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Collective Narcissism Moderates the Effect of In-group Image Threat on Intergroup Hostility

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Abstract

Results of four experiments demonstrated that under in-group image threat collective narcissism predicts retaliatory intergroup hostility. Under in-group criticism (vs. praise) collective narcissists expressed intention to harm the offending out-group but not other, non-offending out-groups. This effect was specific to collective narcissism and was replicated in studies that accounted for the overlap between collective narcissism and individual narcissism, in-group positivity (in-group identification, blind and constructive patriotism), social dominance orientation and right wing authoritarianism. The link between collective narcissism and retaliatory intergroup hostility under in-group image threat was found in the context of national identity and international relations and in the context of a social identity defined by university affiliation. Study 4 demonstrated that the relationship between collective narcissism and intergroup hostility was mediated by the perception of in-group criticism as personally threatening. The results advance our understanding of the mechanism driving the link between collective narcissism and intergroup hostility. They indicate that Threatened Egotism Theory can be extended into the intergroup domain.

Keywords: collective narcissism, in-group image threat, intergroup hostility

In his "Letter to the American People," Osama bin Laden called for the moral betterment of Western civilization under the guidance of fundamentalist Islam and warned: "If the Americans refuse to listen to our advice and the goodness, guidance and righteousness that we call them to, then be aware that you will lose this Crusade Bush began (…)" (Full text: bin Laden's "letter to America," 2002). The letter expresses Bin Laden's belief that the group he represents is superior to others. It should, therefore dominate and guide other groups. Moreover, this group is entitled to punish members of other groups for the lack of proper recognition of this group's extraordinary characteristics and privileged position. From this perspective, the terrorist attacks of 9/11 can be seen as retaliatory violence in response to the humiliating lack of regard for the privileged in-group. Throughout human history there have been multiple examples of atrocities inspired and legitimized by the belief that others did not recognize the greatness and the privileged position of the in-group. Germans under the Nazi regime believed that their self-proclaimed right to the "better living space" and pure blood of the Aryan race was, to put it mildly, not properly appreciated by other nations.

In this paper we propose that a phenomenon operating at the psychological level, namely *collective narcissism*, may help explain these large-scale social phenomena (see e.g., Adorno, 1951; Emmons, 1987). Inflated beliefs in one's own superiority and entitlement, contingent on continuous external validation, are characteristics of narcissism (Crocker & Park, 2004; Morf & Rhodewalt, 2001). Narcissists respond with anger and aggression to personal insult, criticism or humiliation. It has been proposed that narcissistic hostility is direct, retaliatory and serves ego defensive purposes (Bushman & Baumeister, 1998). Individual narcissism has an equivalent at the social level of self (Golec de Zavala, Cichocka, Eidelson, & Jayawickreme, 2009; Golec de Zavala, 2011a). We propose that just as narcissistic individuals react with defensive violence against those who insult, humiliate or

criticize them, collective narcissists become hostile against those who insult or criticize their in-group. Collective narcissists may perceive in-group criticism as personally threatening and use intergroup violence to restore positive self- and group-image.

In this paper we present four experiments that, using different intergroup contexts and assessing collective narcissism with reference to different social groups, test the hypothesis that collective narcissism predicts retaliatory intergroup hostility. These studies compare the moderating effect of collective narcissism with a variety of individual difference variables that have been shown to predict intergroup hostility (e.g., right wing authoritarianism, social dominance orientation) or hostile responses to criticism (e.g., individual narcissism, collective self-esteem and high in-group identification). We conclude with a discussion of the implications of these findings for the illumination of the psychological mechanism underlying the relationship between collective narcissism and intergroup hostility.

Collective Narcissism and Intergroup Hostility

Collective narcissism is defined as an emotional investment in a belief in the unparalleled greatness of an in-group (Golec de Zavala et al., 2009). Inasmuch as people can idealize the self, they can idealize social groups to which they belong and differ with the extent they do so (for a similar idea that processes on individual level of self can be paralleled by processes on the social level of self see e.g., Bizman, Yinon, & Krotman, 2001; Gramzow & Gaertner, 2005; Hornsey, 2003). Just like the narcissistic idealization of the self, the narcissistic idealization of an in-group may be contingent on its external recognition and involve hypersensitivity to threats to the in-group's image.

We propose that collective narcissism captures the capacity of exaggerated group esteem to inspire out-group hostility in response to perceived threat to the in-group's positive image. Collective and individual narcissism are positively related. Studies indicate that the

strength of their relationship ranges from relatively weak to moderate (*rs* =.15 to .27; Golec de Zavala et al., 2009). Importantly, collective narcissism predicts intergroup attitudes and behaviors that individual narcissism does not account for and individual narcissism predicts interpersonal anger and interpersonal aggressiveness, both of which are unrelated to collective narcissism (Golec de Zavala et al., 2009; Studies 2 and 3).

Collective narcissism predicts intergroup hostility over and above such robust predictors as social dominance orientation or right wing authoritarianism (Golec de Zavala et al., 2009). We claim that the psychological mechanism underlying the relationship between collective narcissism and intergroup hostility is considerably different than the mechanism that drives the relationship between intergroup hostility and other predictors. Namely, intergroup hostility related to collective narcissism is a response to actions taken by an out-group (or out-group members) that are perceived as undermining the positive image of the in-group and are experienced as offensive and threatening. Intergroup hostility inspired by collective narcissism is specific and retaliatory in nature. Intergroup hostility in response to in-group criticism serves the function of punishing the offending out-group and restoring the in-group's image.

Supporting this line of reasoning, correlational analyses indicate that collective narcissists are sensitive to anything that can be interpreted as a threat to the exaggerated image of the in-group. For example, Mexicans high in collective narcissism perceived the construction of the wall along the Mexican-American border as more of an insult to Mexico and Mexicans than did those low in collective narcissism (Golec de Zavala et al., 2009; Study 5). Poles high in collective narcissism saw publication of a book that analyzed anti-Semitic outbursts in Poland during the Second World War as more of an insult to Poland and Poles than a presentation of an unwanted aspect of complex Polish-Jewish relationships than did

Poles low in collective narcissism. Turkish participants high in collective narcissism perceived the Turkish long wait to enter the European Union as more of an insult to and humiliation of their nation than did Turkish participants low in collective narcissism (Golec de Zavala & Pekker, 2012). Polish participants high in collective narcissism perceived as offensive the fact that the anniversary of the collapse of Communism was celebrated in Germany, not in Poland (Cichocka & Golec de Zavala, 2011). Importantly, the perception of the actions of other groups as offensive and insulting mediated the relationship between collective narcissism and intergroup hostility in the above-mentioned studies. In addition, correlational studies show that collective narcissists are prejudiced only towards those social groups that they regard as threatening the in-group's image or those who threatened the in-group's greatness in the past. For example, Polish collective narcissists tend to be prejudiced against Jews and Germans, but less consistently towards French or British people (e.g., Golec de Zavala & Cichocka, 2012; Golec de Zavala, Cichocka, & Bilewicz, 2013).

Exaggerated sensitivity to threat to the in-group image can be explained by the very nature of the narcissistic in-group evaluation. Just as the self-worth of individual narcissists is contingent on the constant admiration of others (e.g., Bushman & Baumeister, 1998; Baumeister, Bushman, & Campbell, 2000; Stucke & Sporer, 2002), the exaggerated greatness of an in-group promoted by collective narcissists is dependent on continuous external validation. Therefore, collective narcissists are constantly vigilant for signs of anything that might jeopardize the in-group's image. The aversive effects of in-group criticism or the cessation of external validation of the in-group's greatness may also be amplified by collective narcissists' own unacknowledged doubts concerning the in-group's inflated image. Empirical findings show that collective narcissism is related to high explicit collective self-esteem but underpinned by low implicit collective self-esteem (Golec de Zavala et al., 2009;

Study 4). Thus, conceivably, collective narcissists are sensitive to group-directed criticism because they are chronically threatened by their own ambiguous feelings towards the in-group.

Collective Narcissism and Other Forms of In-group Positivity

Studies show that collective narcissists perceive certain out-groups as chronically threatening to the in-group and are chronically hostile towards them (Golec de Zavala & Cichocka, 2012). In this paper we test the prediction that collective narcissism will also predict hostile responses to threat and criticism coming from out-groups that are usually not perceived as threatening and not usually targeted by collective narcissists' hostility. The present studies are the first to examine the proposition that collective narcissists react with uniquely elevated hostility in direct response to in-group criticism and that they do so because they perceive such criticism as threatening.

Previous studies provide foundational support for our expectations. Firstly, studies show that individual narcissists react aggressively to ego threats such as criticism of individual performance (Bushman & Baumeister, 1998). In the intergroup context, studies on the Intergroup Sensitivity Effect reveal that the external critics of an in-group are less accepted and more severely punished than its internal critics (Horsney, Trembath, & Gunthorpe, 2004; Hornsey, Oppes, & Svensson, 2002; Tarrant & Campbell, 2007; for review see Hornsey, 2005). Importantly, these studies show that negative attitudes towards out-group members who criticize the in-group are higher among strong identifiers (Morier, Bryan, & Kasdin, 2012; Tekman, Hortacsu, & Afife, 2008).

In a related vein, a study reported by Branscombe and Wann (1994) demonstrated that high national pride moderates the intergroup effects of a failure in an intergroup competition when that failure can be perceived as a threat to the in-group image. In this study, the authors

asked 40 female participants to watch a fragment of a popular movie, *Rocky IV,* in which an American boxer loses a fight against a Russian boxer. Participants who initially reported that they frequently experience pride in being American, expressed stronger negative attitudes towards Russians after watching an American losing to Russian in a boxing match than did those participants who watched the match but not the defeat in the finale. It was assumed that losing a boxing match is experienced as threat to the in-group's positive image. Those findings fit our moderation hypothesis but they fall short of providing direct support for the expected effects. They did not specify that it is the narcissistic national pride (rather than national pride in general or confidently held patriotic pride) that inspires intergroup hostility after in-group image threat. In addition, Branscombe and Wann's study did not empirically establish that watching the defeat of the American boxer was experienced as threatening to the in-group's positive image.

We argue that existing measures of national group identification, national pride, patriotism and collective self-esteem conflate non-narcissistic and narcissistic aspects of positive group regard and that it is collective narcissism that inspires intergroup hostility in response to intergroup threat. Non-narcissistic positive group regard is not related to intergroup hostility after the overlap between narcissistic and non-narcissistic aspects of in-group positivity is controlled for (Golec de Zavala, et al., 2013). We aim to empirically demonstrate that in-group criticism is experienced as personal threat by individuals scoring high in collective narcissism. In addition, we expect that the moderating role of collective narcissism on the intergroup effects of in-group criticism will generalize beyond the international to other, less emotionally charged, intergroup contexts. This possibility has not yet been empirically examined.

The Present Studies

In this paper, we present results of four experimental studies in which we examined the hypothesis that collective narcissism moderates the effects of in-group image threat on intergroup hostility. We expected that collective narcissists would react with vengeful hostility towards an out-group that threaten the in-group's positive image but not towards non-offending out-groups. In other words, we expected collective narcissistic intergroup hostility to be retaliatory, specific and not displaced.

Moreover, we expected that this moderation effect would be specific to collective narcissism. In other words, we expected that the relationship between collective narcissism and retaliatory intergroup hostility under in-group image threat would not be explained by an overlap of collective narcissism with other forms of in-group positivity (e.g. positive in-group identification or patriotism), individual narcissism or other predictors of generalized intergroup hostility such as right wing authoritarianism or social dominance orientation.

Finally, we expected that collective narcissistic intergroup hostility would be defensive: that it would serve to protect the ego from threat. Thus, in Study 4 we tested a hypothesis that the combined effect of in-group image threat and collective narcissism on intergroup hostility would be mediated by the perception of in-group criticism as personally threatening.

In our studies we adapted methodologies used in previous research that inspired our hypotheses: studies that have examined the moderating role of individual narcissism on the effects of ego-threat vs. ego-praise on interpersonal aggression (Bushman & Baumeister, 1998) and studies that have looked at the effects of in-group directed criticism versus in-group directed praise on out-group attitudes (Hornsey, 2005).

Study 1

Study 1 provided an initial test of the hypothesis that collective narcissism predicts retaliatory intergroup hostility under in-group image threat. We expected that in comparison to an in-group praise condition, under in-group criticism collective narcissism would be related to hostility toward an offending out-group but not towards a non-offending out-group. In addition, we tested the assumption that collective narcissism is a form of positive in-group regard unique in its ability to inspire retaliatory intergroup hostility in response to in-group image threat. Therefore, we allowed collective narcissism and non-narcissistic in-group positivity (operationalized as positive in-group identification) to compete as moderators of the effects of in-group image threat on intergroup hostility as was done on the individual level in studies conducted by Bushman & Baumeister (1998). These authors demonstrated that personal self-esteem did not predict interpersonal aggression in response to ego-threat when individual narcissism was taken into account. We argue that in the intergroup context it is the narcissistic rather than non-narcissistic positive group esteem that moderates the effects of in-group image threat on intergroup hostility (e.g., Branscombe & Wann, 1994; Tekman, et al., 2008).

We also examined the hypothesis that the relationship between intergroup hostility and collective narcissism under in-group image threat would remain significant even after the analyses account for the overlap of collective narcissism and individual narcissism, right wing authoritarianism and social dominance orientation. All three variables were found to correlate with collective narcissism and all three are robust predictors of hostility. Individual narcissism predicts interpersonal hostility, vengeful rancor and anger (e.g. Baumeister, Smart, & Boden, 1996; Bushman, & Baumeister, 1998; Rhodewalt & Morf, 1989). Social dominance orientation and right wing authoritarianism predict intergroup hostility, aggressiveness and prejudice (e.g., Cohrs, & Abrock, 2009; Duckitt, 2006; Jackson, & Gaertner, 2010,

McFarland, 2005; Sidanius & Pratto, 1999). We allowed in-group identification, individual narcissism, right wing authoritarianism and social dominance orientation to compete with collective narcissism as moderators of the effects on in-group image threat on intergroup hostility.

Method

Participants. Study 1 was conducted among 153 American participants. Data from 19 participants were not included in the analyses due to missing data on a dependent variable measure. Among the remaining 134 participants 63 were men and 62 women (9 participants did not provide information about age and gender). The mean age was 29.99 (*SD* = 11.03).

Procedure. In an on-line experiment conducted on Amazon's MTurk, participants were asked to take part in a study with the alleged aim of comparing American worldviews and opinions about European nations with the opinions about Americans among Europeans. First, participants responded to scales measuring the moderating variables: collective and individual narcissism, national in-group identification, social dominance orientation and right wing authoritarianism. Next, participants were randomly assigned to the positive (n = 66) or negative (n = 68) in-group evaluation condition. Participants were informed that they would be asked to provide their opinions about two randomly chosen European nations. Before expressing their opinions they were asked to read a sample opinion of a foreign exchange student in the US who comments about America, Americans and American politics.

Study 1 used the method of manipulating in-group criticism vs. praise adopted from the studies on the Intergroup Sensitivity Effect (but using only *external* positive vs. negative evaluation; Hornsey, 2005; Sutton, Elder, & Douglas, 2006). In both research conditions participants were asked to read an example of responses to an attitudes survey provided by an international student. The fragment was allegedly authored by a British student (23-year old,

no gender was indicated) who participated in a student-exchange program to the US which either criticized or praised Americans for their involvement in the War on Terrorism. This manipulation of in-group directed criticism was pre-tested and has been used in previous studies (Sutton, Douglas, & McClellan, 2012). The negative evaluation read: "I think that they invaded Iraq on the basis of a lie about the presence of 'weapons of mass destruction.' They certainly cannot claim to have brought freedom and a stable democracy to Iraq, and indeed I think they have condemned it to civil war. I also think that by going into Iraq they have made themselves a major target for terrorism." The positive evaluation read: "I think that they invaded Iraq on the basis of the intelligence regarding the presence of 'weapons of mass destruction.' They certainly can claim to have brought freedom and a stable democracy to Iraq, and indeed I think they have prevented civil war in Iraq. I also think that by going into Iraq they have reduced the risk of international terrorism targeting innocent people."

After reading the excerpt, participants were asked two manipulation check questions presented as checks of whether they read and understood the fragment. Finally, they were asked to indicate their behavioral intentions towards German and British people (counterbalanced) and reminded that those groups were chosen at random by a computer program. National surveys indicate that attitudes towards both Germans and British people are rather positive among American public (e.g., BBC, 2011). Thus, there was no reason to expect that either of these groups will be disliked or present a threat to the American national in-group image before the experimental manipulation was introduced.

Measures.

Manipulation check. We checked the effectiveness of the experimental manipulation with two items: "The opinion about America and Americans expressed by the foreign exchange student in the interview transcript was?" (1 = *very negative* to 7 = *very positive*) and

"The opinion about America and Americans expressed by the foreign exchange student in the interview transcript makes me feel" (1 = *definitely unpleasant* to 7 = *definitely pleasant*), r (132) = .67, p <.001, M = 4.44, SD = 1.63. Higher scores in this measure indicate that the opinion of the exchange student about Americans was perceived as more favorable and pleasant.

Collective narcissism (α = .83, M = 3.51, SD = 1.22) was measured by a 5-item Collective Narcissism Scale used in previous studies (Golec de Zavala, et al., 2013). Participants were asked to think about their national in-group while responding to the items (e.g., "Not many people seem to fully understand the importance of my national group") on the scale ranging from 1 = *definitely disagree* to 6 = *definitely agree*.

Individual narcissism (α = .78, M=.31, SD=.22) was measured by the 16-item Narcissistic Personality Inventory (NPI-16, Ames, Rose, & Anderson, 2006). This inventory measures people´s beliefs in their own exaggerated greatness. It correlates highly (average r = .90) with the original NPI-40 measure assessing the construct of individual narcissism developed by Raskin & Terry (1988). For each item participants can give a narcissistic (e.g., "I know that I am good because everybody keeps telling me so"; coded 1) or a non-narcissistic (e.g., "When people compliment me I sometimes get embarrassed"; coded 0) answer. The mean of the answers was computed. Higher scores on this scale represent higher levels of individual narcissism.

Social dominance orientation (α = .83, M = 2.43, SD = 1.20) was measured by the 4-item version of the Social Dominance Orientation Scale used in previous studies (Pratto et al., in press). The scale contains items measuring support for social hierarchies (e.g., "It would be better if all groups knew their place in the hierarchy"). Participants responded using the scale where 1 = *definitely disagree* to 7 = *definitely agree.*

Right wing authoritarianism (α = .85, *M* = 2.98, *SD* = 1.10) was measured by the 10-item version of the original Right Wing Authoritarianism Scale proposed originally by Altemeyer (1988), shortened and used in previous studies (Golec de Zavala et al., 2009; McFarland, 2005). Participants responded to the items of the scale (e.g., "Obedience and respect for authority are the most important virtues children should learn.") using a scale from 1 = *definitely disagree* to 7 = *definitely agree.*

In-group identification (α = .89, *M* = 4.21, *SD* = 1.42) was measured with a 4 - item scale used in previous studies (e.g., Jetten, Branscombe, Spears, & McKimmie, 2003; Stone & Crisp, 2007). Participants responded to items such as "I identify strongly with other American people" using a scale from 1 = *definitely agree* to 7 = *definitely disagree*.

Hostile behavioral intentions towards British and German people were measured using the procedure proposed by Mackie, Devos and Smith (2000). Participants were asked to respond using a scale from 1 = *not at all* to 6 = *very much* to the question "To what extent do the members of this group make you want to…?" Participants were asked to what extent they wanted to *confront* or *actively oppose* British people, *r* (132) = .75, *M* = 2.11, *SD* = 1.29 or German people, *r* (132) = .75, *M* = 1.90, *SD* = 1.25.

Results

Correlations. The correlation analyses indicate that across research conditions collective narcissism, in-group identity, social dominance orientation and right wing authoritarianism were positively related to hostile behavioral intentions towards British people. All five predictors were also positively associated with aggressive intentions towards German people. Aggressive intentions towards British and German people were positively correlated. Collective narcissism correlated positively with all other individual difference variables (Table 1).

TABLE 1

Manipulation check. Inspection of mean responses to the manipulation check questions revealed that in the in-group criticism condition (M = 3.33, SD = 1.29) participants perceived the attitude of the British exchange student as significantly less favorable towards Americans and less pleasant than in the in-group praise condition (M = 5.49, SD = 1.20), $F(1,132) = 100.74$, $p < .01$, $\eta_p^2 = .43$.

The effect of collective narcissism and in-group image threat on retaliatory intergroup hostility. In order to test the hypothesis that collective narcissism is a unique moderator of the effect of in-group image threat (vs. praise) on retaliatory intergroup hostility, we performed a series of hierarchical multiple regression analyses. The first model tested the main effects of collective narcissism and experimental condition on the tendency to support hostile actions towards the offending out-group (British people). Age and gender, individual narcissism, social dominance orientation, right wing authoritarianism, and positive in-group identification were also entered in Model 1. The second model added all two-way interactions of research condition and the continuous predictors. All continuous variables were centered prior to analyses. Experimental conditions were coded ”0” for in-group praise condition and ”1” for in-group criticism condition. Gender was coded ”0” for men and ”1” for women. Listwise deletion of missing data was used.

The results from Model 1 revealed a positive and marginally significant main effect of the experimental manipulation (p = .10). Participants in the in-group criticism condition (M = 2.39, SD = 1.43) expressed higher support for hostile actions towards the offending out-group than participants in the in-group praise condition (M = 1.83, SD = 1.08). In addition, higher levels of right wing authoritarianism, social dominance orientation (p = .056) and in-group identification predicted intentions to engage in hostile actions towards the offending out-

group. The results of Model 2 indicated that the effect of research condition was qualified only by the significant interaction of research condition and collective narcissism. Only the main effect of right wing authoritarianism remained significant in Model 2. Adding the interaction of collective narcissism and research condition to the regression equation significantly increased the amount of explained variance in the criterion variable, $\Delta R^2 = .02$; $F(1, 111) = 3.92$, $p = .05$. No other interaction was significant (Table 2)[1].

TABLE 2

In order to probe the significant interaction, simple slopes were computed according to the procedure proposed by Cohen, Cohen, West and Aiken (2003) using the MODPROBE syntax provided by Hayes and Matthes (2009). In all studies the covariates were included in the simple slopes analyses[2]. The analyses revealed that the relationship between collective narcissism and hostile behavioral tendencies towards the offending out-group was positive and significant in the in-group criticism condition ($b = .32$, $SE = .13$, $t(126) = 2.47$, $p = .02$) but was not significant in the in-group praise condition ($b = -.20$, $SE = .13$, $t(126) = -1.60$, $p = .11$) (Figure 1).

FIGURE 1

The effect of collective narcissism and in-group image threat on hostility towards the non-offending out-group. In order to test the hypothesis that the intergroup hostility related to collective narcissism is retaliatory and does not spill over to an out-group that did not threaten the image of the in-group, we performed the same series of hierarchical regression analyses using hostility towards the non-offending out-group as a criterion variable. Hostility towards Germans was assessed after in-group image threat was introduced but this out-group was not a source of the threat. The results of Model 1 revealed that hostility toward Germans was predicted by higher levels of social dominance orientation and right

wing authoritarianism (marginally significant, $p = .08$) and individual narcissism. The results of Model 2 did not reveal any significant effect (Table 3). The two-way interaction of research condition and collective narcissism was not significant ($p = .99$). Adding the two way interaction of research condition and collective narcissism to Model 2 did not increase the amount of explained variance, $\Delta R^2 = .000$, $F(1,111) = .00$, $p = .99$[3].

TABLE 3

In-group image threat, collective narcissism and retaliatory intergroup hostility.

In order to provide an alternative test for the hypothesis that under in-group criticism collective narcissism affects hostility towards the offending but not towards the non-offending out-group we performed a 2 (target out-group: offending vs. non-offending) x 2 (research condition: in-group criticism vs. praise) GLM with the first factor repeated. We entered continuous predictors as covariates and controlled for participants age and gender. We tested the model which analyzed the two-way interaction of the repeated and between subject factors, two-way interactions of the within subject factor with all continuous predictors, and three-way interactions of within subject factor, between subject factor and continuous predictors.

The results revealed that only the three-way interaction between the target out-group, experimental manipulation and collective narcissism was significant, Wilk's $\lambda = .96$, $F(1, 111) = 4.27$, $p = .04$, $\eta_p^2 = .04$. Parameter estimates indicated that for the offending out-group the interaction between research condition and collective narcissism was significant ($b = .41$, $SE = .21$, $t(111) = 1.98$; $p = .05$). In comparison to the in-group praise condition, under in-group criticism, collective narcissism significantly increased intergroup hostility.

Discussion of Study 1

Results of Study 1 provided initial support for the hypothesis that collective narcissism moderates the effects of in-group image threat on retaliatory intergroup hostility. American national collective narcissism was associated with hostile action tendencies towards British people only after participants were led to believe that a British person criticized American involvement in the War on Terror. When the opinion about American involvement in the War on Terror expressed by a British person was positive, the relationship between collective narcissism and support for hostile actions towards British people was not significant.

The results of Study 1 revealed that collective narcissism was the only significant moderator of the effect of in-group criticism on retaliatory intergroup hostility. The effect of collective narcissism on intergroup hostility under in-group image threat remained significant when the analyses accounted for the overlap of collective narcissism with positive in-group identification, individual narcissism, right wing authoritarianism and social dominance orientation.

In addition, the results of Study 1 confirmed that under in-group criticism the intergroup hostility associated with collective narcissism is specific and retaliatory: it targets only the out-group that threatened the in-group's positive image. We expected and found that under in-group criticism collective narcissism was associated with support for hostile actions towards the offending out-group (the British), but not towards the non-offending out-group (the Germans).

The results of Study 1 provided encouraging support for our hypotheses. Nevertheless we believed that a replication was desirable. The measure of intergroup hostility that we adopted in Study 1 from Mackie and colleagues (Mackie, et al., 2000), pertains to two actions (*confront* and *oppose*). Although these actions are clearly antagonistic, they are not unambiguously hostile: they do not reflect a clear desire to harm the out-group, which is

crucial for the definition of hostility. Arguably, actively opposing and confronting the out-group that criticized the in-group may be seen as a reasonable, not hostile, response to the situation. Thus, in Study 2 we sought to replicate our findings using an improved operationalization of intergroup hostility.

Study 2

In Study 2 we used a more direct and explicit measure of intergroup hostility. In addition, we controlled for an overlap between national collective narcissism and two forms of positive attachment to a nation: blind and constructive patriotism. Our previous studies indicate that national collective narcissism is positively associated with both forms of patriotism and all three variables are associated with intergroup hostility (Golec de Zavala et al.,2009; Golec de Zavala et al., 2013). Thus, in Study 2 we wanted to exclude the possibility that the interaction effect of collective narcissism and in-group image threat is driven by the overlap between collective narcissism and blind or constructive patriotism. Especially we believed the relationship between collective narcissism and blind patriotism to be relevant because both variables are related to concerns with in-group´s positive image and in-group criticism. However, while blind patriots reject and avoid in-group criticism, collective narcissists are particularly sensitive to it. Collective narcissists are constantly looking for signs of insufficient appreciation of the in-group (e.g., Golec de Zavala & Schatz, 2012).

Method

Participants. Study 2 was conducted with 115 American participants. Data from 7 participants were not included in the analyses due to missing data on a dependent variable measure. The age of the remaining 108 participants ranged from 18 to 71 (M = 31.48, SD = 12.33). There were 58 women and 48 men, 2 participants did not provide information about their gender.

Procedure. The on-line experiment was conducted via Amazon's MTurk. We asked participants to take part in a survey allegedly about social beliefs and attitudes towards different nations of the world conducted internationally and including an American sample. Participants were first asked to provide demographic information. Next, they were asked to respond to the Collective Narcissism Scale and instructed to think about their nation while responding to the items. Social dominance orientation, right wing authoritarianism, blind and constructive patriotism, positive national identification and individual narcissism were also assessed.

Next, participants were randomly allocated to in-group praise (n = 64) or in-group criticism (n = 44) condition. Study 2 used a method of manipulating in-group criticism vs. praise similar to that used in Study 1, with participants reading a comment ostensibly made by a British foreign exchange student. However, while in Study 1 in-group criticism vs. praise concerned a very specific and controversial aspect of American international politics, in Study 2 we sought to make the criticism vs. praise more general and concerning all Americans regardless of their worldviews or opinions on particular national politics. The negative evaluation read: "Thinking about Americans, it seems to me that they are very materialistic and arrogant. I also think that it is a nation of ignorant people - they do not know much about countries and cultures beyond their own." The positive evaluation fragment read: "Thinking about Americans, it seems to me that they are friendly and optimistic. I also think that it is a nation of hardworking people - they respect both their own and other people's efforts. "

Participants were then asked to respond to a measure of attitudes towards several nations of the world. They were informed that the nations and the number of attitude questions would be chosen at random by the program administering the survey. Participants were asked what kind of actions they would be willing to engage in with members of two

national groups: British people and New Zealanders. The order of groups was counterbalanced. Finally, participants were asked the manipulation check questions.

Measures.

Manipulation check. Participants were asked to respond to the same questions as in Study 1, r (105) = .90, p <.001, M = 4.77, SD = 2.08.

Collective narcissism (α = .82, M = 3.39, SD = 1.26) was measured by the Collective Narcissism Scale (see Study 1).

Individual narcissism (α = .84, M = .31, SD = .25) was measured by the Narcissistic Personality Inventory (see Study 1).

Social dominance orientation (α = .85, M = 2.38, SD = 1.14) was measured by the Social Dominance Orientation Scale (see Study 1).

Right wing authoritarianism (α = .80, M = 3.20, SD = 1.31) was measured by the Right Wing Authoritarianism Scale (see Study 1).

In-group identification (α = 93, M = 4.38, SD = 1.47) was measured as in Study 1.

Blind (α = .80, M = 3.44, SD = 1.40) ***and constructive patriotism*** (α = .80, M = 5.61, SD = .91) were measured by 10 items randomly selected from the original scale proposed by Schatz, Staub and Lavine (1999). Five items measured constructive patriotism (e.g., "My love of America demands that I speak out against popular but potentially destructive policies.") and five items measured blind patriotism (e.g., "People who do not wholeheartedly support the U.S. should live somewhere else.") These items have been used in previous studies (e.g., Golec de Zavala et al., 2009).

Hostile behavioral intentions (British α = .85, M = 1.30, SD = .73; New Zealanders α = .85, M = 1.25, SD = .63) were measured similarly to Study 1. However, in Study 2 we used actions that unambiguously relate to aggressive intentions to hurt and cause suffering to

members of the targeted out-groups. For both target groups we asked participants to what extent they wanted to *hurt, offend, injure, intimidate and humiliate* members of the out-group. Participants were asked to respond using a scale from 1 = *not at all* to 6 = *very much* to the question "To what extent do the members of this group make you want to…?."

Results

Correlations. Across research conditions collective narcissism was positively related to individual narcissism, social dominance orientation, right wing authoritarianism, blind patriotism and in-group identification. Collective narcissism was also positively correlated with support for aggressive actions towards British and New Zealander targets. The indices of hostility towards the offending and the non-offending out-group were positively correlated. They both were positively correlated with individual narcissism and negatively correlated with constructive patriotism (Table 4).

TABLE 4

Manipulation check. The inspection of the means on the manipulation check questions confirmed that participants thought that the opinion of the foreign exchange students about Americans was more positive and pleasant in the in-group praise condition (M =6.28, SD =.96) than in the in-group criticism condition (M =2.60, SD =1.07), $F(1, 105)$ = 346.10, $p < .001$, $\eta^2 = .77$.

The effect of collective narcissism and in-group image threat on retaliatory intergroup hostility. Like in Study 1, we first tested the hypothesis that the experimental manipulation and collective narcissism, but no other continuous predictors, would interact in predicting retaliatory intergroup hostility. As in Study 1, we performed a series of hierarchical multiple regression analyses. The first model tested the main effects of collective narcissism and experimental condition on the tendency to support aggressive actions toward the

offending out-group. Age and gender, individual narcissism, social dominance orientation, right wing authoritarianism, positive in-group identification, and blind and constructive patriotism were entered in Model 1. The second model added all two-way interactions of research condition along with the continuous predictors.

The results of Model 1 revealed significant negative effect of constructive patriotism and significant positive effect of individual narcissism. These effects became non-significant after the interaction terms were entered into the equation in Model 2. The results for Model 2 indicate significant interaction of research condition and collective narcissism (Table 5). No other interaction was significant. Adding the interaction of research condition and collective narcissism to the regression equation significantly increased the amount of explained variance, $\Delta R^2 = .04$, $F(1, 88) = 5.23$, $p = .03$.

TABLE 5

The simple slope analyses revealed that the relationship between collective narcissism and hostile behavioral tendencies towards British people was not significant in the in-group praise condition ($b = .07$; $SE = .09$; $t(98) = .76$, $p = .45$) but it was positive and significant in the in-group criticism condition ($b = .31$; $SE = .11$; $t(98) = 2.73$; $p = .01$; Figure 2).

FIGURE 2

The effect of collective narcissism and in-group image threat on hostility towards the non-offending out-group. In order to test the hypothesis that the intergroup hostility related to collective narcissism is retaliatory and does not spill over to the non-offending out-group, we performed the same series of hierarchical regression analyses using hostility toward New Zealanders as a criterion variable.

The results for Model 1 were marginally significant ($p = .06$). There was a marginally significant positive effect of individual narcissism and a significant negative effect of

constructive patriotism. These effects became non-significant when interaction terms were entered in Model 2. Model 2 was marginally significant (p = .06). The interaction of research condition and collective narcissism was not significant (b = .28; SE = .20; t (88) = 1.39, p = .17). Entering this interaction term did not contribute significantly to the percentage of explained variance, ΔR^2= .01, F(1, 88) = 1.94; p = .17. However, there was a significant interaction of research condition and right wing authoritarianism[4] (Table 6).

TABLE 6

In-group image threat, collective narcissism and retaliatory intergroup hostility.

As in Study 1, we also performed a 2 (target out-group: offending vs. non-offending) X 2 (research condition: in-group criticism vs. praise) GLM with the first factor repeated, the second between subjects and continuous predictors, age and gender entered as covariates. Results revealed that only a three-way interaction of the repeated factor, research condition and collective narcissism was significant, Wilk's λ = .96, F(1, 88) = 3.82, p = .05, η^2 = .04. Parameter estimates indicated that only for the offending out-group was the interaction of research manipulation and collective narcissism significant (b = .41, SE = .18, t(88) = 2.29; p = .03). In comparison to the in-group praise condition in the in-group criticism condition, collective narcissism is related to a significant increase in intergroup hostility.

Discussion of Study 2

In Study 2 we replicated the findings of Study 1 supporting the hypothesis that collective narcissism predicts retaliatory intergroup hostility after in-group image is threatened. In Study 2 under in-group criticism collective narcissism predicted preferences for actions directly and unambiguously harming the offending out-group such as *hurt, offend, injure, intimidate and humiliate*. The relationship between collective narcissism and out-group hostility was not significant after in-group image boost.

As in Study 1, collective narcissism moderated the effects of in-group criticism on hostility towards the source of criticism regardless of whether other continuous predictors were controlled or not. Thus, once again we can conclude that the relationship between collective narcissism and intergroup hostility is specific to collective narcissism and not driven by the overlap between collective narcissism and individual narcissism, social dominance orientation, right wing authoritarianism, in-group identification, or blind or constructive patriotism. Collective narcissism, but none of the other predictors, moderates the effects of in-group image threat on intergroup hostility.

Results of Study 2 confirmed again that the intergroup hostility associated with collective narcissism is specific and retaliatory. Collective narcissism inspired intergroup hostility only under in-group image threat and only towards the out-group that threated the in-group's positive image. Collective narcissism was unrelated to hostility towards the non-offending out-group even when in-group image threat was present.

However, in studies 1 and 2 the order of the out-groups was counterbalanced. Thus, at least for some participants, there existed a possibility that they did not aggress towards the non-offending group because they previously had the opportunity to aggress against the offending out-group. Therefore, in Study 3 we aimed to provide an even stronger test of the hypothesis that under in-group image threat collective narcissism is related to retaliatory but not displaced intergroup hostility. We conducted a study in which both in-group image threat and target out-group were manipulated.

Study 3

In order to test the hypothesis that collective narcissism affects retaliatory hostility under in-group image threat, in Study 3 we manipulated in-group criticism vs. praise as well as the target out-group as independent factors. We predicted that collective narcissism will be

related to intergroup hostility only when in-group image threat is present and only towards the offending out-group. We expected that intergroup hostility associated with collective narcissism would not be displaced and would not spill over to other, non-offending out-groups. Thus, we expected that collective narcissism would not be related to hostility toward the non-offending out-group even if the opportunity to aggress towards the offending out-group was not present. In addition, in Study 3 we examined whether the hypothesized relationship between collective narcissism and intergroup hostility under in-group image threat generalizes to a different national context.

Method

Participants. Participants were 117 Polish undergraduate students who participated in exchange for research participation credit. There were 17 men and 100 women. The mean age was 21.32 (*SD* = 1.77).

Procedure. The study was presented to participants as research on personality and national attitudes. First, the moderating variables were assessed. Right wing authoritarianism, social dominance orientation, individual narcissism, national in-group identification and national collective narcissism were measured. Next, participants were randomly assigned to one of two research conditions. They were informed that their sensitivity to information about their country would be tested as a measure of national attitude. All participants were asked to read a short press release describing the results of a fictional survey that assessed attitudes towards Polish people in Great Britain. Next, manipulation check questions were asked allegedly checking whether participants understood the press release. In line with the cover story, after reading the press release participants were asked to quickly assess without referring back to the article how many times the word “Poland” or “Polish” was used in the article.

In the criticism condition (n = 60) participants read that the general attitude towards Poles in Great Britain was negative, due to Polish anti-Semitism during and after the WWII. In the positive evaluation condition (n = 57) the attitude towards Poles in Great Britain was presented as positive due to the help that Poles offered to Jews during WWII. Both negative and positive evaluations of Poles towards Jews during WWII are plausible. There are reported cases of pogroms of Polish Jews perpetrated by Poles during the WWII and shortly afterwards (e.g., Gross, 2008). At the same time many Polish soldiers (of the Home Army, *Armia Krajowa*) fought in the Warsaw Ghetto Uprising and Poles represented the largest number of people who rescued Jews during the Holocaust; in fact they were awarded the "Righteous among the Nations" medal by Israel (Yad Vashem, 2012).

In the end, participants were asked to take part in an allegedly unrelated study on conflict resolution skills. Participants were presented with another fictional press release describing a fictional conflict between Polish and British (n = 58) or Austrian (n = 59) chemists. The conflict concerned the naming of new chemical elements the international Polish-British or Polish-Austrian team had allegedly discovered. Participants were asked to imagine that they were acting as a representative of their country in this conflict. They were given a list of possible actions and asked to rate the likelihood that they would choose each of them as a response to the situation. This procedure was modeled on the Strategies of Conflict Resolution Questionnaire used by previous studies (Golec & Federico, 2004). Then participants were then thanked and debriefed.

Measures.

Manipulation check questions were asked after the experimental manipulation: "The attitude towards Poles in Great Britain is:" (1 = *definitely unfavorable* to 7 = *definitely favorable*) and "How does the opinion of British people about the Polish people make you

feel" (1 = *definitely unpleasant* to 7 = *definitely pleasant*), r (115) = .78, p <.001, M = 3.98, SD = 1.95.

Collective narcissism (α = .81, M= 3.52, SD= 1.21) was measured by a Polish version of the 5-item Collective Narcissism Scale used in previous studies (Golec de Zavala et al., 2013).

In-group identification (α = 89, M = 4.96, SD = 1.84) was measured with a 4-item scale used in previous studies and an additional item "When I think ´we´ , I think about Polish people". The items were translated to Polish.

Individual narcissism (α = .70, M=.36, SD=.20) was measured by the Polish version of the 16-item one-dimensional Narcissistic Personality Inventory (NPI-16, Ames, et al., 2006).

Social dominance orientation (α = .84, M = 2.95, SD = 1.07) was measured by the 10- item version of the Social Dominance Orientation Scale translated to Polish and used in previous studies (e.g., Golec de Zavala, et al., 2009).

Right wing authoritarianism (α = .70, M = 3.14, SD = .85) was measured by the 10 item version of the Right Wing Authoritarianism Scale translated to Polish and used in previous studies (Golec de Zavala et al., 2009).

Hostile behavioral intentions (α = .79, M = 2.56, SD = 1.23) were measured asking participants how likely it would be that they would choose a given action had they been their country´s representative in the conflict between Polish and British or Austrian chemists. They used the scale where 1 = *highly unlikely* to 7 = *highly likely*. The hostile actions were: "use deception to weaken the other party's position," "spread negative information in order to hurt the public image of the other party," "openly attack the other party," "oppose every action of the other party to impair its plans and efforts."

Results

Correlations. Across research conditions collective narcissism was positively correlated with right wing authoritarianism and positive in-group identification. Intergroup hostility was positively associated with individual narcissism, social dominance orientation and right wing authoritarianism. Collective narcissism was not associated with intergroup hostility across research conditions (Table 7).

TABLE 7

Manipulation check. The inspection of the means on the manipulation check questions confirmed that participants thought that the opinion of British people about Polish people was perceived as more positive and more pleasant in the in-group praise (M =5.57, SD =1.12) than in the in-group criticism condition (M =2.32, SD =1.01), $F(1, 115) = 271.09$, $p < .001$, $\eta^2 = .70$. The interaction of the in-group criticism vs. praise manipulation and the type of the out-group manipulation was not significant F (1,113) < 1.

In-group image threat, collective narcissism and retaliatory intergroup hostility. In order to analyze the moderating effect of collective narcissism on in-group image threat on intergroup hostility depending on the target out-group, we performed a series of hierarchical multiple regression analyses. The first model tested the main effects of in-group image threat manipulation, target out-group manipulation and collective narcissism on intergroup hostility. The second model added the two-way interactions of the target out-group and in-group image threat manipulations, in-group image threat manipulation and collective narcissism, and the target out-group manipulation and collective narcissism. The third model added the three-way interaction of in-group image threat X target out-group X collective narcissism. Social dominance orientation, right wing authoritarianism, in-group identification, individual narcissism, age and gender were entered into the analyses as covariates. All continuous

predictors were centered prior to analyses. In-group image threat conditions were coded "0" for in-group praise and "1" for in-group criticism condition. The target out-group conditions were coded "0" for the non-offending (Austrian) out-group and "1" for the offending (British) out-group.

The results of Model 1 revealed a significant negative effect of in-group identification and significant positive effect of social dominance orientation. The effect of in-group image threat was marginally significant (p = .10). Participants expressed willingness to engage in hostile actions more after the in-group was criticized (M = 2.81, SD = 1.37) than after it was praised (M = 2.33, SD = 1.03). Model 2 revealed marginally significant interaction of the target out-group and collective narcissism (p = .07) and Model 3 revealed a qualifying significant three-way interaction of collective narcissism, in-group image threat and target out-group (Table 8). Adding the three-way interaction to the regression equation significantly increased the amount of explained variance, ΔR^2= .04, $F(1, 103) = 7.80$, $p < .001$[5].

TABLE 8

In order to probe the significant three-way interaction simple slopes were computed with the use of PROCESS (Hayes, in press). The analyses reveal that the interaction between collective narcissism and research conditions in predicting intergroup hostility was significant for the offending out-group, b = .46; SE = .19, $t(105) = 2.34$; p = .02. For the non-offending out-group the effect was marginal and reversed, b = -.36; SE = .21; $t(105)$= - 1.70; p = .09. The relationship between collective narcissism and hostility towards the offending out-group was significant under in-group criticism, b = .63; SE = .18; $t(105) = 3.45$, p = .001, but not under in-group praise, b = .18; SE = .15; $t(105) = 1.17$, p = .25. For the non-offending out-group, the relationship between collective narcissism and intergroup hostility was non-

significant under in-group criticism, $b = -.03$; $SE = .15$; $t(105) = -.21$; $p = .83$ and marginally significant and positive under in-group praise, $b = .32$; $SE = .18$; $t(105) = 1.79$; $p = .08$.

FIGURE 3

Discussion of Study 3

The results of Study 3 confirm the hypothesis that under in-group image threat collective narcissism predicts retaliatory intergroup hostility. Under in-group criticism, collective narcissism predicted the choice of unambiguously harmful actions in an unrelated intergroup conflict that involved the offending but not the non-offending out-group. Those high in collective narcissism gave higher ratings when asked how likely they would be to *deceive, attack, impair efforts* or *hurt the public image* the offending out-group under in-group criticism in comparison to an in-group praise condition. Collective narcissism predicted decrease in hostility in in-group criticism conditions when the subsequent and unrelated conflict involved a non-offending out-group. Thus, collective narcissists aggressed only when the conflict involved the offending out-group. This supports the hypothesis that intergroup hostility related to collective narcissism under in-group image threat is specific, retaliatory and vengeful.

These results were independent of individual narcissism, in-group identification, social dominance orientation and right wing authoritarianism. In addition, the results of Study 3 were obtained in a different national context. This confirms that our findings are not specific to American participants and generalize to other national and intergroup contexts.

Taken together Studies 1-3 provide substantial support for the hypothesis that those high in collective narcissism react to in-group image threat with retaliatory intergroup hostility. In Study 4 we tested whether the moderation effect demonstrated in Studies 1-3 generalizes beyond self-reported intergroup hostility to actual aggressive behavior that aims at

harming the offending out-group. We conducted Study 4 also in order to illuminate the psychological mechanism that drives this effect. Finally, in Study 4 we aimed at replicating the effects of previous studies in the context of a more mundane social identity to provide an even more conservative test of our hypothesis.

Study 4

In Study 4 we assessed collective narcissism with reference to a social group defined by university affiliation. We tested the hypothesis that retaliatory narcissistic intergroup hostility is defensive. We expected that the perception of the in-group criticism as personally threatening would mediate the relationship between collective narcissism and retaliatory aggression towards the offending out-group. We assessed actual aggressive behavior providing participants with an opportunity to harm the chances of the offending out-group to obtain a desired outcome. We allowed collective and individual narcissism and in-group identification to compete as moderators of the effects of in-group image threat on intergroup hostility.

Method

Participants. Participants were 80 Polish undergraduate students who participated in exchange for research participation credit. There were 66 women, 14 men, with a mean age of 23.18 (*SD* = 5.55). All participants were students of Warsaw School of Social Sciences and Humanities, whose psychology department has a distinct identity and high national reputation.

Procedure. During the experimental procedure participants were led to believe that their actions could influence desirable outcomes for several out-groups including the out-group that criticized vs. praised their in-group. Participants were first asked to take part in a study allegedly on self-perception. They responded to individual difference measures assessing individual narcissism, strength of identification with their university and collective

narcissism with reference to an in-group defined as their university peers. After the study was ostensibly completed, participants were offered an opportunity to act as peer judges in a competition for the best graduate research project in psychology. They were led to believe that their evaluation would affect the outcome for the three competing groups. All participants accepted this opportunity and took part in the experimental procedure.

Participants were asked to read self-presentations allegedly prepared by the three teams representing psychology departments at universities comparable in status and reputation to their institution: the University of Bydgoszcz, the University of Warsaw and the University of Gdansk, presented in this order. Each self-presentation contained a short portrayal of team members and a description of the organization of work within each team. All descriptions contained essentially the same information (presented in different order, using different grammatical structures and synonyms rather than the same characteristics to suggest different authorship): that the team consists of an equal number of men and women; all decisions are made democratically; all members are highly motivated and all members are very good students. At the end of each self-presentation the alleged teams praised their departments and universities.

The experimental manipulation was embedded in the self-presentation of the University of Warsaw, the second university presented to participants. In the in-group image threat condition (n = 37) the target fragment contained the comparison of the Department of Psychology at the University of Warsaw to the department of psychology of the university represented by participants. The target fragment read: “Even very good schools, like Warsaw School of Social Sciences and Humanities, render psychological education of lower quality than does the University of Warsaw, and recruit less gifted students.” In the positive evaluation condition (n = 43) this part was replaced by: “University of Warsaw, along with

Warsaw School of Social Sciences and Humanities is among the best centers for psychological education in the country. Both institutions render psychological education of highest quality and recruit very gifted students." The self-presentation of the other universities acclaimed the high quality of psychological education in their departments but did not contain any evaluative information about the participants' university.

Participants were asked to evaluate each team after reading its self-presentation. They evaluated the team representing University of Bydgoszcz before the in-group criticism vs praise manipulation was introduced. They evaluated the University of Gdansk´s and University of Warsaw´s teams after the in-group image threat vs praise was introduced. Their evaluation of the University of Warsaw team represented reactions to the offending out-group and were a measure of retaliatory intergroup hostility. The responses for the University of Gdansk team that did not criticize the in-group but was evaluated after the in-group image threat was introduced, represented displaced intergroup hostility. The attitudes toward University of Bydgoszcz were given before the experimental manipulation of in-group criticism vs. praise. They represent a baseline level of intergroup hostility for each participant.

First, participants provided ratings of the cooperativeness and collegiality within each team. They were led to believe that this evaluation would affect the chances for the competing teams to win the grant. Next, participants were informed that the amount of funding the winning team would obtain also depended on their evaluation. In other words, participants were led to believe that their evaluation of the competing teams could influence not only whether the given team won the award, but also the amount of the award the team would receive if it won the competition. Participants were asked to allocate from 1 to 100 percent of the award to each team allowing all teams to be allocated 100 percent if desired. The average allocations across different teams amounted to 164.54 percent (SD = 64.63) which indicates

that participants understood the instruction and did not treat the award amount as a fixed sum to be distributed between all three teams.

Finally, the manipulation check question was asked. Participants were asked to recall the opinion of the University of Warsaw team about their university. They were also asked whether they found this opinion personally threatening.

Measures.

Manipulation check question was: "What is the opinion of the psychology students at the University of Warsaw about Warsaw School of Social Sciences and Humanities psychology students?" (1 = *definitely negative* to 7 =*definitely positive*).

Threat perception was measured by one question: "Do you feel personally threatened by the opinion of the University of Warsaw students about your university?" (M = 2.86, SD = 1.78) (1 = *definitely no* to 7 = *definitely yes*).

Collective narcissism (α = .81, M = 3.28, SD =.76) was measured using the Polish version of the 9-item Collective Narcissism Scale (Golec de Zavala et al., 2009). Participants were asked to think about the students from their department as their in-group (1 = *definitely disagree* to 7 = *definitely agree*).

Individual narcissism (α = .81, M = 3.44, SD =.62) was measured by the items of the Narcissistic Personality Inventory used in Study 3. Participants were asked to evaluate to what extent the "narcissistic" items describe them using a scale 1 = *definitely disagree* to 7 = *definitely agree* (Ames, et al., 2006).

In-group identification (M = 3.63, SD = 1.56) was assessed by the graphical measure proposed by Tropp & Wright (2001). Participants were asked to indicate which pair of 8 overlapping circles best represents their identification with the in-group defined as other students at their university. Higher scores indicated higher levels of identification. Multiple

studies have confirmed construct, concurrent, divergent and predictive validity of this measure, as well as its test-retest reliability. The one-item measure correlates strongly with multi-item measures of in-group identification and proved to be as powerful as those measures in predicting other types of cognitive and relational variables associated with in-group identification and collective action (Tropp & Wright, 2001).

Intergroup aggressiveness was assessed combining the measure of out-group evaluation and the measure of fund allocation: both could negatively affect the chances of each out-group to receive the desired funding. Out-group evaluation was measured by combining participants' responses to two questions: "What is your impression of this group?" (1 = *definitely negative*, 7 = *definitely positive*) and "Should this group win the contest?" (1 = *definitely no*, 7 = *definitely yes*). These responses were reverse coded so that higher scores would indicate greater negativity. The responses were highly positively correlated: for University of Bydgoszcz r (78) = .72, $p < .001$, $M = 2.62$, $SD = 1.22$; for University of Warsaw r (78) = .89, $p < .001$, $M = 3.33$, $SD = 1.63$; for University of Gdansk r (78) = .87, $p < .001$, $M = 1.75$, $SD = 1.42$.

Participants were also asked how much of the available funds should be allocated to finance the team's project should the team win the contest (0%-100%). After evaluating each team, participants responded to the following instruction: "Should this team win the contest how much of available funding would you recommend be spent on the research grant for this team?" Thus, participants could allocate from 0 to 100 percent for each team independently. These responses were also reverse coded to indicate greater hostility (for University of Bydgoszcz $M = 44.56$, $SD = 25.92$; for University of Warsaw $M = 56.96$, $SD = 29.74$; for University of Gdansk $M = 34.54$, $SD = 25.04$).

The indices of out-group negative evaluation and hostile intentions were highly and positively correlated (for University of Bydgoszcz, r (78) = .57, $p < .001$; for University of Warsaw, r (78) = .76, $p < .001$; for University of Gdansk, r (77) = .74, $p < .001$). To account for different scales they were standardized and combined into a composite index of general hostility toward each out-group.

Results

Correlations. Across the research conditions, collective narcissism was positively related to individual narcissism and perception of in-group criticism as personally threatening. None of the predictors was significantly correlated with hostility towards the criticizing out-group. The indices of intergroup hostility were correlated for University of Bydgoszcz and University of Gdansk: measured before and after the in-group image threat was introduced. The perception of in-group criticism as threatening was related to hostility towards the offending and non-offending out-group.

TABLE 9

Manipulation check. The inspection of mean responses to the manipulation check question reveals that in the in-group image threat condition (M = 1.84, SD = 1.28) participants perceived University of Warsaw students' opinions as significantly more critical of their in-group than in the positive evaluation condition (M = 4.81, SD= 1.83), $F(1,78) = 68.86$, $p < .001$, $\eta^2 = .68$.

The effect of collective narcissism and in-group image threat on retaliatory intergroup hostility. As in the previous studies, a hierarchical multiple regression analysis was performed in order to test the interaction hypothesis. The first model tested the main effects of experimental condition, in-group identification, and individual and collective

narcissism on the index of hostility towards the University of Warsaw team. The second model added two-way interactions of research condition with each continuous variable[6].

The results of Model 1 revealed a positive effect of the research condition. Under in-group image threat participants expressed more hostility (M = .57, SD = .84) towards the criticizing out-group than in the positive evaluation condition (M = -.49, SD = .79). There was a marginally significant, positive main effect of in-group identification, p = .07. Model 2 revealed that the effect of research condition was qualified by a significant interaction between the experimental condition and collective narcissism. No other interaction was significant (Table 10). Adding this interaction to the model significantly increased the amount of explained variance, ΔR^2 = .07; F (1, 70) = 6.03; p = .05.

TABLE 10

The simple slope analyses revealed that the relationship between collective narcissism and intergroup hostility was positive and significant in the in-group image threat condition (b = .31, SE = .15, t(74) = 1.96, p = .05) and negative and marginally significant in the positive evaluation condition (b = -.29, SE = .17, t(74) = -1.70, p = .09; Figure 4).

FIGURE 4

The effect of collective narcissism and in-group image threat on hostility towards the non-offending out-group. The same hierarchical multiple regression analysis performed using the index of hostility towards students of the non-offending out-group as the criterion variable yielded no significant effects (Table 11). Neither the main effect of collective narcissism (p = .98) nor its interaction with research condition was significant (p = .77).

TABLE 11

In-group image threat, collective narcissism and retaliatory intergroup hostility. In order to provide an alternative test of the hypothesis that the collective narcissistic hostility

under in-group image threat is retaliatory rather than displaced we conducted a 3 (target out-group: University of Bydgoszcz vs. University of Warsaw vs. University of Gdansk) x 2 (research condition: in-group criticism vs. praise) GLM with the first factor repeated. As in previous studies, age, gender and continuous predictors were entered into the equation as covariates.

The results revealed that the three-way interaction of the repeated factor (the out-group), research condition and collective narcissism was marginally significant, Wilk's λ = .94, $F(2, 69) = 2.34$, $p = .10$, $\eta^2 = .03$. There were no other significant or marginally significant effects. For a more focused test of our hypothesis, we conducted planned contrast analysis. We hypothesized that under in-group image threat collective narcissism would be related to retaliatory (towards the University of Warsaw team) but not displaced (towards the University of Gdansk team) intergroup hostility. Hostility towards University of Bydgoszcz was measured before the in-group criticism vs. praise manipulation was introduced. We did not expect that it would be affected by the collective narcissism X in-group criticism interaction. Thus, the expected effect was expressed by a 0, 1, -1 contrast on the repeated measure combined with a -1, 1 contrast on the in-group image threat vs boost manipulation and interacting with collective narcissism. This effect was significant, $F(1, 70) = 4.61$, $p = .04$, $\eta^2 = .06$. The parameter estimates indicate that for the offending out-group, in comparison to the condition of in-group praise, under in-group criticism collective narcissism brought an increase in intergroup hostility, $b = .62$, $SE = .25$, $t(70) = 2.46$, $p = .02$, $\eta^2 = .06$.

Hostility towards the University of Bydgoszcz may be treated as a baseline measure of intergroup hostility for participants. Thus, we performed another GLM this time treating hostility towards University of Bydgoszcz as a covariate. The model we tested was a 2 (target out-group: offending vs. non-offending) x 2 (research condition: in-group criticism vs. praise).

After the baseline intergroup hostility was controlled, the three-way interaction of the target out-group, in-group image threat manipulation and collective narcissism became significant and stronger than in the initial analysis, Wilk's $\lambda = .90$, $F(1, 69) = 7.49$, $p = .01$, $\eta^2 = .10$.

The role of perceived threat on the relationship between collective narcissism and retaliatory intergroup hostility under in-group image threat. Next, we tested the hypothesis that the perceptions of in-group criticism as personally threatening mediated the relationship between collective narcissism and intergroup hostility in the image threat condition (Table 12).

TABLE 12

We followed the procedure proposed by Preacher, Rucker and Hayes (2007) to analyze a mediated moderation (Muller, Judd, & Yzerbyt, 2009) and probe the significance of conditional indirect effects of collective narcissism on retaliatory intergroup hostility via perception of the in-group criticism as personally threatening in the two research conditions. To this end we used Model 8 PROCESS (Hayes, in press). Bootstrapping analyses indicated that the indirect effect of collective narcissism via the perceived threat was positive and significantly different from zero only in the in-group criticism condition. The bootstrapped indirect effect in the in-group criticism condition equaled .16 (*SE* = .07) and had a bootstrap 95% bias corrected confidence interval of .04 to .31. The indirect effect in the in-group praise condition equaled .03 (*SE*= .05) and was non-significant with a 95% bias corrected bootstrap confidence interval of -.08 to .13. The indirect effect of the interaction that equaled .13 (*SE* =.08) was significant with a 95% bias corrected bootstrap confidence interval of .01 to .34[7].

FIGURE 5

Specific values for regression analyses in the in-group criticism condition are presented in Figure 5. Collective narcissism was positively and significantly associated with

the perception of in-group criticism as personally threatening. There was also a positive and significant total effect of collective narcissism on retaliatory intergroup hostility (the dotted line in Figure 5). When the mediator was added, all predictors included in the full model accounted for a significant portion of the variance in intergroup hostility in in-group criticism conditions, $F(4, 32) = 4.12$, $p < .001$, $R^2 = .34$. Perception of the in-group criticism as personally threatening was significantly and positively associated with hostility towards the offending out-group. The relationship between collective narcissism and intergroup hostility was reduced to non-significant once the mediator was added to the model. This pattern of results indicates that the relationship between collective narcissism and retaliatory intergroup hostility is driven by the perception of the in-group criticism as personally threatening.

Discussion of Study 4

The results of Study 4 replicated the findings regarding the interactive effects of in-group image threat and collective narcissism on intergroup hostility found in Studies 1-3. This effect was replicated using a different experimental manipulation of the in-group image threat and a different, direct measurement of aggression towards the offending out-group. In addition, the effect was demonstrated in the context of a social group defined as university students. This provides a conservative test for our interaction hypothesis because such an in-group is usually less central to people's selves and less emotionally laden than the national in-groups used in previous studies.

The results of Study 4 point again to the retaliatory nature of narcissistic intergroup hostility. Collective narcissists reacted to in-group criticism by restricting the threatening out-group's access to valued resources: issuing a more negative evaluation of the criticizing out-group which, they believed, would affect the out-group's chances of obtaining research funding and proposing lower funding in case the criticizing out-group won the contest.

Importantly, people high in collective narcissism responded in a hostile way only towards the group that criticized their in-group. Collective narcissism was not associated with a tendency to negatively evaluate and lower the value of the award given to the team representing the non-offending out-group. Across research conditions collective narcissism was not associated with the baseline measure of intergroup hostility: hostility towards University of Bydgoszcz team.

In addition, the results of Study 4 support our hypothesis that collective narcissistic intergroup hostility is defensive. People high in collective narcissism were hostile towards the criticizing out-group because they viewed the in-group criticism as personally threatening. The positive relationship between collective narcissism and intergroup hostility in the in-group criticism condition was mediated by the perception of the in-group criticism as personally threatening. Neither individual narcissism nor in-group identification predicted intergroup aggression in response to in-group criticism. These results corroborate the results of the previous three studies indicating that collective narcissism is the unique moderator of the effects of in-group image threat on intergroup hostility.

General Discussion

The notion that collective narcissism leads to exaggerated intergroup hostility in response to an in-group image threat can be found in the theoretical work of Theodore Adorno (1951). Adorno argued that the preponderance of narcissistic identification with the national group and in-group image threat (the uncertainty of the economic situation and the humiliation of the Treaty of Versailles) was responsible for the rise of the Nazi regime in Germany and support for its aggressive internal and international politics (see also, Baumeister, 2002). In the studies reported in this paper we put the proposition that collective

narcissism inspires intergroup hostility in response to an in-group image threat to empirical test.

We examined whether narcissistic identification with an in-group predicted intergroup hostility under in-group image threat while no such link existed when no threat was present. In addition, we tested whether intergroup hostility related to collective narcissism under in-group image threat was retaliatory. We hypothesized that it would target only the offending out-groups and would not spill over to other, non-offending out-groups even when the in-group image threat was present. We examined a proposition that the interactive effect of collective narcissism and in-group image threat on intergroup hostility generalizes beyond the international context. In addition, we tested whether the moderation effect was specific to collective narcissism, not due to its overlap with other predictors of intergroup hostility.

In four experiments we found that retaliatory intergroup hostility was predicted by the expected interaction of in-group image threat and collective narcissism. This result remained constant across studies that used different procedures to manipulate the in-group image threat and different assessments of intergroup hostility, including a direct behavioral measure of intergroup aggressiveness. The same pattern of results was found in studies conducted in Poland and in the United States. The same interaction of research conditions and collective narcissism was found in Studies 1-3, which looked at the consequences of national collective narcissism when the national self-image was threatened, and in Study 4, which examined narcissistic identification with a university and its effects on hostility towards students of other universities. The fact that we replicated our results when collective narcissism was assessed with reference to a social group that is usually not as central to people's identity as the national group, provides a conservative test of our moderation hypothesis.

Present results indicated that under in-group image threat collective narcissists chose to actively confront and oppose (Study 1), hurt, offend, injure, intimidate and humiliate (Study 2) the offending out-group. In Study 3 after the in-group image threat, collective narcissism predicted a self-reported tendency to deceive, attack, impair efforts or hurt the public image of the offending out-group in a subsequent, unrelated intergroup conflict. The results of Study 4 demonstrated that in response to the in-group image threat people high in collective narcissism were likely to act to reduce the chances of the offending out-group obtaining desirable goals. These results confirm that under in-group image threat collective narcissists express unambiguously hostile and vengeful intentions to attack and harm the offending out-group.

In addition, the results of all studies provide evidence that intergroup hostility associated with collective narcissism under in-group image threat is direct, retaliatory and not displaced. They indicate that the increase in intergroup hostility among collective narcissists is directed *only* towards the out-groups whose members criticized the in-group and is not displaced to other groups. Collective narcissism does not predict displaced intergroup hostility even when in-group image threat is present and there is no opportunity to aggress against the offending out-group (Study 3).

Moreover, the present results demonstrate that this moderating effect is specific to collective narcissism. It is not driven by the overlap of collective narcissism with predictors of intergroup hostility reported in literature: non-narcissistic in-group positivity (in-group identification measured with a multi-item scale in Studies 1-3 and a graphic one-item measure in Study 4, and as two forms of patriotism in Study 3) or robust predictors of intergroup hostility such as right wing authoritarianism or social dominance orientation (Studies 1-3). Also, results of all studies clearly show that the reported moderating effect of collective

narcissism is independent of its overlap with individual narcissism - a predictor of vengeful rancor and aggressive reactions to ego-threat.

The present results extend our previous correlational findings indicating that collective narcissism explains unique variance in intergroup hostility and that it is linked especially to aggressiveness towards out-groups perceived as threatening (Golec de Zavala et al., 2009; Golec de Zavala & Cichocka, 2012). The results go beyond previous findings in several important ways. They indicate that collective narcissists are hostile towards other groups in direct response to in-group image threat and that this hostility is retaliatory, not displaced. In addition, the experimental results of Study 4 complement earlier correlational findings linking collective narcissism to the perception of threat and via perception of threat to intergroup hostility (Golec de Zavala et al., 2009).

Previous studies suggest also that collective narcissism is related to high regard for the in-group accompanied by unacknowledged doubts about the in-group's greatness and a belief that the in-group is not sufficiently recognized by others (Golec de Zavala et al., 2009). Conceivably, those high in collective narcissism are sensitive to threats to the in-group's "good name" because "deep inside" they question the idealized image of the in-group themselves. The present studies are, to the best of our knowledge, also the first to demonstrate that the nature of the narcissistic intergroup hostility is not only retaliatory but also defensive. The results of Study 4 allow us insight into the psychological mechanism underlying the relationship between collective narcissism and retaliatory intergroup hostility in in-group criticism conditions. In his essays on German collective narcissism Adorno (1998) hypothesized that narcissistic idealization of the in-group is a strategy to protect a weak and threatened ego. He argued that narcissistic identification with an in-group was defensive and was likely to emerge in social and cultural contexts that diminished the ego (Adorno, 1998;

see also Arendt, 1971; Fromm, 1941; and status politics theorists, Gusfield, 1963; Hofstadter, 1965; Lipset & Raab, 1970). The results of Study 4 indicate that the relationship between collective narcissism and intergroup hostility under in-group criticism is indeed driven by the experience of in-group criticism as personally threatening.

The present results suggest that the claims of Threatened Egotism Theory (Bushman & Baumeister, 1998) can be extended into the intergroup domain. At the same time, the present results clearly demonstrate that it is collective, not individual, narcissism that moderates the intergroup effects of in-group criticism. Threatened Egotism Theory explains that individual narcissists invest emotionally in an exaggerated self-image and use aggression to retaliate against those who, willingly or not, deflate their favorable self-image or threaten their autonomy (e.g., Bushman & Baumeister, 1998; Baumesiter, Bushman, & Campbell, 2000). Since they require constant validation of unrealistic greatness of the self, narcissists are likely to continually encounter threats to their self image and be chronically intolerant of them (Baumeister et al., 1996). Analogously, collective narcissists emotionally invest in a grandiose image of the in-group and perceive anything that undermines the in-group's greatness (or anything that does not validate and confirm it) as personally threatening. Thus, the excessive, narcissistic in-group esteem seems vulnerable to challenges from within (e.g., internal criticism) or from outside (e.g., from out-groups that question the prominence of an in-group). Conceivably, collective narcissists use retaliatory intergroup hostility as a means of protecting and restoring the in-group's positive image and reducing ego threat.

The present results propose an answer to a long-standing question: whether and when in-group positivity inspires intergroup negativity? (e.g., Hinkle & Brown, 1990; Jackson, Brown, Brown, & Marks, 2001; Pehrson, Brown, & Zagefka, 2009). It seems that it is the narcissistic, exaggerated group esteem that is reliably related to intergroup hostility in

response to in-group image threat. Non-narcissistic positive in-group identification does not systematically predict intergroup hostility nor does it interact with in-group image threat to predict retaliation.

The present results emphasize the importance of the intergroup context in triggering the intergroup hostility related to collective narcissism. Previous studies indicate that collective narcissists are sensitive to in-group image threat. They are likely to interpret even ambiguous actions and opinions of an out-group as threatening the inflated image of the in-group (Golec de Zavala, et al., 2009, Study 5; Cichocka & Golec de Zavala, 2011). The present results complement the previous findings indicating that once the actions of the out-group are interpreted as threatening, hostile actions towards the out-group are likely to follow.

Importantly, in certain conditions narcissistic identification with the in-group may become a social norm. In such conditions introducing even untrue and illogical rumors of intergroup threat may have tragic intergroup consequences (see the example of the Nazi Germany analyzed by Theodore Adorno). Preliminary studies suggest that collective narcissism seems to serve a defensive function compensating for loss of control (Cichocka, Golec de Zavala, & Olechowski, 2012) and personal uncertainty (Golec de Zavala, 2011b). Further studies examining the social conditions in which narcissistic beliefs about an in-group become "contagious" and socially acceptable (vs. conditions in which narcissistic identification with an in-group is discouraged and marginalized) would be a valuable extension of our understanding of conditions leading to escalation of intergroup hostility, and eventually, intergroup violence.

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Table 1

Correlations of individual and collective narcissism, in-group identification, social dominance orientation and right wing authoritarianism with hostile intentions towards British and German people (Study 1, N =134)

Measures	1	2	3	4	5	6
1. Collective narcissism	--					
2. Individual narcissism	.18*	--				
3. SDO	.29**	.19*	--			
4. RWA	.56***	.03	.36***	--		
5. Identification	.41***	.12	.06	.34***	--	
6. Hostility (British)	.37***	.12	.29**	.47***	.28**	--
7. Hostility (German)	.39***	.29***	.37***	.36***	.18*	.59***

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

Effects of research conditions, collective and individual narcissism, in-group identification, right wing authoritarianism and social dominance orientation on retaliatory intergroup hostility (controlling for age and gender; Study 1, N *= 134)*

Variables	Model 1			Model 2		
	B	*SE*	*T*	*B*	*SE*	*t*
In-group criticism manipulation	.33	.20	1.64^{+}	.36	.20	1.87^{+}
Collective narcissism	.05	.10	.45	-.17	.15	-1.15
Individual narcissism	.33	.46	.71	-.05	.63	-.07
SDO	.17	.09	1.93^{+}	.09	.12	.75
RWA	.34	.11	3.05**	.39	.16	2.46*
Identification	.15	.08	1.98*	.15	.10	1.50
Criticism X collective narcissism	-	-		.41	.21	1.98*
Criticism X individual narcissism				.49	.90	.54
Criticism X SDO				.18	.17	1.02
Criticism X RWA				-.08	.22	-.34
Criticism X identification				.02	.15	-.10
F	*F*(8, 116) = 6.26***			*F*(13, 111) = 4.67***		
R^2	.30			.35		

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}p < .10$. $^{*}p < .05$. ** $p < .01$. *** $p < .001$.

Table 3

Effects of research condition, collective and individual narcissism, in-group identification, right wing authoritarianism and social dominance orientation on displaced intergroup hostility (controlling for age and gender; Study 1, N *= 134)*

Variables	Model 1			Model 2		
	B	*SE*	*t*	*B*	*SE*	*T*
In-group criticism manipulation	.16	.21	.79	.19	.21	.91
Collective narcissism	.16	.11	1.51	.15	.16	.98
Individual narcissism	1.10	.47	2.34*	.64	.66	.96
SDO	.23	.09	2.55**	.16	.13	1.25
RWA	.20	.12	1.75^{+}	.12	.16	.71
Identification	.03	.08	.40	.02	.11	.17
Criticism X collective narcissism	-	-		-.001	.22	-.004
Criticism X individual narcissism				.87	.92	.92
Criticism X SDO				.14	.18	.75
Criticism X RWA				.17	.24	.73
Criticism X identification				.01	.16	.09
F	$F(8, 116) = 5.95$***			$F(13, 111) = 3.88$***		
R^2	.29			.31		

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}p < .10$. $^{*}p < .05$. *** $p < .001$.

Table 4

Correlations of individual and collective narcissism, in-group identification, blind and constructive patriotism, social dominance orientation, right wing authoritarianism and hostile intentions towards the British and the New Zealanders (Study 2, N *= 108)*

Measures	1	2	3	4	5	6	7	8
1. Collective narcissism	--							
2. Individual narcissism	.29**	--						
3. SDO	.30**	.31***	--					
4.RWA	.25**	-.18^{+}	.15	--				
5. Identification	.64***	.20*	.14	30***	--			
6. Blind patriotism	.63***	.17^{+}	.22**	.46***	56***	--		
7. Constructive patriotism	-.06	.02	-.16^{+}	-.20*	.16	-.17^{+}	--	
8. Hostility (British)	.20*	.27**	.14	.03	.01	.13	-.24**	
9. Hostility (New Zealanders)	.20*	.22**	.14	.10	.06	.10	-.25**	.81***

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 5

Effects of research condition, collective and individual narcissism, in-group identification, blind and constructive patriotism, right wing authoritarianism and social dominance orientation on retaliatory hostility (controlling for age and gender; Study 2, N *=108)*

Variables	Model 1			Model 2		
	B	*SE*	*t*	*B*	*SE*	*t*
In-group criticism manipulation	.12	.14	1.48	.23	.14	1.60^{+}
Collective narcissism	.16	.10	1.58	.003	.12	.02
Individual narcissism	.17	.08	2.09*	.11	.11	1.03
SDO	-.04	.08	-.46	-.05	.10	-.53
RWA	.03	.08	.43	-.06	.10	-.61
Identification	-.10	.10	-.98	.02	.13	.17
Blind patriotism	-.002	.10	-.02	.07	.13	.52
Constructive patriotism	-.16	.08	-2.03*	-.17	.10	-1.60
Criticism X collective narcissism	-	-	-	.51	.22	2.29*
Criticism X individual narcissism	-	-	-	.18	.16	1.15
Criticism X SDO	-	-	-	.13	.16	.77
Criticism X RWA	-	-	-	.30	.19	1.56
Criticism X identification	-	-	-	-.35	.21	-1.69^{+}
Criticism X blind patriotism	-	-	-	-.26	.22	-1.21
Criticism X constructive patriotism	-	-	-	.11	.17	.63
F	*F*(10, 95) = 2.45**			F(17, 88) = 2.18**		
R^2	.21			.30		

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}p < .10$. $*p < .05$. $**p < .01$.

Table 6

Effects of research condition, collective and individual narcissism, in-group identification, right wing authoritarianism, social dominance orientation, blind and constructive patriotism on displaced hostility (controlling for age and gender; Study 2, N *=108)*

Variables	Model 1			Model 2		
	B	*SE*	*t*	*B*	*SE*	*t*
In-group criticism manipulation	.16	.12	1.30	.17	.12	1.40
Collective narcissism	.10	.0	1.41	.02	.08	.23
Individual narcissism	.50	.28	1.78^{+}	.13	.37	.36
SDO	-.01	.06	-.21	.02	.07	.23
RWA	.06	.06	1.08	-.02	.07	-.33
Identification	-.02	.06	-.27	.04	.08	.55
Blind patriotism	-.02	.06	-.83	-.02	.08	-.25
Constructive patriotism	-.15	.08	-2.01*	-.15	.10	-1.57
Criticism X collective narcissism	-	-	-	.30	.20	1.52
Criticism X individual narcissism	-	-	-	.25	.14	1.80^{+}
Criticism X SDO	-	-	-	-.03	.14	-.18
Criticism X RWA	-	-	-	.34	.18	2.02*
Criticism X identification	-	-	-	-.24	.18	-1.30
Criticism X blind patriotism	-	-	-	-.14	.19	-.74
Criticism X constructive patriotism	-	-	-	.07	.15	.47
F	*F*(10, 97) = 1.86 $^{+}$			F(17, 90) = 1.67^{+}		
R^2	.16			.24		

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}p < .10$. *$p < .05$.

Table 7

Correlations of individual and collective narcissism, in-group identification, social dominance orientation, right wing authoritarianism and intergroup hostility (Study 3, N = *117)*

Measures	1	2	3	4	5
1. Collective narcissism	--				
2. Individual narcissism	-.09	--			
3. SDO	.11	.38***	--		
4.RWA	.28**	.21*	.45***	--	
5. Identification	.66***	-.18^{+}	-.18	.11	--
6. Out-group hostility	.10	.33**	.65***	.35***	-.26**

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}p < .10$. $*p < .05$. $**p < .01$. $***p < .001$.

Table 8

Effects of in-group criticism condition, target out-group and collective and individual narcissism, in-group identification, right wing authoritarianism and social dominance orientation on intergroup hostility (controlling for age and gender; Study 3, N = 117*)*

Variables	Model 1			Model 2			Model 3		
	B	*SE*	*t*	*B*	*SE*	*t*	*B*	*SE*	*t*
In-group criticism manipulation	.29	.18	1.66^{+}	.10	.24	.42	.18	.24	.74
Target out-group manipulation	-.19	.18	-1.04	-.36	.24	-1.48	-.38	.23	-1.65
Collective narcissism	.18	.10	1.84^{+}	.01	.15	.02	.29	.18	1.58
Individual narcissism	.66	.48	1.36	.70	.49	1.42	.79	.48	1.55
SDO	.53	.11	5.02***	.52	.11	4.99***	.45	.11	4.27***
RWA	.12	.12	1.06	.11	.12	.90	.11	.11	.97
Identification	-.16	.07	-2.42**	-.17	.07	-2.58**	-.19	.06	-2.99**
Criticism X collective narcissism	-	-	-	.11	.15	.71	-.34	.21	-1.61
Criticism X target				.35	.35	1.01	.31	.33	.94
Target X collective narcissism				.27	.15	1.80^{+}	-.14	.20	-.70
Criticism X target X collective narcissism				-	-	-	.82	.29	2.88**
F	*F*(9, 107) = 11.35***			*F*(12, 104) = 9.00***			*F*(13, 103) = 9.53***		
R^2	.49			.51			.55		

Note. SDO = social dominance orientation. RWA = right wing authoritarianism.

$^{+}$ $p < .10$. * $p < .05$ ** $p < .01$. *** $p < .001$.

Table 9

Correlations of collective and individual narcissism, in-group identification, intergroup hostility and threat perception (Study 4, N = *80)*

Measures	1	2	3	4	5	6
1. Collective narcissism	--					
2. Individual narcissism	.25*	--				
3. Identification	.17	.01	--			
4. Hostility against UW	.09	.10	.20^{+}	--		
5. Hostility against UG	-.03	-.13	.07	.15	--	
6. Hostility against UB	.08	-.02	.09	-.05	.44***	
7. Perceived threat	.32**	.17	.22^{+}	.38***	.28*	.16

Note. UW = University of Warsaw (offending out-group). UG = University of Gdansk (non-offending out-group, evaluated after the manipulation). UB = University of Bydgoszcz (non-offending out-group, evaluated before the manipulation).

$^{+}p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 10

Effects of research condition, collective and individual narcissism and group identification on retaliatory intergroup hostility (Controlling for age and gender; Study 4, N = *80)*

	Model 1			Model 2		
	B	*SE*	*t*	*B*	*SE*	*t*
In-group criticism manipulation	.96	.18	5.40***	.98	.17	5.62***
Collective narcissism	.04	.12	.29	-.30	.17	-1.73^{+}
Individual narcissism	.01	.15	.03	-.11	.18	-.64
Identification	.11^{+}	.06	1.86	.14^{+}	.07	1.88
Criticism X collective narcissism	-	-	-	.61	.25	2.44*
Criticism X individual narcissism				.12	.32	.38
Criticism X identification				-.11	.11	.36
F	*F*(4, 75) = 8.65***			*F*(7, 72) = 6.36***		
R^2	.32***			.38***		

Note. $^{+}$ $p < .10$. * $p < .05$. *** $p < .001$.

Table 11

Effects of research condition, collective and individual narcissism and group identification on displaced intergroup hostility (Controlling for age and gender; Study 4, N = *80)*

	Model 1			Model 2		
	B	*SE*	*t*	*B*	*SE*	*t*
Criticism manipulation	-.20	.21	-.99	-.23	.21	-1.08
Collective narcissism	-.003	.14	-.02	-.05	.21	-.24
Individual narcissism	-.17	.18	-.98	-.35	.21	-1.66
Identification	.04	.07	.62	-.02	.09	-.19
Criticism X collective narcissism	-	-	-	-.09	.30	-.29
Criticism X individual narcissism				.59	.39	.14
Criticism X identification				.14	.14	1.04
F	$F(4, 75) = .68$			$F(7, 72) = .85$		
R^2	.04			.08		

Note. $^{+}$ $p < .10$. * $p < .05$. *** $p < .001$.

Table 12

Conditional indirect effects of collective narcissism on retaliatory intergroup hostility through perception of in-group criticism as personally threatening (Controlling for age and gender; Study 4; N = *80)*

Predictor	*B*	*SE*	*t*
	Perception of the out-group opinion as threatening		
Collective narcissism	.16	.36	.45
Criticism manipulation	-2.24	1.55	-1.45
Criticism x collective narcissism	.79	.46	1.72^{+}
	Out-group hostility		
Collective narcissism	-.35	.17	-2.01*
Perceived threat	.16	.06	2.93**
Criticism manipulation	-.78	.75	-1.03
Criticism x collective narcissism	.51	.23	2.28*

Note. 5.000 bootstrap samples.

^{+}p<.10. *p < .05. **p < .01.

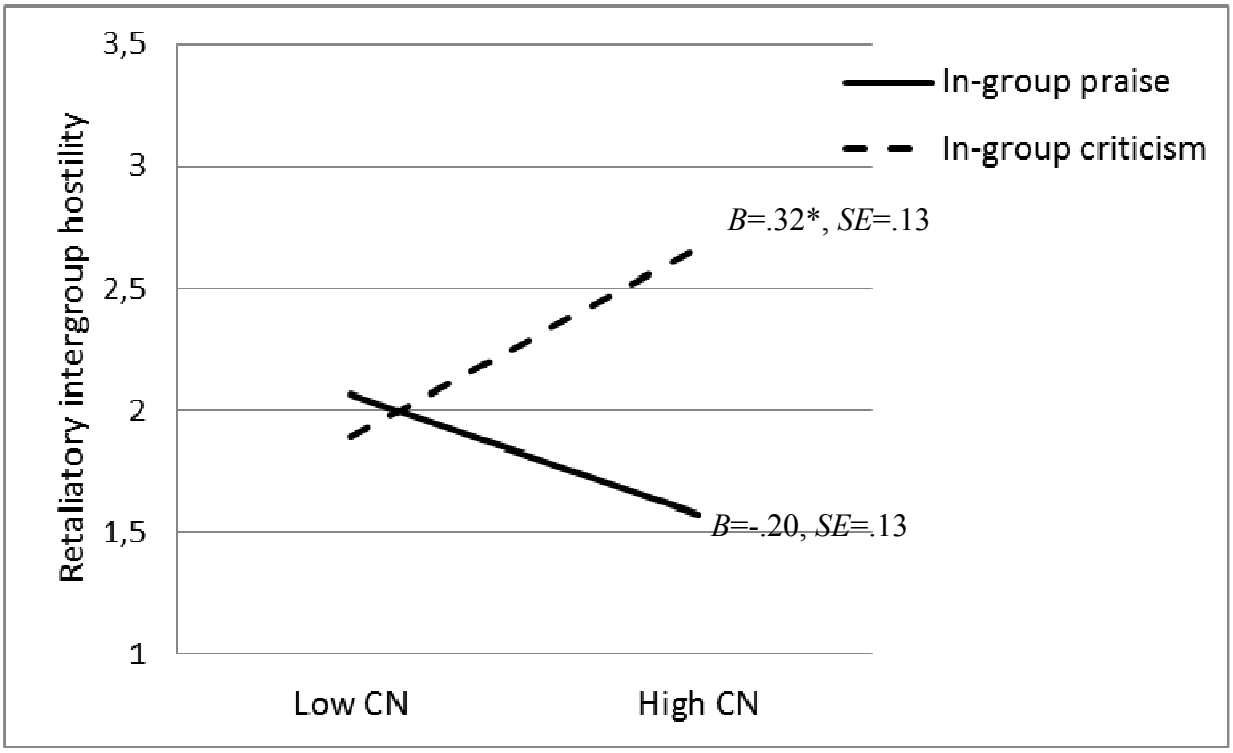

Figure 1. Interaction effect of collective narcissism (CN) and research condition on retaliatory intergroup hostility (Study 1, $N = 134$).

*** $p < .001$.

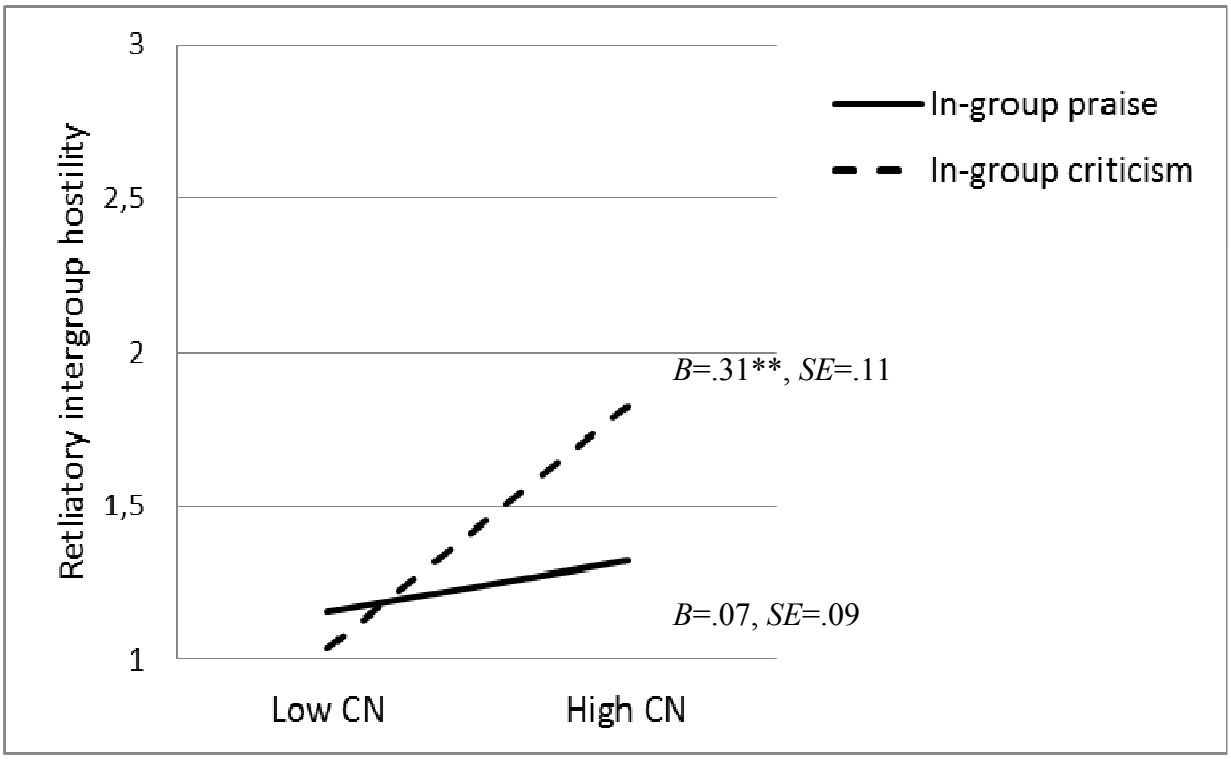

Figure 2. Interaction effect of collective narcissism (CN) and research condition on retaliatory intergroup hostility (Study 2, $N = 108$).

** $p < .01$.

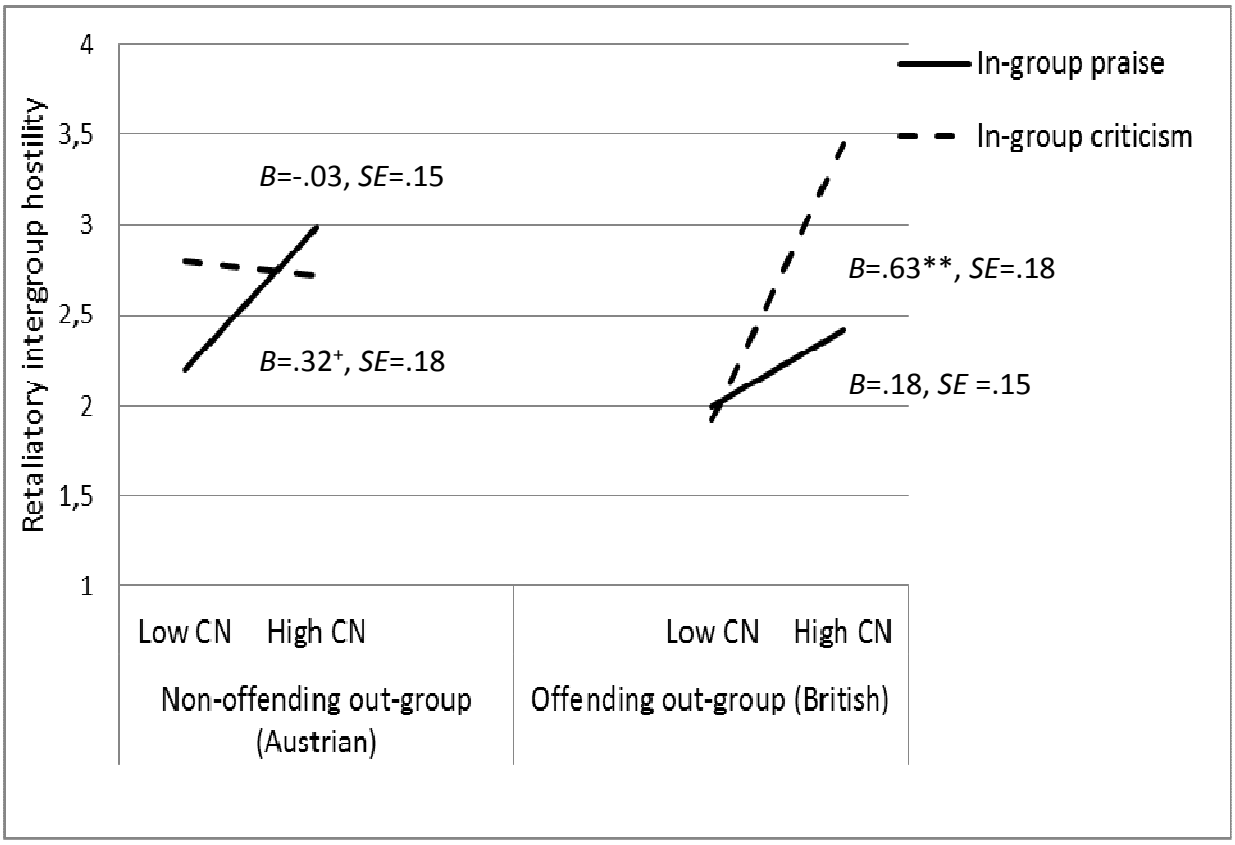

Figure 3. Interaction effect of collective narcissism (CN) and in-group criticism condition on intergroup hostility (Study 3, $N = 117$).

** $p < .01$.

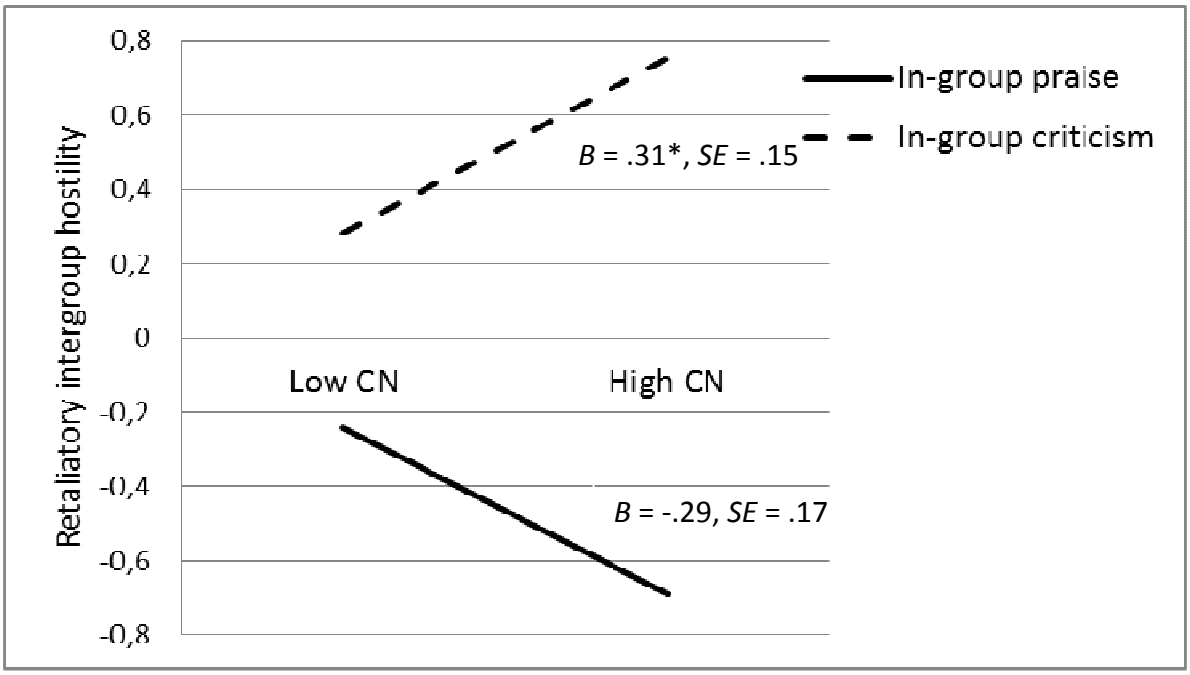

Figure 4. Interaction effect of collective narcissism and research condition on retaliatory intergroup hostility (Study 4, $N = 80$).

* $p < .05$.

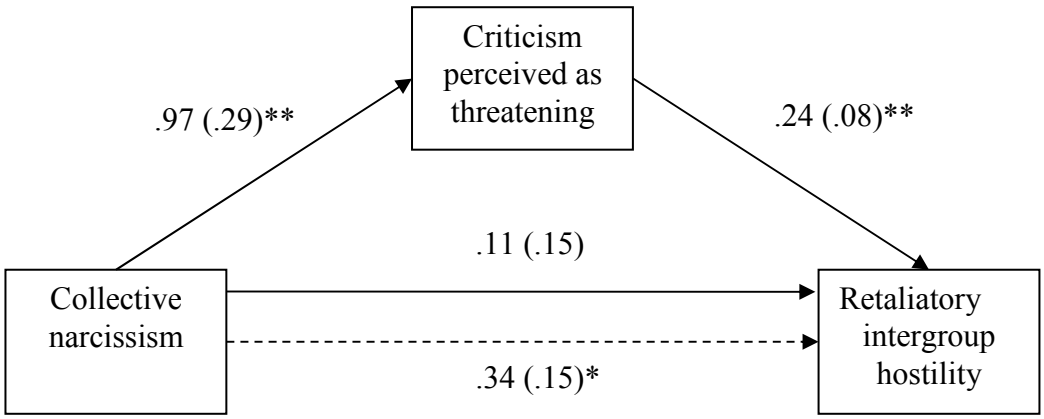

Figure 5. Indirect effect of collective narcissism on retaliatory intergroup hostility via perception of in-group criticism (Controlling for age and gender; Study 4, criticism condition, $N = 37$).

*$p < .05$. ** $p < .01$.

Note. Entries are unstandardized coefficients with error terms in parentheses (dotted line indicates total effect).

Footnotes

[1] In all studies the pattern of results remained unchanged when the controlled continuous variables were not entered into the equation. In Study 1 when only the main theoretical predictors were analyzed Model 1 revealed main effects of collective narcissism (b = .36, SE = .09, t (131) = 4.16, p < .001) and research condition (b = .40, SE = .21, t(131) = 1.91, p = .058). Model 2 revealed that these effects were qualified by a significant interaction of research condition and collective narcissism (b = .54, SE =.17, t(130) = 3.22, p = .002). In Study 2, Model 1 revealed a main effect of collective narcissism (b = .12, SE = .06, t (105) = 2.21, p = .03). Model 2 revealed that this effect was qualified by a significant interaction of research condition and collective narcissism (b = .25, SE =.12, t (104) = 2.09, p = .04). In Study 3 Model 1 revealed a significant effect of research condition (b = .47, SE =.22, t (113) = 2.15, p = .03), and of target out-group (b = -.46, SE =.22, t (113) = -2.11, p = .04). Model 2 revealed a significant, two-way interaction of the target group and collective narcissism (b = .38, SE =.19, t (110) = 2.05, p = .04). Finally, the results of Model 3 indicate that the main effect and the two way interaction were qualified by a three-way interaction between research condition, target out-group and collective narcissism (b = 1.22, SE =.35, t (109) = 3.44, p = .001). In Study 4, Model 1 revealed a significant main effect of research condition (b = .97, SE =.18, t (77) = 5.45, p < .001), that was qualified by a significant interaction revealed in Model 2 (b = .61, SE =.23, t(76) = 2.68, p = .01).

[2] The predicted patterns for high collective narcissism and research conditions were present in all studies when the simple slopes analyses are conducted without the covariates. When the simple slopes were analyzed for the significant interaction in Study 1 without entering the covariates the relationship between collective narcissism and hostile behavioral tendencies towards the offending out-group was positive and significant in the in-group criticism

condition (b = .62, SE = .12, $t(130) = 5.32$, $p < .001$). The same relationship was negative and not significant in the in-group praise condition (b = .09, SE = .12, $t(130) = .74$, p = .46). In Study 2 the simple slope analyses without covariates revealed that the relationship between collective narcissism and hostile behavioral tendencies towards British people was not significant in the in-group praise condition (b = .05; SE = .06; t (104) = .68, p = .50) but it was positive and significant in the in-group criticism condition (b = .29; SE = .10; $t(104) = 2.99$; p = .001For Study 3, the analyses reveal that the interaction between collective narcissism and research conditions was significant for hostility towards the offending out-group, b = .61; SE = .24, $t(109) = 2.52$; p = .01, and for hostility towards the non-offending out-group but the effect was reversed, b = -.61; SE = .26; $t(109) = -2.35$; p = .02. The relationship between collective narcissism and hostility towards the offending out-group was significant under in-group criticism, b = .61; SE = .19; $t(109) = 3.30$, p = .01, but not under in-group praise, b = .01; SE = .15; $t(109) = .04$, p = .97. For the non-offending out-group, the relationship between collective narcissism and intergroup hostility was significant and negative under in-group criticism, b = -.37; SE = .17; $t(109) = -2.22$; p = .03 and non-significant under in-group praise, b = .24; SE = .20; $t(109) = 1.20$; p = .23. The analyses reveal that the interaction between collective narcissism and research conditions was significant for hostility towards the offending out-group, b = .61; SE = .24, $t(109) = 2.52$; p = .01, and for hostility towards the non-offending out-group but the effect was reversed, b = -.61; SE = .26; $t(109) = -2.35$; p = .02. The relationship between collective narcissism and hostility towards the offending out-group was significant under in-group criticism, b = .61; SE = .19; $t(109) = 3.30$, p = .01, but not under in-group praise, b = .01; SE = .15; $t(109) = .04$, p = .97. For the non-offending out-group, the relationship between collective narcissism and intergroup hostility was significant and negative under in-group criticism, b = -.37; SE = .17; $t(109) = -2.22$; p = .03 and non-

significant under in-group praise, $b = .24$; $SE = .20$; $t(109) = 1.20$; $p = .23$. An unexpected pattern emerged when the simple slopes for Study 3 were computed without covariates. The highest levels of intergroup hostility were predicted by low collective narcissism in the in-group criticism condition towards the non-offending out-group. Further studies should examine whether this pattern is reliable. For Study 4 the simple slope analyses without controlling covariates revealed that the relationship between collective narcissism and intergroup hostility was positive and significant in the in-group image threat condition ($b = .33$, $SE = .14$, $t(76) = 2.33$, $p = .03$) and negative and non-significant in the positive evaluation condition ($b = -.28$, $SE = .18$, $t(76) = -1.57$, $p = .12$.

[3] The whole equation was significant in Model 2 whereas none of the individual predictors were significant any longer. There were no multicollinearity problems (VIFs < 3.4). This may suggest that there were too many variables in Model 2. Thus, we ran another multiple regression analysis in which we included only the interaction of research condition and collective narcissism in Model 2. This analysis replicated the results revealing significant main effects of social dominance orientation ($b = .24$, $SE = .09$, $t\ (115) = 2.59$, $p = .01$); individual narcissism ($b = 1.05$, $SE = .47$, $t\ (115) = 2.23$, $p = .03$) and marginally significant effect of right wing authoritarianism ($b = .20$, $SE = .12$, $t\ (115) = 1.75$, $p = .08$). No other main effects were significant. The interaction of research condition and collective narcissism was not significant ($b = .16$, $SE = .17$, $t\ (115) = .98$, $p = .33$).

[4] Simple slope analysis indicated that the relationship between right wing authoritarianism and hostility towards the non-offending out-group was not significant in the in-group praise condition ($b = -.01$, $SE = .07$, $t\ (104) = -.12$, $p = .91$) and significant in the in-group criticism condition ($b = .17$, $SE = .08$, $t\ (104) = 2.12$, $p = .04$). This result may point to authoritarian displaced aggressiveness. However, more studies are needed before more definite conclusions

can be drawn about the nature of this relationship. Interpreting this interaction is beyond the scope of this paper and the effect did not seem reliable enough to warrant such interpretation in the present paper. It is important to note that the full model that included this interaction did not reach statistical significance, the analyses that looked only at the effect of research condition, right wing authoritarianism and their interaction found no significant effect. Moreover, the interaction was not replicated in other studies.

[5] Four additional regression analyses were performed in order to examine whether the hypothesized three-way interaction of in-group criticism vs praise conditions, target out-group manipulation and collective narcissism would remain significant when three way interactions with the competing continuous moderators were also entered into the equation. The competing predictors were analyzed one at the time because the sample size was relatively small compared to the number of predictors entered into such an equation. The hypothesized three way interaction for collective narcissism remained significant, $b = .70$; $SE = .29$, $t(100) = 2.45$; $p = .02$ when it was tested against the three way interaction with individual narcissism, $b = -.86$; $SE = 1.81$, $t(100) = -.48$; $p = .64$. The hypothesized interaction for collective narcissism remained significant, $b = .73$; $SE = .31$, $t(100) = 2.38$; $p = .02$ also when it was tested against the three way interaction with right wing authoritarianism, $b = .21$; $SE = .43$, $t(100) = .48$; $p = .63$. The hypothesized interaction for collective narcissism remained significant, $b = .80$; $SE = .28$, $t(100) = 2.83$; $p = .003$ when it was tested against the three way interaction with social dominance orientation, $b = -.16$; $SE = .35$, $t(100) = -.45$; $p = .66$. The main effects of social dominance orientation and in-group identification remained significant in these three analyses. When the three way interaction with in-group identification was entered into the equation together with the hypothesized interaction, the interaction with collective narcissism remained significant, $b = .83$; $SE = .28$, $t(100) = 2.93$; $p = .001$. The

three way interaction with in-group identification was marginally significant, $b = -.23$; $SE = .12$, $t(100) = -1.90$; $p = .06$ and the main effect of in-group identification became non-significant.

[6]We conducted the same set of regression analyses for negative evaluations and negative behavioral intentions towards the offending and non-offending out-groups separately. The pattern of results remained the same for both University of Warsaw and University of Gdansk.

[7] We re-ran the mediated moderation procedure on both criterion variables separately. We also ran all the analyses without controlling for age and gender. We confirmed a similar pattern of results in each case.