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National Collective Narcissism, In-Group Satisfaction, and Religious Commitment in Contemporary
Poland

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Abstract

Religion is frequently a key component of national identity. This is notably true in Poland, where national identity is strongly tied to traditional Catholic values. In the present study, we examine the relationship between religious commitment (indicated by self-identification as religious and frequency of practice) and two kinds of national identity in Poland: *national collective narcissism*, an exaggerated belief in an in-group's greatness that is insufficiently recognized by others; and *national ingroup satisfaction*, a belief in the value of the national ingroup. We predicted that although both forms of national identity would be linked to religious commitment, Polish collective narcissism would have an especially strong relationship with religiosity, given that populist rhetoric in Poland relies on grievance-oriented nationalist appeals that emphasize threats to Poland's traditional Catholic character. In cross-sectional and dynamic analyses using data from a six-wave panel study of Polish adults, we find support for these predictions, though we do not find clear evidence that within-person changes in collective narcissism and ingroup satisfaction are linked with within-person changes in religiosity.

Keywords: religious commitment, national collective narcissism, national in-group satisfaction

Word Count: 8,155

National identity, while significant in its own regard, is often strengthened when it overlaps with other important social identities. One of the most important of these other identities is religion, which often closely overlaps with national identity in religiously-homogenous societies (Dingley, 2009). Poland is a notable example of this, as Poland's national identity has long been intertwined with traditional Roman Catholic identity, symbols, and values (Marody & Mandes, 2005; Topidi, 2019). This connection has become more salient in recent years under the leadership of the authoritarian-populist Law and Justice Party (PiS), which emphasizes appeals to national sovereignty focused (among other things) on a defense of the nation's traditional religious values from secular influences (e.g., Ayoub & Chataille, 2020). Thus, Poland provides an excellent context for studying the relationship between national identification and religious commitment.

But what kind of national identity relates most strongly to religious commitment in Poland? Researchers have long distinguished among multiple dimensions of social (Leach et al., 2008) and in particular national identification (e.g., Kosterman & Feshbach, 1989). Two dimensions of national identification have received much attention in research: *national collective narcissism*, an exaggerated perception of in-group greatness that is insufficiently recognized by others; and *national ingroup satisfaction*, a belief in the value of the national ingroup (Golec de Zavala & Lantos, 2020; Golec de Zavala, Dyduch-Hazar, & Lantos, 2019). These two forms of national identity differ in the extent to which they construct relations between the ingroup and outgroups. Whereas national collective narcissism is associated with defensive hostility and sensitivity to perceived threats to the ingroup, this is less true of ingroup satisfaction (Golec de Zavala, 2011; 2018). In the present study, we explore the links between these two forms of national identity and religious commitment in Poland. We predict that both will be associated with greater religious commitment among Poles. However, of the two we expect that national collective narcissism will be more strongly related to religious commitment given the extent to which current Polish political discourse emphasizes the lack of

appreciation of Polish Catholicism and Polish Catholic values being under siege from hostile outside forces (Graff, 2019). We examine these predictions using data from a nationally-representative panel study of Poles in both cross-sectional and dynamic analyses.

Religion and National Identity in Poland

As Kyriaki Topidi (2019) recently noted, “In the most common representations of the Polish people, the Catholic Church is not simply considered as a part of the Polish nation; it *is* the Polish nation” (emphasis added; p. 1). Demographically, Poles have historically overwhelmingly self-identified as Catholic in terms of belief and affiliation. The Catholic Church has been a critical influence on the nation’s art, culture, and politics (Hann, 2002; Marody & Mandes, 2005). In this respect, Poland is like other nations with a dominant national religion that have repeatedly suffered domination by foreign nations with different religious traditions (Dingley, 2009; Hastings, 1997; Smith, 1991). In such contexts, national identity can become coterminous with the majority religious tradition as religious commitment serves an expressive function for two social identities: national and religious. Thus, during periods of foreign domination, religious commitment served to express Polish national uniqueness. For this reason alone, we might expect Poles with stronger national identifications—regardless of the flavor of those identifications—to be more religiously-involved.

Recent features of Polish history have both strengthened and shifted the character of the nexus between national and religious identity. In Poland, political representations of the role of the Catholic Church in the struggle against communism and the nation’s transition to democracy and national independence elevated its symbolic significance in contemporary Polish identity, even among many who were not overly religious (Graff, 2019; Topidi, 2019). Moreover, it was feared that the fall of communism would leave an institutional and ideological vacuum. Both actors in the church and in government leaned on the residual prestige of the nation’s religious traditions, drawing on them to articulate a vision of national identity capable of providing the integration once

furnished by communism (Ley, 1996). As part of this transition process, the Catholic Church was able to secure a privileged role, both in the public square and in terms of policy influence (Graff & Korolczuk, 2021; Marody & Mandes, 2005).

More recently, the rise of authoritarian populism in Poland under the ruling Law and Justice party has further deepened the links between national and religious identity in Poland—and shifted both in an exaggerated and exclusionary direction (Golec de Zavala & Keenan, 2020). Elected in 2015, Law and Justice (*Prawo i Sprawiedliwość*, PiS) has built its appeal around a narrow conception of Polish identity rooted in traditional Catholicism (Ayoub & Chetaille, 2020; Graff, 2019; Jaskiernia, 2019). Representatives of the party often invoke traditional religiosity as an us/them marker with respect to Polishness. The party's appeals often center on themes of an embattled Catholic Poland beset by liberal forces from abroad (e.g., the European Union) and at home (e.g., feminists, the LGBT community) that do not respect the nation's traditional culture and seek to undermine it (Golebiowska, 2017; Golec de Zavala & Bierwiazzonek, 2020; Graff, 2010; Korolczuk & Graff, 2018; Mole, Golec de Zavala & Adraq, 2022). Along with these developments, older themes associated with Polish romantic nationalism, such as the notion of Poland as a suffering “Christ of nations”, have seen a resurgence (Krajewski, 2002). With its growing influence over various government and media sectors (and strong ties with conservative sectors of the church), Poland's current leaders have thus pushed discourse regarding the link between national identity and religion in a decidedly defensive and reactionary direction—despite declining overall levels of religious participation and strong pushback from opponents of PiS's authoritarianism (Topidi, 2019).

National Collective Narcissism Versus National Ingroup Satisfaction

Thus, there is ample reason to expect a relatively strong relationship between national identification and religious commitment among Poles, as well as reason to believe that multiple forms of national identity are implicated. Indeed, national identity is a multidimensional construct, as

noted previously. Commonly, the literature on national identity distinguishes between nationalism, which emphasizes the superiority of the national ingroup and seeks to have it dominate other nations, and patriotism, a simple love of the national ingroup and its symbols (de Figueiredo & Elkins, 2003; Huddy & Khatib, 2007; Kosterman & Feshbach, 1989; Viroli, 1995). Similarly, others have distinguished between blind patriotism, which takes an uncritical ‘my country right or wrong’ approach, and constructive patriotism, which combines loyalty to the nation with a willingness to criticize it when it falls short (Schatz, Staub, & Lavine, 1999).

More recently, political psychologists have distinguished between *national collective narcissism* and *national ingroup satisfaction* (Federico & Golec de Zavala, 2020). Collective narcissism is an exaggerated belief in the greatness of an ingroup, combined with a sense of entitlement and resentment at others’ perceived failure to accord the ingroup the respect it deserves (Golec de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009; see also Golec de Zavala et al., 2019; Golec de Zavala & Lantos, 2020). Ingroup satisfaction, in contrast, is a simple belief in the value of the national ingroup and one’s membership in it (Golec de Zavala et al., 2019; see also Crocker & Luhtanen, 1990; Leach et al., 2008). Though these two constructs can apply to any important social identity, they have been most commonly examined with respect to national identity (Federico & Golec de Zavala, 2020; Golec de Zavala et al. 2019).

These two forms of national identification have different characteristics and correlates. Like national in-group satisfaction, national collective narcissism reflects positive regard for a national identity. But it is an inflated form of group regard, which requires external validation from others in a way that parallels narcissism at the individual level (Golec de Zavala & Keenan, 2020). Those who score high on collective narcissism are overly sensitive to slights—whether real or perceived—to the exaggerated image of the national ingroup that they hold. In this vein, those high in collective narcissism are especially likely to react to perceived criticism or insults directed at the ingroup with

hostility and retaliation (Golec de Zavala et al., 2009; Golec de Zavala, Cichocka, & Iskra-Golec 2013; Golec de Zavala, Pekker, Guerra, & Baran 2016; Hase et al., 2021; Jasko et al., 2019; see also Cichocka & Cislak, 2020; Golec de Zavala et al., 2020; Golec de Zavala & Lantos, 2020).

National ingroup satisfaction also involves reverence for the national ingroup, but without the exaggerated sense of group regard, insecurity, and obsession with ingroup image maintenance that characterize collective narcissism (Golec de Zavala et al., 2009, 2019). Though ingroup satisfaction correlates positively with collective narcissism (Golec de Zavala et al. 2019, 2020), it does not relate on its own to intergroup aggression the way collective narcissism does. Controlling for collective narcissism, ingroup satisfaction is either uncorrelated with or negatively related to hostility toward outgroups (Golec de Zavala & Cichocka, 2012; Golec de Zavala et al., 2016, 2019, 2020; see also Federico & Golec de Zavala 2020). Moreover, net of national collective narcissism, nationalism ingroup satisfaction is positively associated with social connectedness and prosociality (Golec de Zavala, 2019).

Despite their differences, we expect that both national collective narcissism and national ingroup satisfaction will independently predict greater religious commitment among Poles. Given the centrality of Catholicism to Polish national identity, both those who feel resentment for insufficient recognition of Polish uniqueness (per national collective narcissism) and those who feel pride as Poles without insecurity or an inflated sense of group regard (per national ingroup satisfaction) should be more religiously committed. On one hand, religiosity may serve an expressive function for Poles who feel that aspects of their national identity are threatened and unappreciated, insofar as conservative Catholicism is seen as a bulwark against forces seen as hostile to traditional Polish identity (e.g., supranational authorities such as the EU that are perceived to be socially liberal; Korolczuk & Graff, 2018). On the other hand, aspects of religiosity may be a source of pride even

for Poles whose sense of national identity is not defensive (e.g., given the role of the Catholic Church in the movement for democracy during the period of Soviet domination; Topidi, 2019)

However, given that political rhetoric in Poland has increasingly linked to traditional Catholic values and symbolism to a defense of Poland against a perceived array of hostile forces, we also expect that Polish collective narcissism will be especially related to religious commitment. In this vein, national collective narcissism predicts a number of attitudes, beliefs, and behaviors that have been linked to the kind of defensive, religiously-tinged nationalism that has become especially prominent in Poland under the current governance of populist Law and Justice party. These include a tendency to see the ingroup as beset by malevolent, conspiratorial enemies (Cichocka, Marchlewska, Golec de Zavala, & Olechowski 2016; Golec de Zavala & Cichocka, 2012), hostility toward minority groups that are thought to contaminate and undermine the unity of the national ingroup (Golec de Zavala & Bierwiazzonek, 2020; Golec de Zavala & Cichocka, 2012; Golec de Zavala et al., 2013; Golec de Zavala, Guerra & Simao, 2017; Golec de Zavala et al., 2020; Mole et al., 2022), and support for national-populist parties and leaders (Federico & Golec de Zavala, 2018; Golec de Zavala & Keenan 2020; Marchlewska et al., 2018). Moreover, in Poland the collectively-narcissistic belief that the greatness of national group is not sufficiently recognized by others overlaps strongly with a parallel belief that the greatness of the Catholic Church is not sufficiently recognized by others (Mole et al., 2022). Thus, we also expect that national collective narcissism will be more strongly related than national ingroup satisfaction to religious commitment.

The Present Study

In line with the above considerations, we examine two hypotheses about the relationships between two forms of national identity—national collective narcissism and national ingroup satisfaction—and religious commitment in Poland:

Hypothesis 1: National collective narcissism and national ingroup satisfaction will be independently associated with greater religious commitment.

Hypothesis 2: National collective narcissism will be more strongly related than national ingroup satisfaction to religious commitment, given the centrality of religious identity to defensive constructions of nationality in present-day Poland.

Using a unique six-wave panel study of Polish adults collected during the 2020 Polish presidential election, we examine these hypotheses in two ways. First, we estimate cross-sectional regression models predicting religiosity from collective narcissism, ingroup satisfaction, and a set of demographic controls within each wave of the study. Second, to address the temporal ordering of the relationships between the two national-identity variables and religious commitment, we conduct a series of dynamic analyses that examine whether variation in the national-identity measures predicts changes in religiosity (and vice versa). We begin by estimating a cross-lagged panel model of the relations between collective narcissism, ingroup satisfaction, and religious commitment across the six survey waves. However, since conventional cross-lagged models fail to account for trait-like stability in model variables when assessing the influence of one variable on changes in another, they cannot distinguish between-person changes in the rank ordering of participants' scores on the variables from within-person changes in the variables. Thus, we also estimate a random-intercept cross-lagged panel model (Hamaker, Kuiper, & Grasman, 2015; Orth et al., 2021) to specifically examine within-person change in each variable as a function of within-person variation in the others.

Method

Data

Our data come from a six-wave panel study of Polish adults collected online through the Ariadna Research Panel using a computer-assisted web interviewing (CAWI) method that presented the respondent with the questionnaire and instructed them to respond online. All surveys were

conducted in Polish. *Wave 1* reached a representative sample of 1,060 Polish adults (568 women, 492 men) ranging in age from 18 to 94 years ($M=45.09$, $SD=16.00$) between 28 February 2020 and 4 March 2020. Age, gender, town were selected to reflect the population of Polish adults over 18 years old. Five additional waves of data were collected via recontacts of these respondents: *Wave 2* from 13 to 18 March 2020 ($N=932$), *Wave 3* from 27 March 2020 to 1 April 2020 ($N=889$), *Wave 4* from 10 to 15 April 2020 ($N=826$), *Wave 5* from 24 to 30 April 2020 ($N=808$), and *Wave 6* from 8 May to 18 May 2020 ($N=785$). The study was omnibus in nature and broadly aimed at tracking public opinion during the 2020 Polish presidential election. Further information on the sample and translations of all measures can be found in the Supplemental Materials.

Measures

Unless otherwise indicated, responses were given on a 11-point scale (0 = *I do not agree at all*, 10 = *I completely agree*). All variables were recoded to run from 0 to 1 before scales were created; the descriptives below use the 0-1 recodings. Correlations between key study variables across all waves can be found in the Supplemental Materials in Table S1.

National collective narcissism. This was assessed using the five-item Collective Narcissism Scale (Golec de Zavala et al., 2013). An example item is: “I will never be satisfied until Poland gets the recognition it deserves.” Scores were averaged to form a scale in each wave. Higher scores indicate higher collective narcissism (Wave 1: $\alpha=0.90$, $M=0.49$, $SD=0.25$; Wave 2: $\alpha=0.91$, $M=0.50$, $SD=0.25$; Wave 3: $\alpha=0.92$, $M=0.49$, $SD=0.26$; Wave 4: $\alpha=0.92$, $M=0.47$, $SD=0.25$; Wave 5: $\alpha=0.92$, $M=0.47$, $SD=0.26$; Wave 6: $\alpha=0.93$, $M=0.46$, $SD=0.26$).

National in-group satisfaction. This was measured using four items (Leach et al. 2008). An example is: “I am glad to be Polish.” Item responses were averaged to form a scale in each wave, and higher scores indicate greater ingroup satisfaction (Wave 1: $\alpha=0.93$, $M=0.70$, $SD=0.23$; Wave 2:

$\alpha=0.94$, $M=0.70$, $SD=0.23$; Wave 3: $\alpha=0.94$, $M=0.69$, $SD=0.23$; Wave 4: $\alpha=0.94$, $M=0.68$, $SD=0.24$; Wave 5: $\alpha=0.95$, $M=0.67$, $SD=0.24$; Wave 6: $\alpha=0.95$, $M=0.67$, $SD=0.25$).¹

Religious commitment. This was measured using two items: (1) a measure of frequency of attendance at religious services, answered on a 7-point scale; and (2) a question asking whether the respondent was a religious person, answered on a 5-point scale. Responses to the two items were highly correlated in all waves, so they were recoded to run from 0-1 and averaged (Wave 1: $r=0.67$, $M=0.49$, $SD=0.30$; Wave 2: $r=0.65$, $M=0.49$, $SD=0.30$; Wave 3: $r=0.68$, $M=0.49$, $SD=0.30$; Wave 4: $r=0.69$, $M=0.49$, $SD=0.31$; Wave 5: $r=0.71$, $M=0.49$, $SD=0.31$; Wave 6: $r=0.70$, $M=0.48$, $SD=0.31$).

Demographic covariates. These included: a dummy variable indicating *male* gender (1 = yes, 0 = no), *education* (six ordered categories, recoded to run from 0 to 1), *urban residence* (1 = yes, 0 = no), and *age* (in years).

Results

Predictors of Religiosity: Cross-Sectional Analysis

We began by carrying out a cross-sectional examination of the relationships between national collective narcissism (CN) and national in-group satisfaction (IS) and religious commitment. We regressed religious commitment on CN and IS using ordinary least-squares within each wave; each within-wave regression used the measurements of these three variables from that wave. The six models also included male gender, education, urban residence and age (all measured in Wave 1) as covariates to control for variation in commitment due to demographic characteristics. The HC3 robust variance-covariance estimator was used in all models (Long & Ervin, 2000). Summarizing

¹ Federico, Golec de Zavala, and Baran (2020) report confirmatory factor analyses using these data indicating that a two-factor structure best fits the collective-narcissism and ingroup-satisfaction items in each wave.

these results, Figure 1 presents forest plots of the estimates for the relationships between CN and IS and commitment in each wave.²

Figure 1. Forest plots: Religious commitment as a function of national collective narcissism and national ingroup satisfaction in Waves 1-6. The error bands indicate 95% CIs around the predictions. Predicted values based on estimates in Table S2.

As predicted by H1, national collective narcissism had a positive net relationship with religious commitment in all waves (all p s < 0.001). The magnitude of the relationship was relatively similar across waves. For example, in Wave 1, the estimate for CN was $b = 0.46$ ($p < 0.001$), whereas in Wave 6 it was $b = 0.45$ ($p < 0.001$). Given the 0-1 variable codings, the unstandardized coefficients indicate that going from the minimum to the maximum value of CN is associated with a 46%

² The complete set of regression estimates for each wave (including covariates) can be found in Table S2 in the Supplemental Materials. We also report robustness checks in each wave that add conservative identification as a covariate, given the relationship between liberal-conservative ideology and religiosity (Jost et al., 2014). These analyses produce substantive conclusions that are largely identical those reported here in the main analyses (see Figure S1 and Table S3 in the Supplemental Materials).

increase in commitment in Wave 1 and a 45% increase in Wave 6 (Baguley, 2009). Also consistent with H1, national ingroup satisfaction was also positively related to commitment net of the other variables in all waves except for Wave 1, albeit more weakly and inconsistently. To illustrate, in Wave 1, the estimate for IS was $b=0.07$ ($p=0.132$), but in Wave 6 it was $b=0.18$ ($p<0.001$). These estimates indicate that going from the lowest to the highest value of IS corresponded to 7% and 18% increases in commitment in each wave respectively.

Examining the estimates in Figure 1, national collective narcissism appears to be more strongly related than national ingroup satisfaction to religious commitment, consistent with H2. To test this, we conducted two additional analyses in each wave: a dominance analysis and a Wald F-test on the CN and IS coefficients. These statistics for the comparison between CN and IS are provided for each wave in Table 1. We begin with the dominance analysis. The *dominance statistic* for a predictor is the average net contribution to model R^2 made by a predictor to models constructed from all possible subsets of the other $k-1$ predictors. A predictor completely dominates another predictor if it provides a larger net contribution to R^2 than the other predictors across all models constructed from all possible subsets of predictors (Luchman, 2013). Dominance statistics are provided for CN and IS in the first and second columns of Table 1. In each wave, CN completely dominated IS in predictive power, with dominance statistics that were at least twice those of IS. In turn, the Wald F-tests for each wave are summarized in the third and fourth columns of Table 1. Within each wave, this test examines the null hypothesis that the coefficient estimates for CN and IS are equal. As the test statistics in Table 1 indicate, the Wald F was significant in all waves (ps at least <0.05), suggesting that it is relatively unlikely that the coefficients for the two variables are equal in the population in each wave.

Table 1. Comparisons Between CN and IS, Waves 1 through 6

	Dominance Statistics		Wald Test on Coefficients	
	National CN	National IS	<i>F</i> (df)	<i>p</i> value
Wave 1	0.14	0.04	22.18 (1, 1053)	<0.001
Wave 2	0.13	0.05	13.51 (1, 925)	<0.001
Wave 3	0.12	0.06	4.48 (1, 882)	0.027
Wave 4	0.12	0.06	7.28 (1, 819)	0.007
Wave 5	0.13	0.06	8.29 (1, 801)	0.004
Wave 6	0.14	0.07	7.34 (1, 778)	0.007

In sum, cross-sectional regressions within each of the six waves is consistent with the H1 in that both forms of national attachment—collective narcissism and ingroup satisfaction—were associated with religious commitment among Poles (net of demographics). However, consistent with H2, CN was more strongly related than IS to commitment in all waves, suggesting that religiosity in Poland has an especially strong relationship with an exaggerated variant of national identification that requires external validation from others.

Dynamic Models of In-group Satisfaction, Collective Narcissism, and Religious

Commitment

The above analyses examine the relationships between CN, IS, and religious commitment at single points in time. As such, they do not allow us to examine the temporal order of the links between the three variables—in particular, whether national CN and IS predict changes in commitment or vice versa. To address this question, we conducted a series of dynamic analyses that leveraged the panel structure of the data. Using the composite measures of CN, IS, and religious commitment, we estimated two dynamic models: a traditional cross-lagged panel model (CLPM) and a random-intercept cross-lagged panel model (RI-CLPM; Hamaker, Kuiper, & Grasman, 2015).

These models examine dynamic linkages between variables measured repeatedly at multiple time points in different ways. The CLPM accounts for order by controlling for individuals' earlier states on a dependent variable when predicting the latter from an independent variable at an earlier time. Although the CLPM is an appropriate model for estimating over-time effects of between-persons differences in one construct on rank-order changes over time in scores on another construct (i.e., changes in how an individual scores relative to other individuals on the second construct; Orth et al., 2021), it does not distinguish between-person variable stability (relative to the sample means of the variables) from stability within persons relative to each person's trait-like level of each construct (Hamaker et al., 2015). As a result, it does not specifically address the extent to which a given variable changes *within individuals* as a function of whether an individual has a relatively high level of another variable relative to their "average," trait-like level of that variable. In contrast, the RI-CLPM specifically isolates within-person change by adding random intercepts for each variable to the CLPM to account for stable individual differences in each variable in the series. Estimating both models more thoroughly clarifies the ordering of the variable and the level at which dynamic relationships among the variables can be found. If the CLPM indicates that the national-identity variables precede religious commitment and the RI-CLPM does not, this would suggest that between-person (but not within-person change) in commitment follows between-person variation (but not within-person variation) in CN and/or IS.

A conceptual diagram of the CLPM and RI-CLPM is shown in Figure 2. To estimate both models in the same framework, each variable in each wave entered as a latent variable with its observed value as a single indicator with its loading fixed to 1 and its residual variance fixed to 0. Both the CLPM and RI-CLPM (1) regress each construct in a given on all three constructs in the prior wave; (2) permit the disturbances for the variables in Waves 1-6 to correlate within each wave; and (3) allow the Wave 1 measures of the variables to correlate. Stationarity was assumed in both

models, with both the autoregressive paths and the cross-lagged paths constrained to equality across the five intervals between waves. The RI-CLPM adds a random intercept for each variable, defining each intercept as a latent variable with the measures of that construct at the six waves as its indicators (with the loadings are fixed to unity). In the RI-CLPM, the random intercepts can be thought of as a person's average levels of each variable across all waves, and they were allowed to correlate. Fits for the two models can be compared, since the CLPM is nested within the RI-CLPM; the CLPM is identical to the RI-CLPM when the variances and covariances of the random intercepts in the latter are fixed to 0. Both of these models were estimated in R (version 4.0.3) with the `lavaan` package (version 0.6-7) using maximum likelihood with the Satorra-Bentler correction for non-normality (MLM; Rosseel, 2012; Satorra & Bentler, 1994). The models used only those respondents who provided complete data on all measures in all waves ($N=661$). The key estimates for both models can be found in Table 2.

~~As noted above, the CLPM focuses on changes in the rank ordering of respondents in religiosity within the sample as a function of the rank orderings of respondents on IS and CN (and vice versa), plus within-person changes relative to individuals' personal means.~~ The CLPM fit somewhat poorly on the whole, $CFI=0.889$, $RMSEA=0.141$, $SRMR=0.079$, $\chi^2(150)=1523.82$, $p<0.001$. The structural coefficients indicated that all three variables were relatively stable ($\beta=0.91$ for religiosity, $\beta=0.82$ for CN, $\beta=0.81$ for IS; $ps<0.001$). Consistent with H1, both CN ($\beta=0.02$, $p<0.001$) and IS ($\beta=0.02$, $p=0.012$) at $t-1$ had small cross-lagged effects on religious commitment at t . Moreover, in line with H2, the cross-lagged estimate for CN was larger than that of IS, though constraining these paths to equality did not significantly reduce the fit of the model.³ Interestingly, the reverse cross-lagged coefficients—from religiosity to CN and to IS—were also significant

³ i.e., $\Delta\chi^2(1)=0.58$, $p>0.250$.

($\beta=0.08$ for CN, $\beta=0.06$ for IS; $p<0.001$). Though not predicted, this suggests that commitment may also predict over-time increases in both CN and IS.

As noted above, the CLPM focuses mainly on changes in the within-sample rank ordering of respondents' religious-commitment levels as a function of the rank orderings of respondents on IS and CN, and it does not fully distinguish between-person and within-person dynamics. Because of this, it may provide biased estimates of *specifically within-person changes* in one variable due to another (Hamaker et al., 2015; Orth et al., 2021). To zero in on within-person dynamics, we turn to the RI-CLPM estimates (Table 2). The RI-CLPM provided a better fit, CFI=0.995, RMSEA=0.032, SRMR=0.028), with $\chi^2(144)=213.50$, $p<0.001$.⁴ The RI-CLPM reveals little evidence of within-person dynamic effects. IS and CN do not predict shifts in religious commitment within respondents across the six waves ($p>0.250$), and commitment does not predict changes in IS and CN within respondents ($p>0.200$). Nevertheless, the random intercepts—representing stable between-persons variation in each construct—were correlated as predicted. Between-persons CN was correlated with between-persons religious commitment ($\varphi=0.50$, $p<0.001$), and so was between-persons IS ($\varphi=0.39$, $p<0.001$).⁵ Constraining these correlations to equality reduced model fit, suggesting that CN was more strongly correlated with commitment than IS was, $\Delta\chi^2(1)=16.06$, $p<0.001$.

In sum, though the CLPM suggests dynamic effects in both directions, the RI-CLPM results do not find a similar pattern at the specifically within-person level. Rather, the variables relate to one another primarily at the trait-like, between-persons level in the RI-CLPM, in terms of stable individual differences. However, the random-intercept correlations in the RI-CLPM represent zero-

⁴ A difference test indicates a superior fit for the RI-CLPM, $\Delta\chi^2(6)=1230.20$, $p<0.001$.

⁵ The random intercepts for CN and IS were positively correlated ($\varphi=0.61$, $p<0.001$), consistent with previous research on national CN and IS (Golec de Zavala 2019).

order relationships and do not account for the variance shared by CN and IS in estimating the relationship between each of the latter and religious commitment. To address this concern, we re-estimated a variant of the RI-CLPM to provide a regression-based examination of the relationship between the random intercepts for CN and IS and the random intercept for commitment parallel to the within-wave regressions reported in Figure 1. This model was identical to the RI-CLPM, except that the correlations between the random intercepts were removed and the random intercept for religious commitment was regressed on the random intercepts for national CN and IS. In addition, the Wave 1 measurements of the demographics were also included as exogenous predictors in this regression. Thus, this analysis allows us to predict latent religious commitment from latent CN, latent IS, and the demographics in a multivariate analysis.

Table 2. CLPM and RI-CLPM Estimates, Waves 1 through 6

	CLPM Estimates (Between + Within)				RI-CLPM Estimates (Within Only)			
	<i>Estimate</i>	95% CI	<i>Std. Est.</i>	<i>p</i>	<i>Estimate</i>	95% CI	<i>Std. Est.</i>	<i>p</i>
<i>Religious Commitment (t)</i>								
Religious Commitment (<i>t</i> -1)	0.921	[0.908, 0.933]	0.914	<0.001	0.068	[-0.015, 0.150]	0.070	0.110
Collective Narcissism (<i>t</i> -1)	0.029	[0.015, 0.043]	0.024	<0.001	-0.005	[-0.033, 0.024]	-0.007	>0.250
In-group Satisfaction (<i>t</i> -1)	0.015	[0.003, 0.028]	0.012	0.015	0.006	[-0.027, 0.038]	0.008	>0.250
<i>Collective Narcissism (t)</i>								
Religious Commitment (<i>t</i> -1)	0.064	[0.049, 0.079]	0.075	<0.001	-0.028	[-0.075, 0.019]	-0.023	0.247
Collective Narcissism (<i>t</i> -1)	0.792	[0.767, 0.818]	0.794	<0.001	0.129	[0.072, 0.187]	0.151	<0.001
In-group Satisfaction (<i>t</i> -1)	0.045	[0.024, 0.066]	0.040	<0.001	0.039	[-0.010, 0.089]	0.042	0.115
<i>In-group Satisfaction (t)</i>								
Religious Commitment (<i>t</i> -1)	0.046	[0.032, 0.060]	0.060	<0.001	0.028	[-0.017, 0.073]	0.024	0.230
Collective Narcissism (<i>t</i> -1)	0.028	[0.010, 0.046]	0.031	0.003	0.006	[-0.041, 0.053]	0.007	>0.250
In-group Satisfaction (<i>t</i> -1)	0.819	[0.796, 0.842]	0.805	<0.001	0.179	[0.118, 0.240]	0.200	<0.001
<i>RI-CLPM Intercept Correlations:</i>								
CN/IS					0.030	[0.026, 0.035]	0.613	<0.001
CN/Commitment					0.034	[0.029, 0.039]	0.495	<0.001
IS/Commitment					0.024	[0.019, 0.029]	0.385	<0.001

Note. Estimation performed using maximum likelihood with the Satorra-Bentler correction for non-normality. Models assume stationarity; autoregressive and cross-lagged coefficients are fixed to equality across waves. CLPM fit: CFI=0.889, RMSEA=0.141, SRMR=0.079, $\chi^2(150)=1523.82$, $p<0.001$. RI-CLPM fit: CFI=0.995, RMSEA=0.032, SRMR=0.028, with $\chi^2(144)=213.50$, $p<0.001$.

Figure 2. Conceptual diagram of cross-lagged panel (CLPM) and random-intercept cross-lagged panel (RI-CLPM) models of the relationships between CN, IS, and religious commitment. Disturbances within each of Waves 2-6 are allowed to correlate; paths are not shown for visual clarity. Model assumes stationarity; autoregressive and cross-lagged coefficients are fixed to equality across waves. RC = religious commitment; CN = national collective narcissism; IS = national ingroup satisfaction.

The key estimates from this model are summarized in Table 3. Like the RI-CLPM, the modified RI-CLPM fit well, CFI=0.989, RMSEA=0.038, SRMR=0.05, $\chi^2(212)=369.83, p<0.001$. Consistent with H1, the random intercepts for CN ($\beta=0.43, p<0.001$) and IS ($\beta=0.11, p=0.021$) predicted higher scores on the random intercept for religious commitment, net of each other and the controls. Moreover, consistent with H2, latent CN was more strongly related than latent IS to commitment; constraining the regression coefficients for CN and IS to equality produced a significant decline in model fit, $\Delta\chi^2(1)=10.37, p=0.001$. Thus, while the RI-CLPM analyses do not provide evidence for dynamic within-person effects of national identity, they suggest that the stable trait-like portions of CN and IS relate to the stable portion of religiosity in the fashion suggested by our hypotheses.

Table 3. Modified RI-CLPM Regression Estimates, Waves 1 through 6

	Modified RI-CLPM Regression Estimates			
	<i>Coefficient Estimate</i>	<i>95% CI</i>	<i>Standardized Estimate</i>	<i>p</i>
Male	-0.044	[-0.083, -0.005]	-0.148	0.027
Education	0.078	[0.017, 0.140]	0.266	0.013
Age	<0.001	[-0.001, 0.002]	0.001	>0.250
Urban Residence	-0.071	[-0.112, -0.031]	-0.241	0.001
Collective Narcissism	0.545	[0.441, 0.663]	0.434	<0.001
In-group Satisfaction	0.153	[0.023, 0.275]	0.107	0.021

Note. Estimation performed using maximum likelihood with the Satorra-Bentler correction for non-normality. Model assumes stationarity; autoregressive and cross-lagged coefficients are fixed to equality across waves. CFI=0.989, RMSEA=0.038, SRMR=0.05, $\chi^2(212)=369.83, p<0.001$.

Discussion

The aim of this study was to examine links between two key dimensions of national identity—*national collective narcissism* and *national ingroup satisfaction*—and religious commitment in

Poland. Whereas national collective narcissism involves the perception that the national ingroup is extraordinary and worthy of special treatment but unappreciated by outsiders, ingroup satisfaction is simply a tendency to value one's nation and membership in it (Golec de Zavala & Lantos, 2020). Given the historical link between Polish national identity and Catholic religious identity, we expected a positive relationship between both facets of national identity and religious commitment. However, given current populist political rhetoric that connects religious traditionalism with an embattled sense of national identity in Poland, we also expected that Polish collective narcissism would be more strongly related than ingroup satisfaction to religious commitment.

Using a nationally-representative panel study of Poles, we found support for these predictions. In cross-sectional regressions, support for our two hypotheses was clear and consistent. In dynamic analyses, the picture was more complex. On one hand, a traditional cross-lagged panel model (CLPM) suggested that between-person differences in the two national-identity variables predicted between-person changes in religious commitment (and vice versa) over time. On the other hand, a random-intercept cross-lagged panel model (RI-CLPM) that specifically accounted for trait-like stability in national identity and religious commitment indicated that the size of within-person deviations from individuals' stable trait levels of each national identity variable at earlier time periods did not predict within-person changes in religious commitment (or vice versa). Nevertheless, the latter analysis confirmed that the trait-like portions of collective narcissism, ingroup satisfaction, and religious commitment were related in the expected fashion.

What can we take away from these results? Perhaps most simply, they provide empirical evidence of the connection between national identity and religious commitment in the Polish context, consistent with qualitative treatments of the construction of national identity in Poland (Marody & Mandes, 2005). Importantly, the two facets of national identity—national collective narcissism and national ingroup satisfaction—independently related to religiosity in our sample of

Poles. Given well-established differences between collective narcissism and ingroup satisfaction (Golec de Zavala et al., 2019), these results suggest that religious commitment may link up with Polish national identity in multiple, psychologically-distinct ways. On one hand, the relationship between national ingroup satisfaction and religious commitment may partly reflect pride in Polish Catholicism's contributions to national culture, apart from any exaggerated, defensive sense of attachment to the nation. On the other hand, the association between national collective narcissism and religious commitment also suggests that religious involvement is bound up with an embattled sense of national identity and may serve as way of demarcating the ingroup from both outgroups and ingroup political minorities that are perceived to threaten the Polish ingroup's image (Golec de Zavala, 2019).

Nevertheless, the fact that collective narcissism consistently had a *stronger* relationship with religious commitment than ingroup satisfaction also sheds light on specific features of the relationship between national identification and religious commitment in contemporary Poland. Though the relative strength of the relationships between the two dimensions of national identity and religious commitment may vary over time depending on the nature of political discourse (as we note below), the balance of findings suggests that religious commitment is currently linked to the more inflated and brittle aspects of national identity in Poland—namely, those associated with national collective narcissism (Golec de Zavala & Keenan, 2020). As we argued in our introduction, this tracks recent developments in the discursive representation of national identity in Poland. Under the leadership of the Law and Justice Party, nationalism has become increasingly fused with Catholic religious conservatism, with Poland depicted as a faithful remnant challenged by insidious forces at home and abroad that seek to undermine the traditional values central its identity (Golec de Zavala & Bierwiczaneck, 2020; Graff & Korolczuk, 2021). In this context, the relative strength of the

relationship between collective narcissism as an element of national identity and religious commitment is perhaps not surprising.

While instructive, our results leave a number of questions unaddressed. First, though our results provide relatively clear evidence of *associations* between national collective narcissism and national ingroup satisfaction (on one hand) and religious commitment (on the other) in the Polish context, they offer less clarity on the exact causal nature of these relationships. Our panel analyses produced inconsistent results. While the CLPM suggested that individuals with higher levels of the national-identity variables show rank-order increases in religious commitment over time relative to individuals with lower levels of collective narcissism and ingroup satisfaction, the RI-CLPM found little evidence that within-person variation in the national-identity variables (relative to a person's mean level of the two variables) was associated with within-person changes in religious commitment. Nevertheless, the RI-CLPM did confirm the predicted pattern of relations among the stable trait-like portions of the study variables. Given that the RI-CLPM more precisely pinpoints within-person causal dynamics (Hamaker et al., 2015), this implies that national identity did not shape religious commitment (or vice versa) over the study period in terms of changes within individuals.

Several factors might account for this pattern. On one hand, changes in collective narcissism and ingroup satisfaction may relate to changes religious commitment mainly in terms of how different individuals compare to one another on each variable, as opposed to how individuals' attitudes change with one another over time relative to their own stable trait-like levels of the variables (Orth et al., 2021). On the other hand, the absence of within-person cross-lagged effects in the RI-CLPM may simply reflect the short duration of the study (about 2.5 months) and brief lags between waves (1-2 weeks). National collective narcissism and ingroup satisfaction may influence religious commitment within individuals, but only in ways that can be detected over longer periods. Indeed, religious commitment was relatively stable over the study (with $r_s > 0.90$; see Table S1 in the

Supplemental Materials), perhaps leaving little room for short-term effects of national identity. Our reliance on an adult sample adds to these concerns: a short-term panel study of adults may be especially unable to detect dynamics if the causal influence of national identity on religiosity unfolds gradually within persons in adolescence or very early adulthood (prior to when most of our respondents were interviewed; Sears & Brown, 2013).

Second, our results are specific to the Polish context in the present era; this was our explicit focus and we do not intend the results to be interpreted as generalizable. Various dimensions of national identity and religious commitment are likely to be related outside Poland, even if they are not related in precisely the same fashion. Future studies should explore relationships between collective narcissism, ingroup satisfaction, and religious commitment in other nations, while remaining attentive to the particular social and historical links between nationality and religion in those nations when articulating hypotheses. In this vein, we would expect the relative predictive power of national collective narcissism versus ingroup satisfaction to vary depending not only on the extent to which a nation has a dominant religious identity, but also according to whether political discourse constructs national and religious identities in terms of themes of threat and victimization (Golec de Zavala & Keenan, 2020; Korolczuk & Graff, 2018). It is also worth asking whether we might observe somewhat different relationships in a study of Poles conducted at a different time. Recall that our study coincided with the 2020 Polish presidential election. Though this provided us with a look at attitudes during a high-intensity period, nationalistic rhetoric surrounding the election may have strengthened the relationship between collective narcissism and religious commitment beyond a possibly-lower ‘baseline’ level. These questions, along with others, await future study.

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Supplemental Materials for “National Collective Narcissism, In-Group Satisfaction, and Religious Commitment in Contemporary Poland” (Federico, Golec de Zavala, and Baran)

1. Additional Sample and Measure Information

All data and code needed for variable creation and replication of the results of this study can be found at: <https://osf.io/w9h68/>.

Sample Characteristics

Wave 1 respondents ($N=1060$; 570 women, 490 men) ranged between 18 and 94 years in age ($M=45.09$, $SD=16.00$), Wave 2 respondents ($N=932$; 501 women, 431 men) ranged between 18 and 93 years in age ($M=45.62$, $SD=15.79$), Wave 3 respondents ($N=889$; 467 women, 422 men) ranged between 18 and 93 years in age ($M=45.81$, $SD=15.85$), Wave 4 respondents ($N=826$; 430 women, 396 men) ranged between 18 and 93 years in age ($M=46.15$, $SD=15.75$), Wave 5 respondents ($N=808$; 421 women, 387 men) ranged between 18 and 93 years in age ($M=46.15$, $SD=15.75$), and Wave 6 respondents ($N=785$; 405 women, 380 men) ranged between 18 and 93 years in age ($M=45.99$, $SD=15.76$).

Question Wordings for Key Measures

Collective narcissism. This was assessed using the five-item version of the Collective Narcissism Scale (Golec de Zavala et al., 2013). The items were: “If Poland had a major say in the world, the world would be a much better place,” “Poland deserves special treatment,” “It really makes me angry when others criticize Poland,” “Not many people seem to fully understand the importance of Poland,” and “I will never be satisfied until Poland gets the recognition it deserves.”

In-group satisfaction. This was measured using four items (Leach et al. 2008). The items included: “I am glad to be Polish,” “I think that Poles have a lot to be proud of,” “It is pleasant to be Polish,” and “Being Polish gives me a good feeling.”

Religious commitment. This was measured using two items. The first item measured the frequency with which the respondent attended religious services: “How often do you personally go to church for mass?” There were seven ordered response options: “2-3 times a week,” “once a week,” “2-3 times a month,” “once every 3 months,” “once every half year,” “less than once in a half year,” and “in general I do not go to church.” The second item asked whether the respondent was religious: “Are you a religious person?”. Responses were given on a five-point scale ranging from “definitely no” (1) to “definitely yes” (5).

2. Additional Results and Analyses

Correlations Between Key Study Variables

Pairwise correlations between the measurements of the three key study variables in each of the six study waves can be found in Table S1.

Complete Regression Estimates for Waves 1-6

Figure 1 in the main text of the paper presents forest plots summarizing the key estimates for collective narcissism and ingroup satisfaction as predictors of religious commitment within each wave. Table S2 presents the full model estimates for the ordinary least squares regression analyses that were performed in each wave, and which were used to generate the forest plots in Figure 1. Estimates for Waves 1-3 can be found in the top row of Table S2, whereas estimates for Waves 4-6 can be found in the second row. Each wave’s model uses the measures of CN, IS, and religious commitment from that wave, making the analyses cross-sectional in nature. The demographic variables in each model (male, education, age, urban resident) were all assessed in Wave 1. All estimates are unstandardized, and all confidence intervals and p -values were computed based on the HC3 robust variance-covariance estimator (Long & Ervin, 2000).

Table S1. Pairwise Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. RC1	1.00																
2. RC2	0.92	1.00															
3. RC3	0.93	0.91	1.00														
4. RC4	0.93	0.91	0.94	1.00													
5. RC5	0.92	0.91	0.93	0.94	1.00												
6. RC6	0.92	0.92	0.92	0.93	0.93	1.00											
7. CN1	0.42	0.41	0.40	0.38	0.39	0.41	1.00										
8. CN2	0.45	0.42	0.44	0.42	0.43	0.43	0.81	1.00									
9. CN3	0.42	0.41	0.41	0.38	0.40	0.42	0.79	0.82	1.00								
10. CN4	0.43	0.42	0.44	0.41	0.42	0.45	0.80	0.81	0.85	1.00							
11. CN5	0.43	0.40	0.43	0.40	0.42	0.42	0.79	0.83	0.85	0.87	1.00						
12. CN6	0.45	0.43	0.45	0.43	0.43	0.45	0.77	0.80	0.84	0.85	0.87	1.00					
13. IS1	0.28	0.29	0.30	0.28	0.28	0.29	0.57	0.50	0.47	0.50	0.46	0.47	1.00				
14. IS2	0.32	0.31	0.34	0.34	0.33	0.34	0.47	0.57	0.45	0.47	0.45	0.47	0.81	1.00			
15. IS3	0.31	0.32	0.34	0.30	0.31	0.33	0.50	0.52	0.55	0.53	0.49	0.52	0.81	0.82	1.00		
16. IS4	0.33	0.33	0.34	0.32	0.34	0.35	0.50	0.52	0.50	0.56	0.51	0.51	0.80	0.81	0.85	1.00	
17. IS5	0.32	0.32	0.35	0.34	0.32	0.33	0.51	0.54	0.52	0.55	0.57	0.54	0.78	0.80	0.83	0.87	1.00
18. IS6	0.35	0.33	0.36	0.33	0.34	0.36	0.48	0.50	0.47	0.53	0.50	0.58	0.75	0.78	0.82	0.85	0.86

Note. RC1-RC6 = religious commitment, waves 1-6; CN1-CN6 = national collective narcissism, waves 1-6; IS1-IS6 = national ingroup satisfaction, waves 1-6. All correlations significant at $p < 0.001$.

Table S2. Religious Commitment as a Function of Collective Narcissism and Ingroup Satisfaction in Waves 1-6 (Cross-Sectional Estimates)

Predictor	Wave 1			Wave 2			Wave 3		
	<i>b</i>	95% CI	<i>p</i>	<i>b</i>	95% CI	<i>p</i>	<i>b</i>	95% CI	<i>p</i>
Male	-0.03	[-0.07, -0.0004]	0.048	-0.04	[-0.08, -0.006]	0.022	-0.05	[-0.08, -0.01]	0.011
Education	0.07	[0.02, 0.13]	0.009	0.09	[0.03, 0.14]	0.003	0.06	[0.005, 0.12]	0.034
Age	0.0001	[-0.001, 0.001]	>0.250	-0.0002	[-0.001, 0.001]	>0.250	0.0002	[-0.001, 0.001]	>0.250
Urban Resident	-0.07	[-0.10, -0.03]	<0.001	-0.06	[-0.10, -0.03]	<0.001	-0.07	[-0.11, -0.03]	<0.001
Collective Narcissism	0.46	[0.38, 0.55]	<0.001	0.45	[0.36, 0.54]	<0.001	0.39	[0.29, 0.48]	<0.001
Ingroup Satisfaction	0.07	[-0.02, 0.17]	0.131	0.13	[0.03, 0.23]	<0.001	0.20	[0.10, 0.30]	<0.001
Intercept	0.20	[0.11, 0.28]	<0.001	0.17	[0.09, 0.25]	0.011	0.16	[0.07, 0.24]	<0.001
<i>F</i> (df)	41.17 (6, 1053), <i>p</i> <0.001			44.72 (6, 925), <i>p</i> <0.001			41.91 (6, 882), <i>p</i> <0.001		
<i>R</i> ²	0.195			0.296			0.206		
<i>N</i>	1054			926			883		

Predictor	Wave 4			Wave 5			Wave 6		
	<i>b</i>	95% CI	<i>p</i>	<i>b</i>	95% CI	<i>p</i>	<i>b</i>	95% CI	<i>p</i>
Male	-0.05	[-0.08, -0.01]	0.020	-0.04	[-0.07, 0.003]	0.074	-0.06	[-0.10, -0.02]	0.002
Education	0.08	[0.01, 0.14]	0.017	0.08	[0.02, 0.14]	0.016	0.09	[0.02, 0.15]	0.008
Age	-0.0002	[-0.001, 0.001]	>0.250	0.0003	[-0.001, 0.002]	>0.250	-0.0002	[-0.002, 0.001]	>0.250
Urban Resident	-0.08	[-0.12, -0.04]	<0.001	-0.07	[-0.11, -0.03]	0.002	-0.08	[-0.12, -0.04]	<0.001
Collective Narcissism	0.42	[0.32, 0.52]	<0.001	0.43	[0.32, 0.53]	<0.001	0.44	[0.35, 0.55]	<0.001
Ingroup Satisfaction	0.16	[0.05, 0.27]	0.004	0.15	[0.04, 0.26]	0.006	0.19	[0.08, 0.29]	<0.001
Intercept	0.19	[0.10, 0.27]	<0.001	0.16	[0.07, 0.25]	<0.001	0.17	[0.08, 0.25]	<0.001
<i>F</i> (df)	35.50 (6, 819), <i>p</i> <0.001			35.08 (6, 801), <i>p</i> <0.001			47.70 (6, 778), <i>p</i> <0.001		
<i>R</i> ²	0.202			0.203			0.242		
<i>N</i>	820			802			785		

Note. Entries are ordinary least-squares regression coefficients and confidence intervals based on HC3 robust standard errors.

Supplemental Analyses Including Liberal-Conservative Ideology

As a robustness check, we re-estimated the models summarized in Figure 1 and Table S1 with one additional covariate: liberal-conservative ideology. The variable allowed us to provide an additional control for worldview differences related to openness to change versus a preference for the status quo that might be associated with religious commitment (Jost et al., 2003, 2014). Liberal-conservative ideology was measured in each wave using a single item: “How do you assess your political beliefs in general?” The item used a 5-point scale: liberal; rather liberal; hard to say, a bit conservative, a bit liberal; rather conservative; and conservative. Scores were recoded to run from 0-1, with high scores indicating greater conservative identification. We label this variable “conservative identification” (Wave 1: $M=0.46$, $SD=0.25$; Wave 2: $M=0.46$, $SD=0.25$; Wave 3: $M=0.47$, $SD=0.25$; Wave 4: $M=0.47$, $SD=0.26$; Wave 5: $M=0.47$, $SD=0.26$; Wave 6: $M=0.46$, $SD=0.26$).

The six supplemental models were identical in specification to those reported in Table A1, except that the model for each wave also included the conservative-identification variable assessed in that wave. To summarize the results of these analyses, Figure S1 presents forest plots of the estimates for the relationships between CN, IS, and conservative identification (on one hand) and religious commitment (on the other) within each wave. The results are largely consistent with those reported in Figure 1 and Table S2, though some of the effects for CN and IS were somewhat weaker. Conservative identification was positively associated with religious commitment in each wave ($ps<0.001$). Consistent with H1, CN was again positively related to religious commitment in all waves ($ps<0.001$), and IS was as well in all waves except for the first ($ps<0.05$).

Figure S1. Forest plots: Religious commitment as a function of collective narcissism, ingroup satisfaction, and conservative identification in Waves 1-6. The error bands indicate 95% CIs around the predictions.

Consistent with H2, the estimates for CN were again larger than those for IS in all waves. CN completely dominates IS in all waves, and the Wald F-test on the difference between the CN and IS coefficients is significant ($p < 0.05$) in all waves but Waves 3 and 6.⁶ Comparisons between the estimates for CN and IS are summarized in Table S3.⁷ In sum, the results of the analyses are substantively similar when conservative identification is considered as an additional covariate.

⁶ The Wald F-test was marginally significant in Wave 6, $p = 0.066$ (see Table S3).

⁷ The model estimates also indicated that CN showed “general dominance” over conservative identification in all waves besides Waves 1 and 3. That is, the average net contribution of CN to R^2 (averaged across all models constructed from all possible subsets of the other $k-1$ predictors in the model) was larger than that contributed by all other predictors (Luchman, 2013). All things considered, collective narcissism is usually the strongest predictor of religious commitment even in most of the models that all include conservative identification.

Table S3. Comparisons Between CN and IS with Conservative Identification Included as a Covariate, Waves 1 through 6

	Dominance Statistics		Wald Test on Coefficients	
	National CN	National IS	<i>F</i> (df)	<i>p</i> value
Wave 1	0.10	0.03	12.21 (1, 1052)	<0.001
Wave 2	0.10	0.04	5.60 (1, 924)	0.018
Wave 3	0.09	0.05	1.32 (1, 881)	>0.250
Wave 4	0.10	0.05	3.99 (1, 818)	0.046
Wave 5	0.10	0.05	5.01 (1, 800)	0.025
Wave 6	0.11	0.06	3.39 (1, 777)	0.066