Populism as identity politics:

Perceived ingroup disadvantage, collective narcissism and support for populism

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Abstract

Populists combine anti-elitism with a conviction that they hold a superior vision of what it means to be a true citizen of their nation. We expected support for populism to be associated with national collective narcissism—an unrealistic belief in the greatness of the national group, which should increase in response to perceived ingroup disadvantage. In Study 1 (Polish participants; $n=1007$), national collective narcissism predicted support for the populist Law and Justice party. In the experimental Study 2 (British participants; $n=497$), perceived long-term ingroup disadvantage led to greater support for Brexit and this relationship was accounted for by national collective narcissism. In Study 3 (American participants; $n=403$), group relative deprivation predicted support for Donald Trump and this relationship was accounted for by national collective narcissism. These associations were present even when we controlled for conventional national identification. We discuss implications of the link between collective narcissism and support for populism.

Keywords: populism, collective narcissism, ingroup disadvantage, relative deprivation

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On October 25th 2015 Law and Justice, a national-conservative party, won the parliamentary election in Poland. On June 23rd 2016 the UK voted to Leave the European Union. On Nov 8th 2016 Americans elected Trump for president. All these votes were in favor of nationalist populist ideas. According to Müller (2016), "populism is always a form of identity politics" (p. 3). He argues that populists combine anti-elitism with a conviction that they hold a morally superior vision of what it means to be a true citizen of their nation. Thus, despite its anti-establishment rhetoric, national populism seems to promote commitment to a group that needs recognition as the only legitimate representation of "the people." Accordingly, any opposition to the populist agenda is condemned as a threat to national interests. In this paper, we propose that construing such a defensive national identity can arise as a compensation for feelings of ingroup disadvantage.

Although it was initially thought that poor economic conditions might be responsible for the recent rise of populism (Hernandez & Kriesi, 2015; Sides & Tesler, 2016), evidence for the role of economic hardship is mixed. There is some evidence that low income households support the ruling Law and Justice party in Poland (Roguska, 2016), yet in the U.S household income seems to play a minimal role in predicting support for Trump (Rothwell & Diego-Rosell, 2016). However, objective indices of material wealth might not accurately reflect how people experience their relative standing in the broader social system. Perceptions of relative deprivation capture a belief that one receives less than others or, raising this to the collective level, that one's group receives less than members of other groups (Runciman, 1966; Walker & Pettigrew, 1984). Such subjective perceptions might be better predictors of support for populist movements than objective indices of group status.

In line with this reasoning, Pettigrew (2017) suggested that support for Trump's populism was associated with feelings that one's group is in some way disadvantaged relative to others. He wrote: "Trump adherents feel deprived relative to what they expected to possess at this point in their lives and relative to what they erroneously perceive other 'less deserving' groups have acquired" (p. 111). In a similar vein, empirical research in Poland demonstrated that feelings of relative deprivation were indeed associated with support for Law and Justice (Winiewski, Jurczyszyn, Bilewicz, & Beneda, 2015). Furthermore, Mols & Jetten (2016) demonstrated that populist leaders can present situations of objective relative gratification (i.e., being relatively better off than others) under the guise of relative deprivation to manipulate the public. Such perceptions create feelings of injustice and resentment towards outgroups, including immigrants, who might be perceived as threatening the disadvantaged group's interests (e.g., Cramer, 2016; Doosje, Loseman, & van den Bos, 2013; Mols & Jetten, 2016). They might also kindle desires to glorify an allegedly deprived ingroup.

A conviction that one's group is disadvantaged relative to others might then be reflected in the way in which populists promote national identity. Specifically, it might foster defensive ideas about the ingroup's worth, which lacks acknowledgement from others. A belief in a great yet unappreciated ingroup might help compensate for a threat one would experience admitting that the ingroup deserves its disadvantage position (see Adorno, 1963/1998; Fromm, 1973). Such a form of ingroup positivity is captured by the concept of collective narcissism—an unrealistic belief in ingroup's greatness contingent on external validation (Golec de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009). Collective narcissism extends the concept of individual narcissism to the group level of analysis. While individual narcissism predicts interpersonal aggressiveness, collective narcissism predicts negative intergroup attitudes, especially towards groups perceived as threatening (Golec de Zavala et al., 2009; Golec de Zavala, Cichocka, & Iskra-Golec, 2013; cf. Cichocka, Dhont, &

Makwana, in press). For example, collective narcissism predicted prejudice towards undocumented immigrants in the US (Lyons, Coursey, & Kenworthy, 2013), and Jews in Poland (Golec de Zavala & Cichocka, 2012). Collective narcissism tends to correlate with measures of conventional in-group positivity (such as in-group identification; Leach et al., 2008; or collective self-esteem; Luhtanen & Crocker 1992), as these concepts also reflect positive in-group evaluation. Yet, they have different consequences. When narcissistic and conventional ingroup positivity are considered together as predictors of intergroup attitudes, collective narcissism predicts prejudice, while non-narcissistic ingroup positivity predicts less negative attitudes (Golec de Zavala, Cichocka, & Bilewicz, 2013). Collective narcissism is also associated with perceptions of other groups conspiring against the ingroup (Cichocka, Marchlewska, Golec de Zavala, & Olechowski, 2016)—a belief often accompanying any failures of populist governments (Müller, 2016).

Past empirical work also suggests that collective narcissism might be a way to compensate feelings of ingroup disadvantage. For example, collective narcissism was associated with perceived group relative deprivation. In a study conducted in the UK, ethnic collective narcissism among Blacks was associated with a stronger conviction that Blacks were deprived relative to Whites (Golec de Zavala et al., 2009). Golec de Zavala and colleagues (2009) theorised that relative deprivation might increase collective narcissism among the deprived ingroup. Thus, collective narcissism may stem from feelings of resentment about the ingroup's disadvantaged position (see Cramer, 2016).

We expected collective narcissism to increase as a consequence of perceived in-group disadvantage, and to account for the association between in-group disadvantage and support for populist ideas. We tested these predictions in three contexts. In Study 1, we examined the association between national collective narcissism (vs. identification) and support for the Law and Justice party in Poland. In Study 2, we manipulated in-group disadvantage and examined

its consequence for national collective narcissism (vs. identification) and support for Brexit in the U.K. We then tested whether collective narcissism accounted for the association between ingroup disadvantage and support for Brexit. In Study 3, conducted in the U.S., we examined whether national collective narcissism (vs. identification) accounted for the association between perceptions of ingroup disadvantage and support for Trump. All studies included at least 400 participants, which gave us a power of .80 for detecting even small associations between variables (for $r = .14$; Cohen, 1988; G*Power yields a target of 395 participants).

Study 1

In Study 1 we used data from Poland to examine the relationship between national collective narcissism versus conventional national identification and support for the populist Law and Justice party and its leader.

Method

Participants and procedure. Study 1 involved a 2014 nationally representative sample of the 1007 Polish adults[1]: 472 men, 535 women, aged 18-87; 513 of them indicated the party they voted for in the 2011 parliamentary elections and 545 indicated the candidate they voted for in the 2010 presidential elections. Data was collected with the use of an address-based sampling (ABS) method by the Public Opinion Research Centre. Several measures[2] and scales were presented to participants, including national collective narcissism, national identification, electoral preferences and demographics (gender, age and material status measured with one item: "How do you assess the current material conditions of your household?", 1=*definitely bad* to 5=*definitely good*).

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[1] This dataset was also used by Jaworska (2016) and Cichocka, Górska, Jost, Sutton, & Bilewicz (in press).
[2] All studies additionally measured system justification (see the Supplement).

Measures.

National collective narcissism was measured with the 5-item version of the Collective Narcissism Scale (Golec de Zavala, Cichocka, & Bilewicz, 2013), e.g., "Polish nation deserves special treatment." Participants responded on a scale from 1=*definitely disagree* to 6=*definitely agree*.

National identification was operationalized as the group level-self-investment dimension of Leach and colleagues' (2008) social identification scale (Polish adaptation by Jaworska, 2016; see the Supplement for analyses involving the full scale). Ten items measured satisfaction with the ingroup, e.g., "I am glad to be Polish," centrality of the ingroup, e.g., "Being Polish is an important part of how I see myself," and solidarity with ingroup members, e.g., "I feel a bond with Polish people." Participants responded on a scale from 1=*definitely disagree* to 6=*definitely agree*.

Law and Justice vote in parliamentary elections was measured with one item: "For which party or organization did you vote in the 2011 parliamentary elections?". Out of those who voted in the elections, 160 participants declared voting for *Law and Justice*; 353 participants declared voting for another political party (e.g., *Civic Platform, Democratic Left Alliance*).

Jarosław Kaczyński vote in presidential elections was measured with one item: "For which candidate did you vote in 2010 presidential elections?". Participants indicated one of two candidates that came out ahead during the first round of the presidential election: *Jarosław Kaczyński (Law and Justice)* or *Bronisław Komorowski (Civic Platform)*. Out of those who voted in the election, 147 participants declared voting for Kaczyński and 398 for Komorowski.

Results

Zero-order correlations between variables and scale properties are presented in Table 1. National identification was significantly positively correlated with collective narcissism, so we accounted for their overlap in the regression analyses.

Table 1

Correlations and Descriptive Statistics (Study 1)

Measure	1	2	3	4	5	6	7
1. Law and Justice vote	*M*=.31,						
1=Law and Justice; 0=other	SD=.46						
2. Jarosław Kaczyński vote	.80[.74,.86]	*M*=.27,					
1= Kaczyński; 0=other	*p* <.001	SD=.44					
3. National collective	.24[.16,.31]	.18[.10,.27]	*M*=3.90,				
narcissism	*p* <.001	*p* <.001	SD=1.27				
5-item scale from 1 to 6			(α=.87)				
4. National identification	.14[.06,.22]	.07 [-.01,.16]	.60[.56,.64]	*M*=4.91,			
10-item scale from 1 to 6	*p* =.002	*p* =.08	*p* <.001	SD=1.01			
				(α=.94)			

5. Age	.10[.004,.19]	.02[-.07,.10]	.28[.23,.33]	.33[.28,.38]	M=47.59,		
-	p =.024	p =.70	p <.001	p <.001	SD=17.59		
6. Gender	.07[-.01,.15]	.03[-.05,.12]	.05[-.02,.11]	.03[-.03,.09]	.06[-.002,.12]	M=.53,	
1=woman; 0=man	p =.13	p =.47	p =.14	p =.36	p =.05	SD=.50	
7. Material status	-.19[-.28,-.11]	-.14[-.22,-05]	-.05[-.11,.02]	.03[-.03,.10]	-.17[-.23,-.11]	-.01[-.07,.05]	M=3.41,
Scale from 1 to 5	p <.001	p =.002	p =.12	p =.38	p <.001	p =.77	SD=0.95

Regression analyses. We conducted hierarchical binominal logistic regression analyses to investigate the effects of collective narcissism on populist votes for: Law and Justice as a party and Kaczyński as the presidential candidate. Voting for Law and Justice (or Kaczyński) was coded as 1 and voting for any other party (or Komorowski) was coded as 0. We also controlled for demographics (age, gender, material status)[3] and national identification[4].

National collective narcissism as a predictor of Law and Justice vote in the parliamentary election. First, we regressed collective narcissism on Law and Justice vote (Table 2). In Step 1, we introduced national identification which was significantly positively associated with Law and Justice vote. In Step 2, we introduced collective narcissism and found its positive effect on Law and Justice vote. The relationship between identification and Law and Justice vote became non-significant, indicating that non-narcissistic national ingroup positivity was not associated with the Law and Justice vote. We also found a significant negative effect of material status on Law and Justice vote.

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[3] In all studies, we controlled for age and gender. In Studies 1 and 3 we controlled for material status/income (not available in Study 2), and in Study 3 we controlled for ethnicity (not available in Studies 1-2). Unless noted otherwise, across all studies results remain the same when we do not include demographic variables.

[4] In all models multicollinearity was not a problem, with all VIFs < 2.0 (Rogerson, 2001).

Table 2

Results of a Binomial Logistic Regression Predicting Law and Justice Vote in the Parliamentary Election (Study 1)

Predictor variable	Step 1				Step 2			
	B(SE)	*OR*	*OR* CI$_{95\%}$	*p*	*B(SE)*	*OR*	*OR* CI$_{95\%}$	*p*
National identification	0.36(0.13)	1.43	[1.10,1.86]	.01	-0.01(0.16)	1.00	[0.73,1.36]	.99
Age	0.002(0.01)	1.00	[0.99,1.02]	.80	-0.002(0.01)	1.00	[0.98,1.01]	.75
Gender	0.24(0.20)	1.27	[0.86,1.87]	.23	0.24(0.20)	1.27	[0.86,1.89]	.24
Material status	-0.47(0.11)	0.63	[0.50,0.78]	<.001	-0.47(0.11)	0.62	[0.50,0.78]	<.001
National collective narcissism					0.44(0.10)	1.55	[1.27,1.90]	<.001
Nagelkerke's R^2		.08				.13		
2 log-likelihood		603.21				583.17		
Δ Nagelkerke's R^2						.05		
Δ 2 log-likelihood						20.04		

National collective narcissism as a predictor of Kaczyński vote in presidential

elections. Second, we regressed collective narcissism on Kaczyński vote (Table 3). In Step 1

we introduced national identification which was marginally significantly positively associated

with Kaczyński vote. In Step 2 we introduced collective narcissism and found its positive

effect on Kaczyński vote. The effect of identification on Kaczyński vote became non-

significant, indicating that non-narcissistic national ingroup positivity was not associated with

the populist vote. Again, we found a significant negative effect of material status[5].

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[5] When we do not control for demographics, we find a significant positive effect of ingroup

identification on Kaczyński vote in Step 1.

Table 3

Results of a Binomial Logistic Regression Predicting Kaczyński Vote in Presidential Elections (Study 1)

Predictor variable	Step 1				Step 2			
	B(SE)	*OR*	*OR* CI$_{95\%}$	*p*	*B(SE)*	*OR*	*OR* CI$_{95\%}$	*p*
National identification	0.22(0.12)	1.25	[0.98,1.59]	.07	-0.10(0.15)	0.91	[0.68,1.21]	.51
Age	-0.01(0.01)	1.00	[0.98,1.01]	.43	-0.01(0.01)	0.99	[0.98,1.00]	.18
Gender	0.12(0.20)	1.13	[0.77,1.66]	.54	0.13(0.20)	1.14	[0.77,1.69]	.51
Material status	-0.36(0.11)	0.70	[0.57,0.87]	.001	-0.36(0.11)	0.70	[0.56,0.87]	.001
National collective narcissism					0.41(0.10)	1.51	[1.24,1.84]	<.001
Nagelkerke's R^2		.04				.08		
2 log-likelihood		618.41				600.81		
Δ Nagelkerke's R^2						.04		
Δ 2 log-likelihood						17.6		

The results of Study 1 provided initial support for our hypothesis that collective narcissism (and not non-narcissistic national identification) would predict voting for the populist Law and Justice party and its leader. In line with previous findings (Roguska, 2016), low material status was a significant predictor of adopting populist views. Still, Study 1 did not account for subjective feelings of ingroup disadvantage, which according to our assumptions should be an important predictor of support for populism. We address this issue in Studies 2 and 3.

Study 2

Study 2 was conducted in the context of the U.K. referendum to leave or remain a part of the European Union. A populist rhetoric of the United Kingdom Independence Party aimed to fuel anti-European attitudes by provoking British citizens to fight against a supposed influx of immigrants and to put national interest over those imposed by the EU (Farage, 2016). The principal message of the Leave campaign was that over the past half-century the EU had systematically diminished British influence and its sovereignty, so the best solution was to leave the union.

Based on this rhetoric, we manipulated perceptions of British (ingroup) disadvantage in the context of the relationship between the U.K. and the EU. In addition, we varied the perceived longevity of ingroup disadvantage by making participants believe it was either short or long-lived. We tested whether the perception of ingroup disadvantage would result in a higher willingness to adopt populist views reflected in Brexit support. Moreover, we expected this relationship to be accounted for by national collective narcissism.

Method

Participants and procedure. Study 2 was conducted among 525 participants recruited via Prolific Academic approximately seven weeks before the Brexit referendum (5-

10 May 2016). Participants were randomly assigned to one of the only three experimental conditions (long-term vs. short-term ingroup disadvantage vs. baseline).

We manipulated the perceived longevity of ingroup disadvantage based on the procedure by Blanchar & Eidelman (2013). In the long-term ingroup disadvantage condition, participants read an online article illustrating the history of the EU. The article emphasized the relationship between the U.K. and the EU as a long-term disadvantage to the U.K. In the short-term ingroup disadvantage condition, the article described the relationship as a recent development (though equally disadvantageous for the U.K.). In the baseline condition, the article described the history of the EU but omitted any indication of ingroup disadvantage (see the Supplement). Afterwards, participants completed measures of national collective narcissism and identification. The order of scale presentation was randomized and did not moderate the effects. Afterwards, participants were asked to indicate whether they thought the U.K. should leave the EU or not.

This study included an attention check. Participants were asked to indicate the main topic of the manipulation text. Twenty-four participants who failed the attention check were excluded from the analyses. We also excluded four participants who indicated their nationality as other than British. The final sample included 497 British participants, 212 men, 285 women, aged 18-72, 143 in the long-term ingroup disadvantage condition, 175 in the short-term ingroup disadvantage condition and 179 in the baseline condition.

Measures.

National collective narcissism was measured with a 9-item version of the Collective Narcissism Scale (Golec de Zavala et al., 2009). Participants responded on a scale from 1=*strongly disagree* to 7=*strongly agree*.

National identification was measured with the Social Identification Scale (Cameron, 2004) which includes 12 items, capturing ingroup ties, e.g., "I have a lot in common with other Brits.", centrality, e.g., "In general, being British is an important part of my self-image.", and ingroup affect, e.g., "In general I'm glad to be British." Participants responded a scale from 1=*strongly disagree* to 7=*strongly agree*.

Brexit support was measured with one item: "Should the United Kingdom remain a member of the European Union or leave the European Union?". Participants responded to a scale from 1=*definitely remain* to 5=*definitely leave*[6].

Results

Zero-order correlations across conditions and scale properties are presented in Table 4. National identification was significantly positively correlated with collective narcissism. Brexit support was significantly positively correlated with collective narcissism, and national identifications. Thus, both types of ingroup positivity were positively related to adopting populist views.

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[6] We also measured perception of immigration from within the EU to the UK as a problem or an opportunity. We found a marginally significant effect of long-term ingroup disadvantage on anti-immigration attitudes, and this effect was accounted for by collective narcissism (see the Supplement).

Table 4

Correlations and Descriptive Statistics (Study 2)

Measure	1.	2.	3.	4.	5.
1. Brexit support	*M*=2.56, *SD*=1.41				
Scale from 1 to 5					
2. National collective narcissism	.47[.40,.54]	*M*=3.62, *SD*=1.14			
9-item scale from 1 to 7	*p* <.001	(α=.91)			
3. National identification	.19[.10,.29]	.52[.44,.58]	*M*=4.51, *SD*=1.09		
12-item scale from 1 to 7	*p* <.001	*p* <.001	(α=.93)		
4. Gender	.03[-.07,.11]	.03[-.06,.13]	.06[-.03,.15]	*M*=.57, *SD*=.50	
1=woman; 0=man	*p* =.58	*p* =.47	*p* =.21		
5. Age	.26[.17,.35]	.09[.004,.18]	.09[.01,.17]	.09[.01,.17]	*M*=34.39, *SD*=11.64
-	*p* <.001	*p* =.04	*p* =.04	*p* =.048	

Regression analyses. We performed multiple regression analyses to investigate the effects of the experimental manipulation. In all analyses, experimental conditions (long-term ingroup disadvantage vs. short-term ingroup disadvantage vs. baseline) were recoded into two dummy variables: one encoded the difference between long-term disadvantage and the baseline; the other one encoded the difference between short-term disadvantage and the baseline. We entered the two dummy variables into the regression, controlling for the overlap between the two types of ingroup positivity, and demographics (age and gender).

Perceived ingroup disadvantage as a predictor of national collective narcissism. We found a significant positive effect of long-term ingroup disadvantage on collective narcissism, indicating that narcissistic ingroup positivity was higher in the long-term disadvantage condition than in the baseline condition. We did not, however, find a significant effect of short-term ingroup disadvantage on collective narcissism (Table 5).

Table 5

Results of a Multiple Regression Predicting National Collective Narcissism (Study 2)

Predictor variable	Step 1			
	B	*t* (489)	*p*	partial *r* [CI$_{95\%}$]
National identification	0.54	13.44	<.001	.52 [.45, .59]
Age	0.004	1.16	.25	.05 [-.04, .14]
Gender	-0.003	-0.04	.97	-.002 [-.09, .09]
Short-term ingroup disadvantage (vs. baseline)	0.06	0.60	.55	.03 [-.06, .12]
Long-term ingroup disadvantage (vs. baseline)	0.33	3.01	.003	.14 [.04, .22]
R^2	.29			
F	39.18			

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Ingroup disadvantage as a predictor of national identification. We found a marginally significant negative effect of short-term ingroup disadvantage and significant negative effect of long-term ingroup disadvantage (Table 6). Thus, long-term ingroup disadvantage decreased non-narcissistic ingroup positivity relative to the baseline condition.

Table 6

Results of a Multiple Regression Predicting National Identification (Study 2)

| | Step 1 | | | |
Predictor variable	*B*	*t* (489)	*p*	partial *r* [CI$_{95\%}$]
National collective narcissism	0.50	13.44	<.001	.52 [.45, .59]
Age	0.004	1.05	.29	.05 [-.04, .13]
Gender	0.08	0.95	.34	.04 [-.05, .13]
Short-term ingroup disadvantage (vs. baseline)	-0.19	-1.92	.06	-.09 [-.17, .01]
Long-term ingroup disadvantage (vs. baseline)	-0.26	-2.46	.01	-.11 [-.20, -.02]
R^2			.28	
F			38.57	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Perceived ingroup disadvantage as a predictor of Brexit support. To test the

hypotheses that ingroup disadvantage will result in higher willingness to adopt populist views

reflected in Brexit support, and that this relationship will be accounted for by collective

narcissism, we conducted a hierarchical multiple regression analysis (Table 7).

Table 7

Results of a Multiple Regression Predicting Brexit Support (Study 2)

Predictor variable	Step 1				Step 2			
	B	t (489)	p	partial r [CI$_{95\%}$]	B	t (488)	p	partial r [CI$_{95\%}$]
National identification	0.22	3.98	<.001	.18 [.08, .28]	-0.10	-1.76	.08	-.08 [-.17, .01]
Age	0.03	5.77	<.001	.25 [.17, .34]	0.03	5.84	<.001	.26 [.17, .34]
Gender	-0.02	-0.20	.84	-.01 [-.10, .09]	-0.02	-0.20	.84	-.01 [-.10, .08]
Short-term ingroup disadvantage (vs. baseline)	0.07	0.46	.64	.02 [-.06, .11]	0.03	0.23	.82	.01 [-.08, .10]
Long-term ingroup disadvantage (vs. baseline)	0.47	3.09	.002	14 [.06, .23]	0.27	1.96	.05	.09 [-.01, .18]
National collective narcissism					0.60	10.67	<.001	.44 [.35, .51]
R^2			.12				.28	
ΔR^2							.16	
F			12.85				32.16	
ΔF							19.31	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

In Step 1 we introduced national identification and two dummy variables. We found a significant positive effect of identification and a significant positive effect of long-term ingroup disadvantage on Brexit support, indicating that Brexit support was higher in the long-term disadvantage condition relative to the baseline condition. We did not find a significant effect of short-term ingroup disadvantage on Brexit support.

In Step 2 we introduced collective narcissism and found its positive effect on Brexit support. Non-narcissistic identification was a negative (albeit marginally significant) predictor of Brexit support. Furthermore, after introducing collective narcissism, we found a marginally significant positive effect of long-term disadvantage on Brexit support, and a non-significant effect of short-term disadvantage.

To perform a full test of our hypothesis, we checked for an indirect effect of long-term and short-term disadvantage on Brexit support via collective narcissism. We used Model 4 of PROCESS (Hayes, 2013) with 10,000 bootstrapped samples. The indirect effect of the perceived long-term ingroup disadvantage on Brexit support via collective narcissism was significant, with a bootstrap 95% bias-corrected confidence interval ($95\%CI_{bc}$) of 0.06 to 0.35. The indirect effect of the perceived short-term ingroup disadvantage on Brexit support via collective narcissism was not-significant, $95\%CI_{bc}$= -0.08, 0.16 (Figure 1).

We additionally checked for indirect effects of ingroup disadvantage on Brexit support via identification. Both indirect effects via identification were not significant: for the long-term disadvantage $95\%CI_{bc}$= -0.001, 0.09, for the short-term disadvantage $95\%CI_{bc}$= -0.002, 0.07.
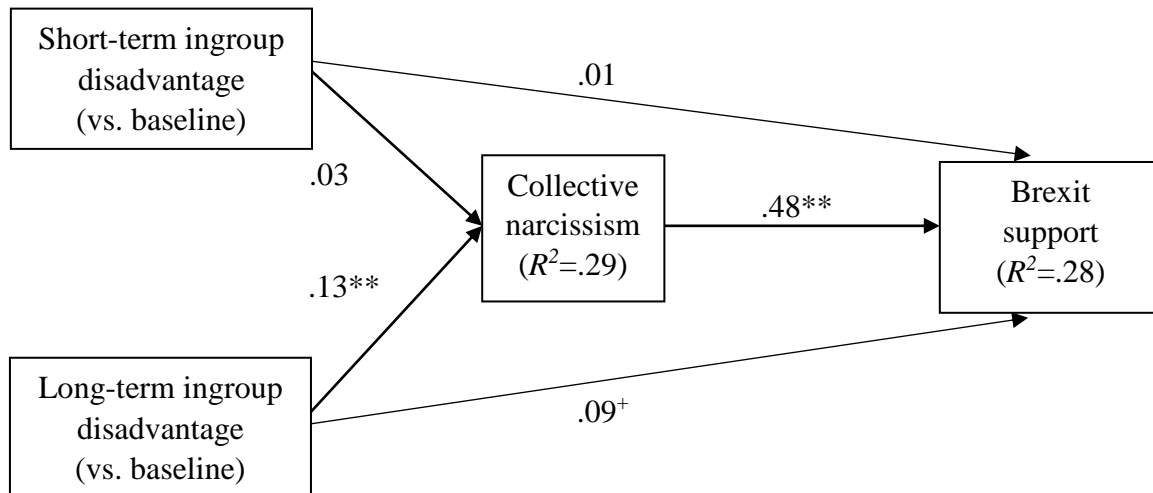
Figure 1. Indirect effects of long-term and short-term ingroup disadvantage on Brexit support via collective narcissism. Entries are standardized coefficients. R^2 represents percentage of the outcome variables variation explained by the model.

[+] $p < .10$ * $p < .05$. ** $p < .001$.

Study 2 revealed that, relative to baseline, reading about the long-term disadvantage of the national ingroup increased support for Brexit, and that this relationship was accounted for by national collective narcissism (and not non-narcissistic identification). Reading about short-term ingroup disadvantage was not enough to encourage participants to support Brexit. In fact, it also was not strong enough to increase collective narcissism.

Furthermore, national identification alone was significantly positively correlated with support for Brexit, but this association became negative (and marginally significant) when we adjusted for national collective narcissism. Although long-term ingroup disadvantage decreased non-narcissistic national identification, we did not find a significant indirect effect of ingroup disadvantage on Brexit support via non-narcissistic national identification. Thus, national collective narcissism, resulting from a perception of a long-term ingroup disadvantage, was the form of ingroup positivity related to adopting populist views.

Study 3

In Study 3 we sought to examine the role of ingroup disadvantage and national collective narcissism in support for Trump. To this end, we examined whether support for Trump will be associated with group relative deprivation (Pettigrew, 2017), and whether this link will be accounted for by national collective narcissism.

Method

Participants and procedure. In Study 3 we used data from a survey conducted among 407 participants recruited via Prolific Academic approximately a month before the Presidential election (5-6 October 2016). Several measures were presented to participants, including national collective narcissism, national identification, group relative deprivation, electoral preferences and demographics (age, gender, family income over the last year measured on a scale from 1=*less than $10,000* to 12=*more than $150,000*). We excluded data from four participants who reported their national identity as other than American or mixed American. The final sample included 403 American participants, 221 men, 182 women, aged 18-70. Most (n=303) were White (not Hispanic), identified themselves as non-immigrants (n=386), and their mode income was between $50,000 and $59,999.

Measures.

National collective narcissism was measured as in Study 1, with respect to the Americans as the ingroup. Participants responded on a scale from 1=*strongly disagree* to 7=*strongly agree*.

National identification was measured as in Study 2, with respect to the Americans as the ingroup. Participants responded on a scale from 1=*strongly disagree* to 7=*strongly agree*.

Group relative deprivation was measured with one item which depended on participant's identity based on similar items used in the Eurobarometer (Pettigrew et al., 2008). Participants who identified themselves as non-immigrants (*n*=386) were asked about their situation in relation to immigrants; those who identified themselves as immigrants (*n*=17) were asked about their situation in relation to new immigrants: "Would you say that over the last 5 years people like yourself in the U.S. have been economically 1=*a lot better off,* 2=*better off,* 3=*the same,* 4=*worse of or* 5=*a lot worse off* than most [new incoming] immigrants living here?"

Preference for Donald Trump was measured with one item: "Now please consider the current presidential nominees. Using the slider, please indicate how much you prefer one candidate over another, if you prefer Hillary Clinton you should move the slider toward the left (0=*Hilary Clinton*), and if you prefer Donald Trump move the slider to the right (10=*Donald Trump*). If you feel neutral to both, then maintain the slider at 5."[7]

Results

Zero-order correlations and scale properties are presented in Table 8. National identification was significantly positively related to collective narcissism. Preference for Trump was significantly positively correlated with collective narcissism, identification, and group relative deprivation. Group relative deprivation was significantly positively correlated with collective narcissism. We did not find a significant relationship between group relative deprivation and identification.

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[7] We also measured individual relative deprivation and additional indices of support for Trump and other candidates. Collective narcissism was unrelated to support for Clinton or Sanders (see the Supplement).

Table 8

Correlations and Descriptive Statistics (Study 3)

Measure	1	2	3	4	5	6	7	8
1. Preference for Trump	*M*=3.16,							
Scale from 0 to 10	*SD*=3.34							
2. National collective	.29[.19,.38]	*M*=2.89,						
narcissism	*p* <.001	*SD*=1.28						
5-item scale from 1 to 7		(α=.88)						
3. National identification	.22[.12,.33]	.55[.46,.62]	*M*=4.38,					
12- item scale from 1 to 7	*p* <.001	*p* <.001	*SD*=1.12					
			(α=.91)					
4. Group relative	.38[.28,.47]	.19[.09,.30]	.03[-.08,.14]	*M*=2.62,				
deprivation	*p* <.001	*p* <.001	*p* =.52	*SD*=0.95				
Scale from 1 to 4								

5. Age -	.14[.03,.25] *p* =.01	.17[.08,.26] *p* =.001	.31[.23,.39] *p* <.001	.13[.01,.23] *p* =.01	*M*=32.47, *SD*=11.88		
6. Gender *1=woman; 0=man*	-.19[-.29,-.09] *p* <.001	-.14[-.24,-.04] *p* =.01	-.13[-.21,-.03] *p* =.01	-.03[-.12,.07] *p* =.57	.05[-.04,.14] *p* =.30	*M*=.45, *SD*=.50	
7. Income *Scale from 1 to 12*	.04[-.06,.14] *p* =.39	.10[-.002,.20] *p* =.045	.15[.06,.25] *p* =.002	-.16[-.25,-.06] *p* =.001	-.16[-.25,-.06] *p* =.002	-.01[-.12,.08] *p* =.78	*M*=5.77, *SD*=3.26
8. Ethnicity *1=white; 0=other*	10[.01,.18] *p* =.044	05[-.03,.14] *p* =.28	04[-.05,.13] *p* =.44	01[-.09,.11] *p* =.88	22[.14,.29] *p* <.001	-03[-.14,.07] *p* =.51	02[-.11,.08] *p* =.75

M=.75, *SD*=.43	

Regression analyses. We performed multiple regression analyses, in which we entered group relative deprivation, and controlled for national identification and demographics (age, gender, income, ethnicity).

Group relative deprivation as a predictor of national collective narcissism. After the inclusion of control variables, we confirmed the significant positive effect of group relative deprivation on collective narcissism (Table 9).

Table 9

Results of a Multiple Regression Predicting National Collective Narcissism (Study 3)

Predictor variable	Step 1			
	B	*t* (395)	*p*	partial *r* [CI$_{95\%}$]
National identification	0.61	11.88	<.001	.51 [.43, .59]
Age	-0.002	-0.38	.70	-.02 [-.11, .08]
Gender	-0.16	-1.49	.14	-.07 [-.18, .03]
Income	0.02	1.06	.29	.05 [-.05, .15]
Ethnicity	0.10	0.82	.41	.04 [-06, .15]
Group relative deprivation	0.25	4.37	<.001	.22 [.12, .32]
R²		.34		
F		33.64		

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Group relative deprivation as a predictor of preference for Trump. To test the hypotheses that group relative deprivation will predict support for populism reflected in preference for Trump over Clinton, and that this relationship will be accounted for by collective narcissism, we conducted a hierarchical multiple regression analysis (Table 10).

Table 10

Results of a Multiple Regression Predicting Preference for Trump over Clinton (Study 3)

Predictor variable	Step 1				Step 2			
	B	*t* (394)	*p*	partial *r* [CI$_{95\%}$]	*B*	*t* (393)	*p*	partial *r* [CI$_{95\%}$]
National identification	0.48	3.29	<.001	.16 [.06, .27]	0.27	1.64	.10	.08 [-.03, .20]
Age	0.01	0.94	.35	.05 [-.06, .16]	0.01	0.99	.32	.05 [-.06, .15]
Gender	-1.09	-3.60	<.001	-.18 [-.27, -.08]	-1.04	-3.44	.001	-.17 [-.26, -.07]
Income	0.09	1.81	.07	.09 [.002, .20]	0.08	1.70	.09	.09 [-.02, .18]
Ethnicity	0.63	1.80	.07	.09 [.000, .18]	0.60	1.71	.09	.09 [-.01, .18]
Group relative deprivation	1.31	8.25	<.001	.38 [.29, .47]	1.23	7.59	<.001	.36 [.27, .44]
National collective narcissism					0.33	2.34	.02	.12 [.01, .23]
R^2			.23				.24	
Δ *R*^{2}							.01	
F			19.17				17.40	
Δ *F*							1.77	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

In Step 1 we introduced national identification and group relative deprivation as predictors of preference for Trump (over Clinton). We found significant positive effects for identification, and group relative deprivation. In Step 2 we introduced collective narcissism and found its positive effect on preferences for Trump. After introducing collective narcissism, we found a slightly weaker, although significant positive effect of group relative deprivation and a non-significant effect of identification [8].

We then checked for an indirect effect of the group relative deprivation on preference for Trump via collective narcissism, following the same procedure as in Study 2. The indirect effect via collective narcissism was significant, $95\%CI_{bc}= 0.01,0.18$ (identification did not show a similar indirect effect, $95\%CI_{bc}= -0.10,0.01$).

Study 3 corroborated the results of Study 2 by demonstrating that perceptions of ingroup disadvantage (here operationalized as group relative deprivation) were positively related to populist views and that this relationship was accounted for by national collective narcissism. As in Studies 1 and 2, national identification alone predicted populist views. However, when we adjusted for national collective narcissism we did not find a significant relationship between non-narcissistic identification with Americans and their preference for Trump.

General Discussion

In three studies, we demonstrated that national collective narcissism (but not non-narcissistic national identification) is a robust predictor of adopting populist views. We

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[8] When we do not account for demographics, the effects of collective narcissism and group deprivation remain significant, and the effect of identification on support for Trump is significant.

confirmed this pattern of results in three countries: Poland (support for the national conservative Law and Justice party), the UK (support for Brexit) and the US (preference for Trump over Clinton). The results of Study 2 and 3 additionally pointed to perceived ingroup disadvantage as a predictor of collective narcissism.

This research contributes to our understanding of the role of group identity in fostering support for populist ideologies. Studies 2 and 3 demonstrated that collective narcissism accounted for the links between perceptions of ingroup disadvantage and support for populist ideas. Nevertheless, these results should be treated with caution given that our studies measured both the mediators and the outcomes. The significant indirect effects via collective narcissism indicate that this variable can help explain a certain amount of the variance shared between ingroup disadvantage and populism support, but does not provide evidence for the causal model (see MacKinnon, Krull, & Lockwood, 2000 for a discussion on possible interpretations of indirect effects). More research is needed to establish causality of the observed relationships, for example by manipulating collective narcissism as the mediator (Bullock, Green, & Ha, 2010). Future research would also do well to rely less on single-item indices (e.g., by including multi-item measures of relative deprivation or populist attitudes).

Our research focused on populism associated mostly with the right-wing side of the political scene, which often manifests in nationalist attitudes. Collective narcissism tends to be positively correlated with nationalism (e.g., Lyons, Kenworthy, & Popan, 2010). Yet, it is a broader construct (it can be used in relation to national but also other social groups) and captures a concern with protecting the in-group's image, rather than the need for dominance characteristic for nationalism (Kosterman & Feshbach, 1989; see Golec de Zavala et al., 2009). Following Müller (2016), we argue that it is the need to be recognized as the only true and moral representation of a nation that drives populism. Nevertheless, it is of course likely that the relationships observed here are at least partially due to the associations between

nationalism and collective narcissism. Future research would do well to explore these

associations more closely. More work is also needed to examine the links between collective

narcissism and populism in other socio-political contexts, for example in the context of left-

wing populism in Latin America.[9]

Overall, our results might at least partially explain why populism is often linked to

prejudicial attitudes and behaviors. Research demonstrates that both group relative

deprivation (e.g., Pettigrew & Meertens, 1995) and collective narcissism (see Cichocka, 2016

for a review) tend to predict negative intergroup attitudes. At the same time, research

indicates that feelings of injustice and deprivation might stimulate increased collective action

aimed at changing ingroup's undesirable circumstances (van Zomeren, Postmes & Spear,

2008). Indeed, some see populist movements as manifestations of those disadvantaged by the

system "taking back control" (Farage, 2016). These attempts to tackle (perceived) inequality

are likely to be at odds with positive intergroup attitudes (Dixon, Levine, Reicher, &

Durrheim, 2012). It is important to note, however, that collective action can take more, or less

disruptive forms. There is evidence showing that collective narcissism stimulates disruptive

forms of protest (Górska & Bilewicz, 2017), which might at least partially explain why we

often observe violent behaviors at populist rallies (Jacobs, 2016; Kellner, 2016). Such

defensive responses might be especially likely when objectively privileged groups are led to

believe they are relatively disadvantaged and threatened by minorities (Mols & Jetten, 2016).

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[9] Note that Study 3 included measures of attitudes toward other candidates, including Sanders.

They were not associated with collective narcissism (see the Supplement). Although some

commenters suggest that Sanders represents left-wing populism (Kazin, 2016), we base our

understanding of populism on Müller (2016), who argues that populism is not only anti-elitist

but also anti-pluralist, and as such does not apply to Sanders.

This can lead to narcissistic ideas of threatened ingroup greatness and, in turn, support for populist politicians.

The current work contributes to our understanding of support for populism, but it also has broader implications for the study of collective narcissism. While there is vast evidence for the correlates and consequences of collective narcissism (for overviews see Cichocka, 2016; Golec de Zavala, 2011), less is known about situational factors that contribute to the increase of this form of ingroup positivity. Past work shows that it might strengthen when people lack personal control (Cichocka et al., in press), or when the group is criticised (Golec de Zavala, 2010). Study 2 demonstrated that collective narcissism increased in response to ingroup disadvantage, especially when the disadvantage was perceived as long lasting. This suggests that the narrative of relative disadvantage, fuelled by populist leaders, might reinforce this defensive and destructive national ingroup positivity. At the same time, it is also possible that the two variables reinforce each other, and that collective narcissism further increases perceptions of relative ingroup disadvantage. Rather than unifying a people to make their nation great, it is more plausible that these dynamics would further foster intergroup divisions.

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Study 1 Additional Analyses

We repeated the regression analyses with the use of the full social identification scale (Leach et al., 2008), that is including both the group-level self-investment and group-level self-definition components of national identification ($\alpha = .95$, $M = 4.84$, $SD = 0.96$). Results were similar to those reported in Study 1 (see Tables S1 and S2).

Table S1

Results of a Binomial Logistic Regression Predicting Law and Justice Vote in Parliamentary Elections (Study 1)

Predictor variable	Step 1				Step 2			
	B(SE)	*OR*	*OR* CI$_{95\%}$	*p*	*B(SE)*	*OR*	*OR* CI$_{95\%}$	*p*
National identification (full scale)	0.45(0.14)	1.57	[1.19, 2.08]	.001	0.08(0.17)	1.08	[0.77, 1.50]	.66
Age	<0.001(0.01)	1.00	[0.99, 1.01]	.99	-0.003(0.01)	1.00	[0.98, 1.01]	.66
Gender	0.22(0.20)	1.25	[0.85, 1.84]	.27	0.23(0.20)	1.26	[0.85, 1.88]	.25
Material status	-0.46(0.11)	0.63	[0.51, 0.78]	<.001	-0.48(0.11)	0.62	[0.50, 0.78]	<.001
National collective narcissism					0.41(0.10)	1.51	[1.23, 1.86]	<.001
Nagelkerke's R^2	.09				.13			
2 log-likelihood	599.74				582.97			
Δ Nagelkerke's R^2					.04			
Δ 2 log-likelihood					16.77			

Table S2

Results of a Binomial Logistic Regression Predicting Kaczyński Vote in Presidential Elections (Study 1)

Predictor variable	Step 1				Step 2			
	B(SE)	*OR*	*OR* CI$_{95\%}$	*p*	*B(SE)*	*OR*	*OR* CI$_{95\%}$	*p*
National identification (full scale)	0.31(0.13)	1.36	[1.05, 1.76]	.02	-0.01(0.16)	0.99	[0.73, 1.34]	.93
Age	-0.01(0.01)	0.99	[0.98, 1.01]	.30	-0.01(0.01)	0.99	[0.98, 1.00]	.14
Gender	0.11(0.20)	1.12	[0.76, 1.65]	.56	0.13(0.20)	1.14	[0.77, 1.69]	.51
Material status	-0.36(0.11)	0.70	[0.57, 0.87]	.001	-0.37(0.11)	0.70	[0.56, 0.86]	.001
National collective narcissism					0.38(0.10)	1.46	[1.20, 1.79]	<.001
Nagelkerke's R^2	.04				.08			
2 log-likelihood	615.96				601.24			
Δ Nagelkerke's R^2					.04			
Δ 2 log-likelihood					14.72			

Study 1 also included a measure of justification of the European Union system. Three items selected from the System Justification Scale (Kay & Jost, 2003) were adjusted to the context of the European Union, e.g., "In general, I find the European Union system to be fair." Participants responded on a 7-point response scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* (α = .74, *M* = 3.66, *SD* = 1.36). Although EU system justification was significantly negatively associated with voting for Law and Justice, *B* = -0.22, *SE* = 0.08, *OR* = 0.80 [0.69, 0.94], *p* = .01, or Kaczyński, *B* = -0.37, *SE* = 0.08, *OR* = 0.69 [0.59, 0.81], *p* < .001, controlling for EU system justification did not affect the pattern of results for collective narcissism and voting for Law and Justice or Kaczyński.

Study 2 Manipulation Text

Long-term disadvantage condition

Understanding the UK's Long Relationship with the EU

With the EU referendum looming near, questions regarding the UK's political and economic interests surface. Specifically, questions regarding how its membership with the EU has influenced its international standing. The UK's power has undoubtedly been compromised over many decades, particularly following its gradual withdrawal from its colonial empire and initial refusal to join the EU following World War II. Having lost its empire, Britain perhaps suffered an imperial hangover, and strived to establish its new role by continuing to give orders, rather than take them.

Realising it was fighting a losing battle, the UK finally agreed to join the EU in 1973, then called the Common Market. As the EU grew in size and power over the decades, it continued to increase its sphere of influence and began shaping more aspects of daily life in the UK. "The EU's involvement [in the UK] has led to both positive and negative outcomes," said former Foreign Secretary Lord Dunn. For example, although the UK has decreasing power over its borders, it can be argued that the flow of immigrants is fuelling economic growth. Furthermore, despite being charged billions of pounds in membership fees, its membership in the EU has resulted in easier trade and increased security.

The EU's influence over the UK's domestic and foreign policies has been especially strong due to the long-lasting decline of the UK as a world power. Considering the increasing dependence of the UK on the EU over the past decades, the upcoming referendum highlights the burning question of whether the UK's future lies with Europe or not.

Short-term disadvantage condition

Understanding the UK's Recent Relationship with the EU

With the EU referendum looming near, questions regarding the UK's political and economic interests surface. Specifically, questions regarding how its membership with the EU has influenced its international standing. The UK's power has undoubtedly been compromised in recent years, particularly following its gradual withdrawal from its colonial empire and initial refusal to join the EU following World War II. Having lost its empire, Britain perhaps suffered an imperial hangover, and strived to establish its new role by continuing to give orders, rather than take them.

Realising it was fighting a losing battle, the UK finally agreed to join the EU in 1973, then called the Common Market. As the EU grew in size and power over the past few years, it continued to increase its sphere of influence and began shaping more aspects of daily life in the UK. "The EU's involvement [in the UK] has led to both positive and negative outcomes," said former Foreign Secretary Lord Dunn. For example, although the UK has decreasing power over its borders, it can be argued that the flow of immigrants is fuelling economic growth. Furthermore, despite being charged billions of pounds in membership fees, its membership in the EU has resulted in easier trade and increased security.

The EU's influence over the UK's domestic and foreign policies has been especially strong due to the recent decline of the UK as a world power. Considering the increasing dependence of the UK on the EU over the past few years, the upcoming referendum highlights the burning question of whether the UK's future lies with Europe or not.

Baseline condition

Understanding the EU

With the EU referendum looming near, questions regarding the role of the EU have begun to surface. Following the Second World War, there were efforts to prevent future conflict by increasing economic interdependence between European countries. This led to the signing of the Treaty of Rome in 1957 by France, West Germany, Belgium, the Netherlands, Luxembourg and Italy, creating the European Economic Community (EEC). The UK initially refused to join, but eventually agreed to an accession treaty in 1972, thus officially joining the EU on the 1st of January, 1973.

Since then, the EU continued to grow in size and power, and expanded its sphere of influence over the 28 European countries that constitute it today. Membership in the EU, essentially a political and economic membership between its members, requires extra responsibilities and offers extra benefits. For example, although its members have to keep their borders open, this makes it easier for people to travel and work in other countries. Furthermore, despite charging billions of pounds in membership fees, membership in the EU results in easier trade between member countries and increased security.

Considering the EU's influence over domestic and foreign policies, the upcoming referendum highlights the burning question of whether the UK's future lies with Europe or not.

Study 2 Additional Analyses

Study 2 additionally included measures of: (a) negative immigration attitudes, which can be considered another indicator of populism, and (b) system justification.

Negative immigration attitudes were measured with one item: "To what extent do you consider immigration from within the EU to the UK to be a problem or an opportunity?". Participants responded to a scale from 1=*definitely an opportunity* to 5=*definitely a problem* ($M = 3.13$, $SD = 1.21$). Brexit support was significantly related to perceiving immigration as a problem $r(495) = .55$, $p<.001$. Therefore, we conducted additional analyses treating immigration attitudes as the DV.

System justification with respect to the EU was measured with eight items from the System Justification Scale (Kay & Jost, 2003). Participants responded on a 7-point scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* ($\alpha = .93$, $M = 3.90$, $SD = 1.20$).

Table S3

Correlations with additional variables (Study 2)

Measures	1.	2.	3.	4.	5.
1. Brexit support	*M*=2.56, *SD*=1.41				
Scale from 1 to 5					
2. National collective narcissism	.47[.40, .54]	*M*=3.62, *SD*=1.14			
9-item scale from 1 to 7	*p* <.001	(α=.91)			
3. National identification	.19[.10, .29]	.52[.44, .58]	*M*=4.51, *SD*=1.09		
12-item scale from 1 to 7	*p* <.001	*p* <.001	(α=.93)		
4. Negative immigration attitudes	.55[.47, .61]	.54[.47, .60]	.28[.19, .37]	*M*=3.13, *SD*=1.21	
Scale from 1 to 5	*p* <.001	*p* <.001	*p* <.001		
5. System justification	-.77[-.81, -.74]	-.37[-.45, -.28]	-.15[-.25, -.06]	-.48[-.56, -.40]	*M*=3.90, *SD*=1.20
8-item scale from 1 to 7	*p* <.001	*p* <.001	*p* =.001	*p* <.001	(α=.93)

Perceived ingroup disadvantage as a predictor of immigration attitudes. A

hierarchical multiple regression analysis was conducted to test the effects of long-term and

short-term ingroup disadvantage on negative immigration attitudes, as well as whether this

relationship is accounted for by national collective narcissism (Table S4).

Table S4

Results of a Multiple Regression Predicting Immigration Attitudes (Study 2)

Predictor variable	Step 1				Step 2			
	B	t (493)	p	partial r [CI$_{95\%}$]	B	t (492)	p	partial r [CI$_{95\%}$]
National identification	0.32	6.56	<.001	.28 [.19, .37]	0.01	0.17	.86	.01 [-.09, .10]
Short-term ingroup disadvantage (vs. baseline)	-0.02	-0.14	.89	-.01 [-.10, .08]	-0.05	-0.46	.65	-.02 [-.11, .07]
Long-term ingroup disadvantage (vs. baseline)	0.25	1.92	.06	.09 [-.004, .18]	0.07	0.58	.56	.03 [-.06, .12]
National collective narcissism					0.56	11.70	<.001	.47 [.39, .54]
R^2		.09				.29		
ΔR^2						.19		
F		16.08				49.59		
ΔF						31.51		

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

In Step 1 we introduced national identification and the two dummy variables. We found a significant positive effect of identification and a marginally significant positive effect of long-term ingroup disadvantage on negative immigration attitudes (i.e., perceiving immigration to be a problem rather than opportunity). We did not find a significant effect of short-term ingroup disadvantage on immigration attitudes.

In Step 2 we introduced national collective narcissism and found its significantly positive effect on negative immigration attitudes. Once we accounted for the variance shared with collective narcissism, non-narcissistic national identification became a non-significant predictor of immigration attitudes. Furthermore, after introducing collective narcissism into regression, long-term ingroup disadvantage also became a non-significant predictor of immigration attitudes.

To perform a full test of our hypothesis, we checked for an indirect effect of the perceived long-term and short-term ingroup disadvantage on negative immigration attitudes via national collective narcissism with 10,000 bootstrapped samples. The indirect effect of the long-term ingroup disadvantage on negative immigration attitudes via national collective narcissism was significant $95\%CI_{bc} = 0.06, 0.32$. The indirect effect of the short-term ingroup disadvantage on negative immigration attitude via national collective narcissism was not-significant, $95\%CI_{bc} = -0.08, 0.15$.

We additionally checked for an indirect effect of ingroup disadvantage on negative immigration attitude via national identification. Both indirect effects via national identification were not significant: for the long-term ingroup disadvantage $95\%CI_{bc} = -0.03, 0.04$, for the short-term ingroup disadvantage $95\%CI_{bc} = -0.02, 0.03$.

Analyses controlling for system justification. We also checked whether results change when controlling for system justification. Although EU system justification was significantly

negatively associated with voting Leave, *B* = -0.80 [-0.87, -0.73], *SE* = 0.04, β= -.67*, p*<.001, and with perceiving immigration as a problem, *B* = -0.33 [-0.41, -0.25], *SE* = 0.04, β = -.32*, p*<.001, controlling for EU system justification did not affect the pattern of results for collective narcissism and these two outcomes.

Study 3 Additional Analysis

Study 3 included additional indices of support for Trump as well as the two other major candidates: Clinton and Sanders. Therefore, we repeated out analyses with these variables included as the DVs. In Study 3 we also included measures of individual relative deprivation and system justification, therefore we repeated the analyses reported in the text controlling for these variables.

Measures.

Feelings towards Trump, Clinton and Sanders. We asked for respondents' general feelings about: (1) Donald Trump (*M* =1.71, *SD* = 2.71), (2) Hilary Clinton (*M* =3.95, *SD* = 3.23) and (3) Bernie Sanders (*M* =6.46, *SD* = 3.30), using a 10-point thermometer scale, with ratings between 5 and 10 degrees indicating a favourable perception of each of the candidates and scores ranging from 0 to 5 indicating an unfavourable view of each of the candidates.

Support for Trump, Clinton and Sanders. General support was measured using a 10-point scale, from 0 = *No Support at All* to 10 = *Fully Support*. We measured support for Trump (*M* = 2.71, *SD* = 2.88), Clinton (*M* = 5.26, *SD* = 3.42) and Sanders (*M* = 7.42, *SD* = 3.59). Additionally, participants were asked: "Considering who was nominated after primaries/caucus, who do you support now?". Response categories for this item were: 1 = *Hilary Clinton* (*n* = 248), 2 = *Donald Trump* (*n* = 81) and 3 = *Other* (*n* = 73). Categories 1 and 3 were collapsed, creating a categorical variable indicating support for Trump compared to all other candidates.

Individual relative deprivation was measured with one item by Pettigrew, Christ, Wagner, Meertens, and Zick (2008): "Over the last 5 years have you been economically a lot better off, better off, the same, worse off, or a lot worse off than other Americans people lie yourself?". Participants rated the statement on a scale from 1 = *A lot better off* to 5 = *A lot worse off* (*M* = 3.00, *SD* = 0.97).

System justification with respect the US political system was measured with 16 items from the Political System Justification Scale (Jost et al., 2010). Participants responded on a 7-point response scale ranging from 1 = *strongly disagree* to 7 = *strongly agree* (α = .90, *M* = 3.30, *SD* = 1.00).

Results.

Correlations including the additional continuous variables are presented below (Table S5).

Table S5

Zero-order correlations [and 95% Confidence Intervals] between Continuous Variables (Study 2)

Measure	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. National collective narcissism *5-item scale from 1 to 7*	*M*=2.89, *SD*=1.28 (α=.88)											
2. National identification *12- item scale from 1 to 7*	.55 [.47, .62] *p* <.001	*M*=4.38, *SD*=1.12 (α=.91)										
3. Group relative deprivation *Scale from 1 to 4*	.20 [.10, .30] *p* <.001	.03 [-.08, .14] *p* =.53	*M*=2.62, *SD*=0.95									
4. Individual relative deprivation *Scale from 1 to 5*	.03 [-.07, .13] *p* =.57	-.09 [-.19, .003] *p* =.08	.43 [.33, .51] *p* <.001	*M*=3.00, *SD*=0.97								

	1	2	3	4	5	6	7	8	9	10	M, SD
5. Preference for Trump over Clinton *Scale from 0 to 10*	.29 [.20, .38] $p<.001$	.22 [.13, .31] $p<.001$	.37 [.28, .46] $p<.001$	.19 [.09, .28] $p<.001$							$M=3.16$, $SD=3.34$
6. Support for Trump *Scale from 0 to 10*	.32 [.23, .42] $p<.001$	.27 [.19, .36] $p<.001$	.27 [.16, .37] $p<.001$	.10 [-.004, .20] $p=.04$	.78 [.73, .82] $p<.001$						$M=2.71$, $SD=2.88$
7. Support for Clinton *Scale from 0 to 10*	-.04 [-.14, .06] $p=.41$	-.01 [-.11, .09] $p=.83$	-.34 [-.42, -.25] $p<.001$	-.21 [-.30, -.11] $p<.001$	-.75 [-.79, -.71] $p<.001$	-.43 [-.50, -.36] $p<.001$					$M=5.26$, $SD=3.42$
8. Support for Sanders *Scale from 0 to 10*	-.23 [-.32, -.13] $p<.001$	-.27 [-.36, -.17] $p<.001$	-.22 [-.32, -.11] $p<.001$	-.13 [-.23, -.03] $p=.01$	-.54 [-.62, -.46] $p<.001$	-.49 [-.58, -.40] $p<.001$	.36 [.26, .45] $p<.001$				$M=7.42$, $SD=3.59$
9. Feelings towards Trump *Scale from 0 to 10*	.31 [.22, .40] $p<.001$	.26 [.17, .35] $p<.001$	.30 [.19, .40] $p<.001$	.14 [.04, .24] $p=.004$	.79 [.74 .83] $p<.001$	.92 [.89, .94] $p<.001$	-.47 [-.53, -.40] $p<.001$	-.49 [-.57, -.40] $p<.001$			$M=1.71$, $SD=2.71$
10. Feeling towards Clinton *Scale from 0 to 10*	-.03 [-.14, .07] $p=.56$	.01 [-.09, .11] $p=.85$	-.32 [-.41, -.23] $p<.001$	-.20 [-.28, -.09] $p<.001$	-.72 [-.76, -.68] $p<.001$	-.43 [-.49, -.35] $p<.001$	.94 [.90, .95] $p<.001$	.32 [.22, .41] $p<.001$	-.43 [-.50, -.37] $p<.001$		$M=3.95$, $SD=3.23$
11. Feelings towards Sanders *Scale from 0 to 10*	-.27 [-.37, -.16] $p<.001$	-.27 [-.36, -.17] $p<.001$	-.25 [-.34, -.16] $p<.001$	-.13 [-.23, -.04] $p=.01$	-.55 [-.62, -.47] $p<.001$	-.48 [-.57, -.40] $p<.001$	.36 [.27, .45] $p<.001$	.90 [.87, .93] $p<.001$	-.47 [-.55, -.39] $p<.001$	.36 [.27, .45] $p<.001$	$M=6.46$, $SD=3.03$

| 12. System justification *16-item scale from 1 to 7* | .50 [.42, .58] *p* <.001 | .55 [.47, .62] *p* <.001 | -.01 [-.11, .09] *p*=.93 | -.16 [-.26, -.07] *p* =.001 | .13 [.03, .23] *p* =.01 | .25 [.15, .34] *p* <.001 | .11 [.01, .21] *p* =.03 | -.25 [-.36, -.15] *p* <.001 | .23 [.13, .33] *p* <.001 | .12 [.01, .21] *p* =.02 | -.26 [-.36, -.16] *p* <.001 | *M*=3.30, *SD*=1.00 (α=.90) |

Analyses with three additional indices of preference for Trump. We examined whether the pattern of results would hold for the three additional indices of preference for Trump (Tables S6 – S8). In the first steps of the analyses, we found that group relative deprivation was a significant predictor of general feelings about Trump, and both the continuous and categorical indices of support for Trump. In second steps of the analyses, we found that national collective narcissism was a significant predictor of feelings about Trump (Table S6), and support for Trump measured with the continuous variable (Table S7), but the effect was not significant for support for Trump versus other candidates measured with the categorical variable (Table S8). We additionally examined the indirect effects and found that national collective narcissism significantly accounted for the association between group relative deprivation and 1) feelings towards Trump (95%CI_{bc} = .02, .17), 2) support for Trump (95%CI_{bc} = .03, .20), but not 3) support for Trump vs. other candidates (95%CI_{bc} = -.03, .13).

Table S6

Results of a Multiple Regression Predicting Feelings about Donald Trump (Study 3)

	Step 1				Step 2			
Predictor variable	B	t (394)	p	partial r [CI$_{95\%}$]	B	t (393)	p	partial r [CI$_{95\%}$]
National identification	0.46	3.82	<.001	.19 [.09, .29]	0.26	1.84	.07	.09 [-.02, .20]
Age	0.02	1.91	.056	.10[-.01, .20]	0.02	1.98	.05	.10 [-.02, .20]
Gender	-0.60	-2.38	.02	-.12 [-.21, -.03]	-0.54	-2.18	.03	-.11 [-.19, -.01]
Income	0.09	2.34	.02	.12 [.03, .20]	0.09	2.20	.03	.11 [.02, .20]
Ethnicity	0.42	1.43	.15	.07 [-.01, .17]	0.38	1.31	.19	.07 [-.03, .15]
Group relative deprivation	0.86	6.48	<.001	.31 [.21, .40]	0.77	5.76	<.001	.28 [.19, .28]
National collective narcissism					0.33	2.85	.01	.14 [.03, .25]
R^2			.19				.21	
ΔR^2							.02	
F			15.23				14.45	
ΔF							0.78	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Table S7

Results of a Multiple Regression Predicting Support for Donald Trump (Study 3)

Predictor variable	Step 1				Step 2			
	B	t (395)	p	partial r [CI$_{95\%}$]	B	t (394)	p	partial r [CI$_{95\%}$]
National identification	0.53	4.11	<.001	.20 [.10, .31]	0.28	1.89	.06	.10 [-.03, .21]
Age	0.02	1.91	.06	.10[-.02, .21]	0.24	2.00	.05	.10 [-.02, .21]
Gender	-0.43	-1.59	.11	-.08[-.17, .01]	-0.36	-1.36	.18	-.07 [-.16, .03]
Income	0.08	1.90	.06	.10[.01, .19]	0.07	1.74	.08	.09 [-.01, .19]
Ethnicity	0.61	1.95	.05	.10[.01, .19]	0.57	1.84	.07	.09 [.003, .18]
Group relative deprivation	0.79	5.55	<.001	.27 [.17, .37]	0.69	4.79	<.001	.23 [.14, .33]
National collective narcissism					0.41	3.27	.001	.16 [.03, .29]
R^2			.17				.19	
ΔR^2							.02	
F			14.43				13.32	
ΔF							0.11	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Table S8

Results of a Logistic Regression Predicting Support for Donald Trump (vs. other Candidates; Study 3)

Predictor variable	Step 1				Step 2			
	B(SE)	*OR*	*OR* CI$_{95\%}$	*p*	*B(SE)*	*OR*	*OR* CI$_{95\%}$	*p*
National identification	0.65(.15)	1.92	[1.43,2.58]	<.001	0.53(0.17)	1.70	[1.21,2.39]	.002
Age	0.01(0.01)	1.01	[0.99,1.04]	.39	0.01(0.01)	1.01	[0.99,1.04]	.34
Gender	-0.44(0.30)	0.65	[0.36,1.16]	.14	-0.41(0.30)	0.66	[0.37,1.19]	.17
Income	0.09(0.05)	1.09	[1.00,1.20]	.06	0.08(0.05)	1.09	[0.99,1.19]	.08
Ethnicity	0.74(0.40)	2.09	[0.98,4.48]	.06	0.70(0.39)	1.96	[0.92,4.21]	.08
Group relative deprivation	1.04(0.17)	2.83	[2.05,3.91]	<.001	0.99(0.17)	2.70	[1.95,3.74]	<.001
National collective narcissism					0.18(0.13)	1.19	[0.93,1.54]	.17
Nagelkerke's R^2	.31				.32			
2 log-likelihood	314.72				312.83			
Δ Nagelkerke's R2					.01			
Δ 2 log-likelihood					1.89			

Analyses on preference for other candidates. We conducted regression analyses to examine the effects of group relative deprivation and collective narcissism on feelings and support towards Sanders and Clinton (see Tables S9-S12). Overall, these analyses revealed that collective narcissism was not a positive predictor of Sanders or Clinton preferences. In fact, collective narcissism marginally negatively predicted feelings about Sanders (this effect was significant when demographics were not controlled for)

Table S9

Results of a Multiple Regression Predicting Feelings about Hilary Clinton (Study 3)

Predictor variable	Step 1				Step 2			
	B	$t (394)$	p	partial r [CI$_{95\%}$]	B	$t (393)$	p	partial r [CI$_{95\%}$]
National identification	0.11	0.72	.47	.04 [.05, -.07]	0.01	0.08	.94	.004 [-.10, .11]
Age	0.01	0.79	.43	.04 [-.06, .13]	0.01	0.81	.42	.04[-.05, .14]
Gender	1.24	4.05	<.001	.20 [.11, .30]	1.26	4.12	<.001	.20 [.11, .31]
Income	-0.003	-0.06	.95	-.003 [-.10, .09]	-0.01	-0.12	.91	-.01[-.10, .09]
Ethnicity	-0.61	-2.70	.09	-.09 [-.18, .01]	-0.62	-1.74	.08	-.09[-.18, .01]
Group relative deprivation	-1.12	-6.96	<.001	-.33 [-.42, -.24]	-1.16	-7.02	<.001	-.33[-.42, -.24]
National collective narcissism					0.15	1.06	.29	.05 [-.05, .16]
R^2			.15				.15	
ΔR^2							.00	
F			11.77				10.25	
ΔF							1.52	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Table S10

Results of a Multiple Regression Predicting Support for Hilary Clinton (Study 3)

Predictor variable	Step 1				Step 2			
	B	$t(395)$	p	partial r [CI$_{95\%}$]	B	$t(394)$	p	partial r [CI$_{95\%}$]
National identification	0.09	0.57	.57	.03 [-.07, .13]	-0.02	-0.12	.90	-.01 [-.11, .12]
Age	0.01	0.45	.65	.02 [-.07, .12]	0.01	0.47	.64	.02 [-.07, .12]
Gender	1.49	4.68	<.001	.23 [.14, .32]	1.51	4.76	<.001	.23 [.14, .33]
Income	-0.01	-0.28	.78	-.01 [-.11, .09]	-0.02	-0.34	.74	-.02 [-.11, .08]
Ethnicity	-0.78	-2.12	.04	-11[-.20, -.002]	-0.80	-2.17	.03	-.11 [-.20, -.001]
Group relative deprivation	-1.24	-7.43	<.001	-.35 [-.44, -.27]	-1.29	-7.52	<.001	-.35 [-.44, -.27]
National collective narcissism					0.18	1.20	.23	.06 [-.05, .17]
R^2			.18				.18	
ΔR^2							.00	
F			14.19				12.39	
ΔF							1.80	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Table S11

Results of a Multiple Regression Predicting Feelings about Bernie Sanders (Study 3)

Predictor variable	Step 1				Step 2			
	B	t (393)	p	partial r [CI$_{95\%}$]	B	t (392)	p	partial r [CI$_{95\%}$]
National identification	-0.62	-4.18	<.001	-.21 [-.31, -.10]	-0.47	-2.69	.01	-.14 [-.25, -.04]
Age	-0.02	-1.63	.10	-.08 [-.19, .02]	-0.02	-1.66	.10	-.08 [-.18, .02]
Gender	0.38	1.24	.22	.06 [-.04, .17]	0.34	1.10	.27	.06 [-.05, .16]
Income	-0.10	-1.98	.05	-.10 [-.19, .004]	-0.09	-1.89	.06	-.10 [-.19, .01]
Ethnicity	-0.96	-2.66	.01	-.13[-.22, -.04]	-0.93	-2.58	.01	-.13 [-.21, -.03]
Group relative deprivation	-0.85	-5.19	<.001	-.25 [-.35, -.16]	-0.78	-4.70	<.001	-.23 [-.32, -.14]
National collective narcissism					-0.26	-1.77	.08	-.09 [-.20, .02]
R^2			.16				.17	
ΔR^2							.01	
F			12.90				11.56	
ΔF							1.34	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Table S12

Results of a Multiple Regression Predicting Support for Bernie Sanders (Study 3)

Predictor variable	Step 1				Step 2			
	B	t (395)	p	partial r [CI$_{95\%}$]	B	t (394)	p	partial r [CI$_{95\%}$]
National identification	-0.65	-3.97	<.001	-.20 [-.30, -.11]	-0.56	-2.92	.004	-.15 [-.25, -.04]
Age	-0.04	-2.24	.03	-.11 [-.21, -.01]	-0.04	-2.26	.02	-.11 [-.22, -.02]
Gender	0.15	0.43	.67	.02 [-.07, .13]	0.12	0.36	.72	.02 [-.08, 12]
Income	-0.10	-1.83	.07	-.09 [-.19, .01]	-0.10	-1.77	.08	-.09 [-.19, .02]
Ethnicity	-1.00	-2.51	.01	-.13 [-.21, -.03]	-0.98	-2.47	.01	-.12 [-.21, -.03]
Group relative deprivation	-0.80	-4.46	<.001	-.22 [-.31, -.12]	-0.76	-4.15	<.001	-.21 [-.30, -.11]
National collective narcissism					-0.15	-0.94	.35	-.05 [-.16, .06]
R^2			.15				.15	
ΔR^2							.00	
F			11.61				10.07	
ΔF							1.54	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Analyses controlling for individual relative deprivation. Then, we conducted regression analyses to examine the effects of group relative deprivation, controlling for individual-relative deprivation. When we controlled for individual relative deprivation, we still found a significant positive relationship between national identification and national collective narcissism. We also found a significant positive effect of group relative deprivation on national collective narcissism. We did not find, however, a significant effect of individual relative deprivation on national collective narcissism (Table S13).

Second, we tested whether group relative deprivation significantly positively predict preference for Trump over Clinton in the presidential elections, and whether this relationship would be accounted for by national collective narcissism when controlled for individual relative deprivation (Table S14). The effect of group relative deprivation on preference for Trump was significant, but the effect of individual relative deprivation was not. Furthermore, after controlling for individual deprivation, we still found a significant effect of collective narcissism in Step 2. We checked for an indirect effect of the group relative deprivation on preference for Trump (over Clinton) via collective narcissism, controlling for individual relative deprivation. The effect remained significant, $95\%CI_{bc} = 0.01, 0.20$. Controlling for individual relative deprivation also did not affect the association between collective narcissism and other indices of Trump support, or Clinton and Sanders support.

Table S13

Results of a Multiple Regression Predicting Collective Narcissism When Controlled for

Individual Relative Deprivation (Study 3)

	Step 1			
Variables	*B*	*t* (395)	*p*	partial *r* [CI$_{95\%}$]
National identification	0.61	11.82	<.001	.51 [.44, .60]
Age	-0.002	-0.41	.68	-.02 [-.11, .07]
Gender	-0.16	-1.49	.14	-.08 [-.17, .02]
Income	0.02	1.10	.27	.06 [-.05, .16]
Ethnicity	0.10	0.79	.43	.04 [-06, .14]
Group relative deprivation	0.24	3.88	<.001	.19 [.09, .29]
Individual deprivation	0.02	0.30	.77	.02 [-.09, .13]
R²			.34	
F			28.78	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Table S14

Results of a Multiple Regression Predicting Preference for Donald Trump Win in Presidential Elections (Study 3)

Predictor variable	Step 1				Step 2			
	B	t (393)	p	partial r [CI$_{95\%}$]	B	t (392)	p	partial r [CI$_{95\%}$]
National identification	0.50	3.45	.001	.17 [.07, .28]	0.30	1.79	.08	.09 [-.01, .20]
Age	0.01	0.76	.45	.04 [-.07, .15]	0.01	0.82	.41	.04 [-.06, .16]
Gender	-1.10	-3.65	<.001	-.18[-.27, -.09]	-1.05	-3.49	.001	-.17 [-.27, -.07]
Income	0.10	2.07	.04	.10 [.01, .19]	0.09	1.96	.05	.10 [.000, .20]
Ethnicity	0.59	1.66	.10	.08 [-.01, .18]	0.55	1.57	.12	.08 [-.01, .17]
Group relative deprivation	1.21	6.96	<.001	.33 [.23, .42]	1.13	6.42	<.001	.31 [.21, .40]
Individual relative deprivation	0.26	1.50	.14	.08 [-.02, .18]	0.26	1.47	.14	.07 [-.03, .17]
National collective narcissism					0.33	2.32	.02	.12 [.01, .23]
R^2			.23				.24	
ΔR^2							.01	
F			16.80				15.54	
ΔF							1.26	

Note. CI$_{95\%}$ = confidence intervals based on 1000 bootstrapped samples.

Analyses controlling for system justification. Finally, we conducted regression analyses to examine the effects of collective narcissism on support of and feelings towards each candidate, when controlling for political system justification.

Political system justification was significantly positively associated with the various indices of support for Trump (see Table S5). However, controlling for political system justification did not affect the pattern of results for collective narcissism and the various indices of Trump support. In the full regression models predicting preference, support and feeling for Trump, political system justification was no longer a significant predictor (βs between -.02 and 10, all *p*s > .08), while the effects of collective narcissism remained significant. In the logistic regression model, controlling for political system justification, *B* = 0.06, *SE* = 0.18, *OR*=1.06 [0.75, 1.49], *p*=.74, also did not affect the non-significant effect of collective narcissism on support for Trump (vs. other candidates).

Moreover, although political system justification was a significant positive predictor for both feelings towards, *B*=0.48[0.11, 0.94], *SE* = 0.19, β=.15, *p*=.01, and support for Clinton, *B*=0.53 [0.15, 0.90], SE=0.19, β=.15, *p*=.01, controlling for political system justification did not affect the non-significant effect of collective narcissism on the two indices for Clinton support.

Further, political system justification was significantly negatively associated with the various indices of support for Bernie Sanders. Political system justification was a significant negative predictor for feelings towards Sanders, *B*=-0.48 [-0.85, -0.11], *SE*=0.19, *β*= -.14, *p*=.01, and support for Sanders, *B*=-0.57 [-0.98, -0.17], *SE*=0.21, *β*= -.16, *p*=.01. However, controlling for political system justification did not affect the effect of collective narcissism on feelings towards Sanders.

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