, they are all part of a larger national community may potentially lead to reversing the process of societal polarization (Fortunato et al., 2021). Thus, bolstering authentic national identity

indeed might be perceived as a tool used for fighting back affective polarization (Levendusky, 2018). Yet, whether national identity becomes a unifying or divisive force largely depends on how it is framed by political leaders. Prior research has demonstrated that narratives emphasizing perceived in-group disadvantage (i.e., portraying the nation as unfairly treated or systematically undermined by others) can reinforce national narcissism, which is linked to intergroup hostility and reduced political tolerance (Marchlewska et al., 2018; see also M. Rogoza et al., 2025). In contrast, our findings suggest that alternative narratives focusing on shared goals and inclusive national belonging may foster a more authentic and constructive identification with the nation. Such framing maintains focus on the national in-group, yet not through comparisons, but by highlighting its potential, values, and ongoing commitment to collective improvement. Consequently, leadership and political discourse play a critical role in shaping national identity and may either escalate societal division or serve as a vehicle for rebuilding political cohesion.

Practical Implications

Our findings may have practical implications for the development of public policy and civic interventions aimed at strengthening democratic cohesion. Specifically, fostering authentic national identity may serve as a buffer against affective polarization when promoted through inclusive, noncomparative narratives emphasizing shared national goals and collective responsibility. Importantly, the authority figures featured in our experimental design were selected based on earlier qualitative research identifying public figures viewed as patriotic and credible across ideological lines. Future initiatives could adopt a similar approach by drawing on figures who resonate broadly with the public to communicate inclusive messages of national belonging. Educational programs, national campaigns, and community initiatives that promote values such as civic cooperation, mutual respect, and pluralistic patriotism may help scale the effects observed in our study, contributing to healthier democratic dialogue and greater political tolerance.

Limitations and Future Directions

Within the current work, there are some limiting factors, which constrain the possibility to generalize our findings. First, participants within the current study were only of Polish nationality. Although Poland is culturally and geographically distant from the USA, it is also considered a WEIRD country, which as well currently struggles with political polarization, negative attitudes toward political

opponents, and society's tiredness with this current political situation (Górska, 2019). Furthermore, the experimental manipulation regarded authorities which are specific for a given nation, thus, including participants from different countries would require developing a separate set of such public figures. Future studies indeed might attempt to replicate this experiment in a different cultural and political context. Second, we used very brief measures of the analyzed constructs. Using such brief formats is a typical procedure, which, however, might result in an increase of measurement bias. We addressed this issue through the implementation of the evaluation of the full measurement models, which takes into account measurement bias, making the results more trustworthy (Cieciuch et al., 2018; Kline, 2013). Third, our experiment was conducted online and referenced to public figures. While this allowed us to present attitudes of well-known authorities, it also hindered our possibility to control for the effects of disturbing variables. Future studies might consider applying a similar manipulation in a real-life context and exposing participants in a live contact with authorities (i.e., trained research assistants) who will emphasize the importance of collaboration and equality. Perhaps, such contact might result in an increase of the effect sizes observed within the current study. It is worth noting that although our sample may be considered as representative for the adult population of Polish citizens, there are no formal data on the situation of individuals who identify themselves as nonbinary. As a result, our sample does not adequately address the situation of such individuals. The robustness of the reported findings is also limited by the fact that we did not pre-registered studies nor the analytical plan. Although we were adherent to the standards in psychological science, given the exploratory nature of the study itself, we did not register our expectations in advance. Thus, future studies, conducting independent replications of our findings would be crucial to determining the robustness of our findings, especially, as some of the observed effects sized were modest in nature.

Conclusion

Affective polarization and lack of political tolerance are factors that are threatening the prospective functioning of democracies (Carey et al., 2019). While a substantial body of literature describes the consequences (Harteveld et al., 2022; Iyengar et al., 2012; Kingzette et al., 2021), less is known about the potential avenues on how to counter-react these processes, and the current study filled this gap. Using an experimental design, we provided initial evidence that evoking the common national (authentic but not narcissistic) in-group identity may not only blur the polarized

perceptions of political adversaries but also potentially increase the tolerance between them (Fortunato et al., 2021; Gaertner et al., 1993). These results suggest that to move from the crisis of societal polarization, both sides of the coin deserve equal respect one from another and thinking in terms of *we* instead of *us* versus *them*.

References

- Berntzen, L. E., Kelsall, H., & Hartevelde, E. (2023). Consequences of affective polarization: Avoidance, intolerance and support for violence in the United Kingdom and Norway. *European Journal of Political Research*, 63, 927–949. <https://doi.org/10.1111/1475-6765.12623>
- Biddlestone, M., Cichocka, A., Główniewicz, M., & Cislak, A. (2022). Their own worst enemy? Collective narcissists are willing to conspire against their in-group. *British Journal of Psychology*, 113(4), 894–916. <https://doi.org/10.1111/bjop.12569>
- Byrne, B. M. (1994). *Structural equation modeling with EQS and EQS/Windows*. Sage Publications.
- Carey, J. M., Helmke, G., Nyhan, B., Sanders, M., & Stokes, S. (2019). Searching for bright lines in the Trump presidency. *Perspectives on Politics*, 17(3), 699–718. <https://doi.org/10.1017/S153759271900001X>
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling*, 14(3), 464–504. <https://doi.org/10.1080/10705510701301834>
- Cichocka, A. (2016). Understanding defensive and secure in-group positivity: The role of collective narcissism. *European Review of Social Psychology*, 27, 283–317. <https://doi.org/10.1080/10463283.2016.1252530>
- Cichocka, A., Marchlewska, M., de Zavala, A. G., & Olechowski, M. (2016). 'They will not control us': Ingroup positivity and belief in intergroup conspiracies. *British Journal of Psychology*, 107(3), 556–576. <https://doi.org/10.1111/bjop.12158>
- Cieciuch, J., Davidov, E., Algesheimer, R., & Schmidt, P. (2018). Testing for approximate measurement invariance of human values in the European Social Survey. *Sociological Method & Research*, 47(4), 665–686. <https://doi.org/10.1177/0049124117701478>
- Cislak, A., Marchlewska, M., Wójcik, A., Śliwiński, K., Molenda, Z., Szczepańska, D., & Cichocka, A. (2021). National narcissism and support for anti-vaccination policy: The mediating role of conspiracy beliefs. *Group Processes & Intergroup Relations*, 24(5), 701–719. <https://doi.org/10.1177/1368430220959451>
- Druckman, J., & Levendusky, M. (2019). What do we measure when we measure affective polarization? *Public Opinion Quarterly*, 83(1), 114–122. <https://doi.org/10.1093/poq/nfz003>
- Finkel, E. J., Bail, C. A., Cikara, M., Ditto, P. H., Iyengar, S., Klar, S., Mason, L., McGrath, M. C., Nyhan, B., Rand, D. G., Skitka, L. J., Tucker, J. A., van Bavel, J. J., Wang, C. S., & Druckman, J. N. (2020). Political sectarianism in America. *Science*, 370(6516), 533–536. <https://doi.org/10.1126/science.abe1715>
- Fluit, A. M., Martinović, B., Verkuyten, M., & Zhou, S. (2023). With or without you? Perceived indispensability and opposition to separatist movements. *The British Journal of Social Psychology*, 62(2), 655–672. <https://doi.org/10.1111/bjso.12624>
- Fortunato, D., Lin, N. C. N., Stevenson, R. T., & Tromborg, M. W. (2021). Attributing policy influence under coalition governance. *American Political Science Review*, 115(1), 252–268. <https://doi.org/10.1017/S0003055420000763>
- Fortunato, D., & Stevenson, R. T. (2013). Perceptions of partisan ideologies: The effect of coalition participation. *American Journal of Political Science*, 57(2), 459–477. <https://doi.org/10.1111/j.1540-5907.2012.00623.x>
- Fromm, E. (1973). *The anatomy of human destructiveness*. Henry Holt.
- Gaertner, S. L., Dovidio, J. F., Anastasio, P. A., Bachman, B. A., & Rust, M. C. (1993). The common ingroup identity model: Recategorization and the reduction of intergroup bias. *European Review of Social Psychology*, 4(1), 1–26. <https://doi.org/10.1080/14792779343000004>
- Garzón-Velandia, D. C., Barreto-Galeano, M. I., & Sabucedo-Cameselle, J. M. (2024). When political elites talk, citizens reply. Affective polarization through temporal orientation and intergroup emotions. *Analyses of Social Issues and Public Policy*, 24(3), 621–644. <https://doi.org/10.1111/asap.12416>
- Gidron, N., Adams, J., & Horne, W. (2019). Toward a comparative research agenda on affective polarization in mass publics. *APSA Comparative Politics Newsletter* 29(1), 30–36. <https://papers.ssrn.com/abstract=3391062>
- Gleibs, I. H. (2025). A social identity approach to crisis leadership. *British Journal of Social Psychology*, 64(2), 1–20. <https://doi.org/10.1111/bjso.12803>
- Golec de Zavala, A. G., Cichocka, A., Eidelson, R., & Jayawickreme, N. (2009). Collective narcissism and its social consequences. *Journal of Personality and Social Psychology*, 97(6), 1074–1096. <https://doi.org/10.1037/a0016904>
- Górska, P. (2019). *Polaryzacja polityczna w Polsce. Jak bardzo jesteśmy podzieleni? [Political polarization in Poland. How much are we divided?]*. The Center for Research on Prejudice. http://cbu.psychologia.pl/uploads/f_bulska/Polaryzacja%20polityczna%202.pdf
- Górska, P., Stefaniak, A., Malinowska, K., Lipowska, K., Marchlewska, M., Budziszewska, M., & Maciantowicz, O. (2020). Too great to act in solidarity: The negative relationship between collective narcissism and solidarity-based collective action. *European Journal of Social Psychology*, 50(3), 561–578. <https://doi.org/10.1002/ejsp.2638>
- Guriev, S., & Papaioannou, E. (2022). The political economy of populism. *Journal of Economic Literature*, 60(3), 753–832. <https://doi.org/10.1257/jel.20201595>
- Hartevelde, E., Mendoza, P., & Rooduijn, M. (2022). Affective polarization and the populist radical right: Creating the hating? *Government & Opposition*, 57(4), 703–727. <https://doi.org/10.1017/gov.2021.31>
- Haslam, S. A., Reicher, S. D., & Platow, M. J. (2021). *The new psychology of leadership: Identity, influence and power* (2nd ed.). Routledge. <https://doi.org/10.4324/9781003110989>
- Iyengar, S., Sood, G., & Lelkes, Y. (2012). Affect, not ideology: A social identity perspective on polarization. *Public Opinion Quarterly*, 76(3), 405–431. <https://doi.org/10.1093/poq/nfs038>
- Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2014). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, 44(3), 486–507. <https://doi.org/10.1177/0049124114543236>
- Kingzette, J., Druckman, J. N., Klar, S., Krupnikov, Y., Levendusky, M., & Ryan, J. B. (2021). How affective polarization undermines support for democratic norms? *Public Opinion Quarterly*, 85(2), 663–677. <https://doi.org/10.1093/poq/nfab029>
- Kline, R. B. (2013). *Principles and practice of structural equation modeling*. The Guilford Press.
- Lelkes, Y. (2016). Mass polarization: Manifestations and measurements. *Public Opinion Quarterly*, 80(1), 392–410. <https://doi.org/10.1093/poq/nfw005>
- Levendusky, M. (2018). Americans, not partisans: Can priming American national identity reduce affective polarization? *Journal of Politics*, 80(1), 59–70. <https://doi.org/10.1086/693987>
- Maciantowicz, O., Marchlewska, M., Rogoza, M., Molenda, Z., Rogoza, R., & Witke, D. (2024). More identified so less envious? On the links between different types of national identity and in-group envy. *The Journal of Social Psychology*, 164(6), 1059–1065. <https://doi.org/10.1080/00224545.2023.2240479>

- Marchlewska, M., Cichońska, A., Jaworska-Zawala, M. A. G., & Bilewicz, M. (2020). Superficial ingroup love? Collective narcissism predicts ingroup image defense, outgroup prejudice, and lower ingroup loyalty. *The British Journal of Social Psychology*, 59(4), 857–875. <https://doi.org/10.1111/bjso.12367>
- Marchlewska, M., Cichońska, A., Panayiotou, O., Castellanos, K., & Batayneh, J. (2018). Populism as identity politics: Perceived ingroup disadvantage, collective narcissism, and support for populism. *Social Psychological and Personality Science*, 9(2), 151–162. <https://doi.org/10.1177/1948550617732393>
- Marchlewska, M., Górska, P., Green, R., Szczepańska, D., Rogoza, M., Molenda, Z., & Michalski, P. (2024). From individual anxiety to collective narcissism? Adult attachment styles and different types of national commitment. *Personality & Social Psychology Bulletin*, 50(4), 495–515. <https://doi.org/10.1177/01461672221139072>
- Marchlewska, M., Górska, P., Podsiadłowski, W., Rogoza, M., Szczepańska, D., & Rogoza, R. (2025). So different yet so alike? Political collective narcissism predicts blatant dehumanization of political outgroups among conservatives and liberals. *The British Journal of Social Psychology*, 64(2), Article e12803. <https://doi.org/10.1111/bjso.12803>
- Molenda, Z., Marchlewska, M., & Rogoza, M. (2023). Nothing hurts like (in-group) love? National narcissism, conspiracy intentions, and non-prosocial managing emotions of others. *Personality and Individual Differences*, 201, Article 111947. <https://doi.org/10.1016/j.paid.2022.111947>
- Molenda, Z., Rogoza, R., Rogoza, M., Marchlewska, M., Szczepańska, D., Podsiadłowski, W., Adamczyk, D., & Szczęśna, M. (2025, August 1). *National identity, affective polarization, & political tolerance* [Data, Materials]. <https://doi.org/10.17605/OSF.IO/SZ9EN>
- Muthén, L. K., & Muthén, B. O. (2017). *Mplus User's Guide* (8th ed.). Muthén & Muthén.
- Peffley, M., & Rohrschneider, R. (2003). Democratization and political tolerance in seventeen countries: A multi-level model of democratic learning. *Political Research Quarterly*, 56(3), 243–257. <https://doi.org/10.1177/106591290305600301>
- Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751–783. <https://doi.org/10.1037/0022-3514.90.5.751>
- Reiljan, A. (2020). Fear and loathing across party lines (also) in Europe: Affective polarisation in European party systems. *European Journal of Political Research*, 59(2), 376–396. <https://doi.org/10.1111/1475-6765.12351>
- Roccas, S., Sagiv, L., Schwartz, S., Halevy, N., & Eidelson, R. (2008). Toward a unifying model of identification with groups: Integrating theoretical perspectives. *Personality and Social Psychology Review: An Official Journal of the Society for Personality and Social Psychology, Inc.*, 12(3), 280–306. <https://doi.org/10.1177/1088868308319225>
- Rogoza, M., Marchlewska, M., Rogoza, R., Molenda, Z., Szczepańska, D., Maciantowicz, O., & Maison, D. (2025). Emotional processes underlying national narcissism. *The Journal of Social Psychology*, 165(4), 587–603. <https://doi.org/10.1080/00224545.2025.2479783>
- Rogoza, R., Marchlewska, M., Molenda, Z., Maciantowicz, O., Rogoza, M., Szczepańska, D., & Maison, D. (in press). Conceptualizing and measuring social identity. In *Advances in cognitive psychology*.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(8), 23–74.
- Stoeckel, F., & Ceka, B. (2022). Political tolerance in Europe: The role of conspiratorial thinking and cosmopolitanism. *European Journal of Political Research*, 62(3), 699–722. <https://doi.org/10.1111/1475-6765.12527>
- Sullivan, D., Landau, M. J., & Rothschild, Z. K. (2010). An existential function of enmityship: Evidence that people attribute influence to personal and political enemies to compensate for threats to control. *Journal of Personality and Social Psychology*, 98(3), 434–449. <https://doi.org/10.1037/a0017457>
- Tajfel, H., & Turner, J. (1986). The social identity theory of intergroup behavior. In W. G. Austin, & S. Worchel (Eds.), *Psychology of intergroup relations* (pp. 7–24). Nelson-Hall Publishers.
- Turner-Zwinkels, F. M., van Noord, J., Kesberg, R., García-Sánchez, E., Brandt, M. J., Kuppens, T., Easterbrook, M. J., Smets, L., Górska, P., Marchlewska, M., & Turner-Zwinkels, T. (2025). Affective polarization and political belief systems: The role of political identity and the content and structure of political beliefs. *Personality & Social Psychology Bulletin*, 51(2), 222–238. <https://doi.org/10.1177/01461672231183935>
- Verkuyten, M. (2024). We need them, they need us": Perceived indispensability and intergroup relations. *Review of General Psychology*, 28(1), 67–80. <https://doi.org/10.1177/10892680231224403>
- Wagner, M. (2021). Affective polarization in multiparty systems. *Electoral Studies*, 69, Article 102199. <https://doi.org/10.1016/j.electstud.2020.102199>

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Open Science

The hypotheses presented within the manuscript were not pre-registered. Data, syntaxes, and supplementary materials are available in an open science repository at the OSF project site: <https://osf.io/sz9en/> (Molenda et al., 2025).

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