

## **The Contagion of Interstate Violence: Perceived International Images and Threat Explain Why Countries Repeatedly Engage in Interstate Wars**

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THE CONTAGION OF INTERSTATE VIOLENCE: PERCEIVED INTERNATIONAL  
IMAGES AND THREAT EXPLAIN WHY COUNTRIES REPEATEDLY ENGAGE IN  
INTERSTATE WARS

A Thesis Presented

by

MENGYAO LI

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The Contagion of Interstate Violence: Perceived International Images and Threat Explain  
Why Countries Repeatedly Engage in Interstate Wars

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## ABSTRACT

# THE CONTAGION OF INTERSTATE VIOLENCE: PERCEIVED INTERNATIONAL IMAGES AND THREAT EXPLAIN WHY COUNTRIES REPEATEDLY ENGAGE IN INTERSTATE WARS

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Three experiments investigated the phenomenon of war contagion in the context of international relations, hypothesizing that past inter- (but not intra-) state war will facilitate future, unrelated interstate war. Americans showed stronger support for violent responses to new, unrelated interstate tensions after being reminded of an historical war between the U.S. and another state, as compared to an historical domestic war within the U.S. (Study 1). This war contagion effect was mediated by heightened perceived threat from, and negative images of, a fictitious country unrelated to the past war, indicating a generalized effect of past interstate war on perceived threat/images from any foreign country. The war contagion effect was further moderated by national glorification (Study 2). Largely replicating these effects with an additional baseline condition, Study 3 yielded further support for the generalized effect of past interstate war on perceived threat and images, this time with a real third-party country.

*Keywords:* interstate violence, war contagion, intergroup threat, image, ingroup identification/ glorification

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## CHAPTER 1

### INTRODUCTION

One of the most well-established phenomena in the psychological literature on aggressive and violent behavior is that violence begets violence. In a wide variety of contexts – from child abuse, to homicide, to community violence – scholars of aggression have demonstrated that suffering, committing, or even observing violence increases the likelihood of engaging in violent acts against others in the future (Bandura, 1973; Goldstein, Davis, & Herman, 1975; Huesmann, 2011; Patel, Simon, & Taylor, 2013; Widom, 1989a, b). While the “violence begets violence” hypothesis has been extensively researched in the realm of interpersonal relations, empirical research on the radiating effect of violence among large social groups such as nation states is limited. Is interstate violence also contagious in the sense that a state’s past engagement in violent conflict with another state can predispose its citizens to supporting future violent conflict against other, third-party states? If so, what are the psychological processes underlying such contagion of interstate violence?

In the current contribution, we argue that when reminded of a historical interstate war, citizens of the participating states will perceive other third-party states as more threatening and dangerous. Such heightened perceived threat of other third-party states will in turn increase these third-party states’ negative images in the eye of citizens from the observing state, which will eventually lead to citizens’ support for violence in response to contemporary tensions with third-party states.

#### **1.1 The Contagion of Interstate Violence**

Events between two states rarely affect only the states involved. They often percolate through each state's respective networks, (re-)shaping each state's relations with other third-party states. Throughout history, conflicts and wars between two nations have created "traps" that draw other nations into their grasp. International relations scholars often refer to this phenomenon as contagion, or diffusion, of war (Houweling & Siccama, 1985; Kedera, 1998; Levy, 1982; Most & Starr, 1990; Siverson & Starr, 1991). The logic of war contagion, in its original form, is that the spread of war is rather immediate both temporarily and spatially, directly associated with the original war. More recent scholarship in the field of international politics has extended this notion by examining the influence of a state's historical ties with other states on its present and future foreign relations (Crescenzi, 2007). In this case, it has been argued that two states are more likely to engage in war if one of them perceives the other as having a history of hostile interactions with other third-party states.

While interstate relations can become more violent due to a state's reputation for hostility, we propose another, perhaps more direct form and cause of violence contagion across space and time. Interstate violence can spread, we argue, because a state's prior experience of interstate violence makes its own citizens more prone to perceiving *any* other state (including third-party states not involved in the original violence) as hostile and threatening to their own state, and therefore more likely to behave violently in the face of new interstate tensions with *any* other state. After the invasion of Afghanistan, for example, the U.S. placed several other states, even those unrelated to Afghanistan or 9/11, on an "axis of evil." One of the states on this axis was Iraq, which was subsequently invaded by the U.S. in 2003. Certainly, states behave violently toward other states for a

variety of reasons other than their historical engagement in interstate violence. In fact, defending national interests is a rhetoric that political leaders commonly employ when justifying their decisions to go to war. Behaviors of ordinary citizens, however, rarely follow such rational-choice models, especially in the context of intergroup conflict (e.g., Long & Brecke, 2003). Thus, our war contagion hypothesis above by no means rejects other explanations for violent interstate behaviors. Rather, it offers a complementary outlook on why countries repeatedly engage in interstate violence, particularly from the perspective of ordinary people, and their support for war.

Against the background of war contagion theory, it is important to note that a state's prior experience of violence, as we argue, will only spill over to new interstate situations when the prior violence has been between, not within (e.g. intra-state violence, such as civil war, political violence within a state), states. This is because past engagement in interstate violence will likely provide information that people use to generalize, accurately or not, to other foreign states. Information provided by past intra-state violence, on the other hand, should not be used by people to generalize it to other foreign states—though it may arguably be used to generalize to other groups within the state.<sup>1</sup> With this distinction between different types of violence in mind, we consider past intrastate violence an important and methodologically rigorous comparison to past interstate violence when examining the contagion of interstate violence through the generalization of perceived threat and negative images of foreign states.

## **1.2 Attitude Generalization**

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<sup>1</sup> Indeed, conflict between different subgroups also seems to perpetuate itself—countries that have experienced one civil war are more likely to experience a second or third civil war compared to those that have no prior history of civil war (Walter, 2004). The contagion of *intrastate* violence, however, is not the

While psychological research has not empirically examined the contagion of interstate violence – specifically, how and why past experiences of violence affect citizens’ reactions to new interstate tensions with unrelated third states – it has shed innovative light on the generalization of attitudes from old intergroup conflicts to new conflicts with unrelated third parties. In one study, Wohl and Branscombe (2009) showed that a reminder of historical ingroup victimization (i.e., attack on Pearl Harbor by the Japanese) was sufficient to elicit collective angst, or the concern about the future vitality of one’s ingroup, among American participants. This concern subsequently motivated ingroup-protective actions in current intergroup situations—participants expressed more forgiveness of the harm Americans committed in the Iraq war. In another study, Americans and Canadians showed dramatically less favorable attitudes toward foreigners and immigrants after the attacks of 9/11, 2001, regardless of whether or not their origins were related to the attackers (Esses, Dovidio, & Hodson, 2002). Similarly, Americans showed increased support for war and violence in general after being reminded of the 9/11 attacks (Carnagey & Anderson, 2007). And in their research on *schadenfreude*, Leach and Spears (2009) demonstrated that when one’s own national group was outshone by a second nation, the dejection at such defeat can lead to feelings of *schadenfreude* toward the misfortune of an uninvolved third nation (see also Leach, Spears, Branscombe, Doosje, 2003, Study 2). Importantly, dislike of the second nation predicted *schadenfreude* toward the third nation, which in turn promoted negative evaluations of the third nation. These findings lend tangential support to the notion that negative interstate experience in the past can have important implications for how citizens view and interact with other states in the future.

While the above-mentioned studies focused mainly on the mechanisms (e.g., collective angst, schadenfreude) underlying effects of past intergroup experiences on present intergroup relations, these mechanisms themselves are not of primary importance to our present research. They do, however, collectively speak to a more general psychological phenomenon that is of importance here: attitude generalization. The attitude generalization effect has been demonstrated in many different domains, suggesting that attitudes toward one object can generalize to other objects (e.g., Bouman, Zomerén, & Otten, 2013; Pettigrew, 1997, 2009; Ranganath & Nosek, 2008; Shook, Fazio, & Eiser, 2007). In the context of interstate violence, we propose that attitude generalization occurs when hostility toward one state generalizes to other states that were not involved in the original interstate conflict. Specifically, as we explain below, the psychological mechanisms underlying this violence generalization are heightened perceived negative images of other countries in general and the associated realistic and symbolic threats they pose to the perceiver's own country.

### **1.3 International Images and Intergroup Threat**

International image theory, originally developed by international relations scholars, posits that perceptions of actors on the international stage are organized into different schemas, stereotypes, or images (Alexander, Brewer, & Herrmann, 1999; Alexander, Levin, & Henry, 2005; Cottam, 1977; Herrmann, Voss, Schooler, & Ciarrochi, 1997; Herrmann, Tetlock, & Visser, 1999). According to the theory, perceived images stem primarily from ongoing relationships between nations and serve to guide or justify strategic action and policy choices in international affairs. Image theorists have identified five major images in the international arena: enemy, ally, imperialist, dependent, and

barbarian. The enemy image arises when the relationship between two international actors of comparable power and cultural sophistication is characterized by intense competition and threat. In direct contrast to the enemy image, the ally image derives from a rather cooperative and mutually beneficial relationship between actors that also share similar status. The imperialist image arises when the observer perceives another actor as more powerful and culturally similar or superior, thus possessing both the capability and opportunity to exploit the observer (e.g., colonizers in the eyes of their current or future colonies). The complement to the imperialist image is the dependent image that pictures the target country as vulnerable and inferior, presenting the opportunity for the more powerful observer to take control over. Finally, the barbarian image portrays the target as more culturally backward and yet more powerful as compared to the observer.

Building upon image theory, we propose that not only does one state's relation with a second state shape the images of that second state, but it can also generalize beyond the specific interstate context to affect perceived images of unrelated third-party states (i.e. images of "other states in general"). Thus, reminders of past interstate war between the observer's own state and another will likely increase his or her perceived negative images (i.e., enemy, imperialist, dependent, or barbarian) and decrease his or her perceived positive images (i.e., ally) of any foreign states in general. It is unclear, however, whether this generalization effect will increase perceptions of any kind of negative images or limit to negative images that reflect specific structural relations between the target and perceiver's own country (e.g. imperialist).

As mentioned earlier, image theory postulates that perceived threat from a target state plays a crucial role in the initial formation of images of that state. It is plausible,

then, that an increase in perceived threat drives the hypothesized effects of engaging in past violent conflict on perceived images of other states. Based on past research on intergroup threat, we explored perceptions of threat to both the ingroup's physical existence and wellbeing, as well as its cherished values and principles. The more tangible threat is often referred to as *realistic threat*, pertaining to perceiving the outgroup as endangering the existence (e.g., through warfare), political or economic power, the physical or material well-being of the ingroup or its members (LeVine & Campbell, 1972; Sherif & Sherif, 1953; 1979). In contrast, *symbolic threat* concerns dangers to the ingroup "way of life" due to perceived group differences in values, norms, standards, and worldviews (Stephan & Stephan, 2000). As such, both realistic and symbolic threat might evoke perceptions of negative international images.

Integrating research on intergroup threat and international images, we propose that reminders of one's state's past engagement in violence against another state will elicit generalized perceptions of symbolic and realistic threat from previously uninvolved third-party states, which will in turn result in increased perceived negative international images. Negative images, according to image theory, should then lead to preferences for aggressive foreign policies in response to new interstate tensions (see Figure 1). Adding another layer of complexity to the proposed war contagion process, and in keeping with literature on attitude generalization, the target country of perceived threats and images does not necessarily have to be the same as the target country of foreign policies. In other words, perceived threats from and negative images of a foreign country can further generalize to influence policy preferences regarding yet other foreign countries.

## CHAPTER 2

### STUDY 1

Study 1 tested the main hypothesis that reminding people of their country's engagement in past interstate (but not intrastate) violence will increase their support for violence in response to new interstate tensions with other countries, and that this effect will be explained by heightened negative perceptions of third-party states in general. To examine this hypothesis, we assessed American participants' reactions to both real and hypothetical contemporary tensions between the U.S. and other nations after being reminded of either the American Revolutionary War (interstate conflict<sup>2</sup>) or the American Civil War (intrastate conflict). The American Civil War was introduced as a rigorous control condition to assess whether increased preference for violent foreign policy is simply a normative response to reminders of intergroup violence in general, or, as we argue, a more specific response to interstate violence in particular. We predicted that Americans will react more hostilely to current tensions between the U.S. and other foreign countries after the reminder of the Revolutionary War as compared to that of the Civil War. To further investigate whether war contagion is driven by generalized perceived threats from and negative images of any foreign state, in Study 1 we assessed perceived threats and images of a fictitious, but allegedly real, country as a "stand-in" for third-party states in general. Given that participants had no knowledge of this fictitious state's foreign relations, using a fictitious country as the target state provided a stringent

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<sup>2</sup> Strictly speaking, the American Revolutionary War did not begin as an interstate conflict due to the colonial status of the United States. However, it gradually grew into an international war and is now arguably remembered more as an interstate war rather than a civil war by the American public.



test of whether, and to what extent, past interstate violence can change the perceived threat and image of a completely uninvolved third-party state.

## **2.1. Method**

**2.1.1 Participants.** The sample consisted of 194 Americans recruited through Amazon's Mechanical Turk (MTurk). Our screening of the data quality resulted in the exclusion of three participants who did not pay sufficient attention to the manipulation materials (as indicated by their summaries of the manipulation materials and incorrect answers to attention check questions), five participants who spent significantly more time reading the manipulation materials than the rest of the sample, and 22 multivariate outliers (Tabachnick & Fidell, 2007). Although we excluded approximately 15% of the total sample, the exclusion rate was similar to the average benchmarks for online studies (Chandler, Mueller, & Paolacci, 2013). 164 participants were retained for data analysis (40% men; age  $M = 35$ ,  $SD = 12.81$ ).

**2.1.2 Procedure.** Participants were randomly assigned to read a fictitious, but allegedly real, New York Times article depicting either the American Civil War (intrastate war condition) or the American Revolutionary War (interstate war condition). In the intrastate war condition, participants read about the vast cultural and political differences between the American South and North, which eventually led to the outbreak of the American Civil War. In the interstate war condition, participants read about the mounting tensions between Great Britain and what is now the United States prior to and during the Revolutionary War. To minimize the differences between the two articles, the descriptions of the Civil War and the Revolutionary War were identical in terms of casualty numbers and injuries. Although the numbers of deaths and injuries were thus

inaccurate, no participant raised suspicion in the summaries of the articles or at the end of the study. To rule out the possibility that any observed effect is due to the perceived intra- versus inter-group nature of the conflict, we also emphasized in both articles that the war was one of the most costly instances of *intergroup* warfare in the sense that two groups were in conflict with each other. Furthermore, both articles ended on a rather positive note, emphasizing the abolition of slavery in the Civil War condition and the independence of the U.S. in the Revolutionary War condition.

After the reading task, participants completed several manipulation checks. To ensure that participants read the article carefully, they also summarized it in their own words. Then they filled out the dependent measures in the order outlined below. All items were measured on 9-point analog visual scales (*1=strongly disagree; 9=strongly agree*) unless noted otherwise. At the end of the study participants reported their demographic information and were fully debriefed.

### **2.1.3 Materials.**

**2.1.3.1 Manipulation check.** After reading the article, participants answered three questions to indicate the extent to which they perceived the conflict depicted in the article as 1. two groups fighting against each other; 2. a domestic/civil war; 3. an international war.

**2.1.3.2 Symbolic and realistic threat.** Adapted from Stephan et al. (1998, 1999), two items measured symbolic threat posed by perceived differences in values and cultures between the U.S. and a fictitious country called *Coebia* (e.g., “*Coebia is a threat to American culture.*”). Two items measured realistic threat posed by military or economic

competition between the U.S. and *Coebia* (“*Coebia’s military development poses a threat to U.S. interests.*”).

**2.1.3.3 *International Images.*** We examined participants’ perceptions of three international images: ally, enemy, and imperialist. Ally and enemy images are the most widely studied images, which are also the most central to contemporary international relations. The imperialist image, in addition, is highly relevant to the American Revolution against the British Empire. Adapted from Alexander et al. (2005), perceived images of *Coebia* were assessed using three sub-scales tapping the three different images, respectively. Each image was measured with two items (e.g., *Ally*: “*Coebia is good-willed toward other countries;*” *Enemy*: “*Coebia has hostile intentions toward others;*” *Imperialist*: “*Coebia exploits other countries and keeps all the profits for itself.*”).

**2.1.3.4 *Support for violent responses to current interstate tensions.*** To measure support for violent and nonviolent solutions to new interstate tensions in general, participants were presented, in random order, with six short descriptions of military and economic tensions between the U.S. and other countries. We included six different conflict scenarios to increase the variability of interstate tensions, and intended to use them as a single scale, measuring generalized attitudes toward unrelated interstate tensions. Our selection of multiple scenarios also echoes the recent call for employing multiple versions of the constructs of interest (Monin & Oppenheimer, 2014). Of the six conflict scenarios, one described the nuclear program in Iran as a potential threat to the U.S. and its allies; one described the recent nuclear threats issued by North Korea; one described America’s increasing economic and trade tensions with China; one described the military tensions between the U.S. and Russia. In addition to countries that currently have real tensions

with the U.S., we also examined participants' reactions to hypothetical, but allegedly real, tensions between the U.S. and countries with which the U.S. has neutral or rather amicable relationships. Two scenarios described hypothetical tensions between the U.S. and Australia as well as the Netherlands, respectively. Participants were instructed to imagine that they were in the position to decide what course of action their country should take in response to those tensions. Participants indicated the extent to which they favored military strategies (e.g., use of force) to address the tensions ( $1 = \text{not at all}$ ;  $9 = \text{very much}$ ).

## **2.2 Results and Discussion**

**2.2.1 Manipulation checks.** As expected, participants in the intrastate ( $M = 7.59$ ) and interstate war ( $M = 7.86$ ) conditions did not differ significantly in their perceptions of the violent conflict described in the article as two groups fighting against each other,  $F(1, 163) = 0.93, p = .336, \eta^2 = .01$ . Participants in the interstate war condition perceived the conflict significantly less as a domestic/civil war ( $M = 4.03$ ) compared to those in the intrastate war condition ( $M = 8.03$ ),  $F(1, 163) = 129.88, p < .001, \eta^2 = .45$ . Conversely, participants in the interstate war condition perceived the conflict significantly more as an international conflict ( $M = 6.80$ ) than participants in the intrastate war condition ( $M = 2.45$ ),  $F(1, 163) = 142.20, p < .001, \eta^2 = .47$ .

### **2.2.2 Main Analyses.**

**2.2.2.1 Analytical strategy.** Because we hypothesized that reminders of past interstate violence would influence attitudes toward contemporary tensions with other, unrelated countries in general, we first treated the six conflict scenarios as a single scale. The scale demonstrated satisfactory reliability ( $\alpha = .82$ ) and loaded onto a single factor. Thus, we

first used the composite score for participants' responses across all six scenarios as the dependent variable (DV), regardless of possible differences between scenarios (e.g. different target countries, different types or severity levels of tension). Although the scale was reliable and unidimensional, it is important to ensure that any within-subject effects representing such differences were non-significant and did not alter the effect of condition on the DV. Thus, we also ran a mixed analysis of variance (ANOVA), in which condition was entered as a between-subjects variable and conflict scenario as a within-subject variable. Results from both analyses converged, thus we only report below the analysis with all six scenarios combined as the DV (see Supplementary Materials for results of the mixed ANOVA).

**2.2.2.2 Support for violent responses to current interstate tensions.** To assess whether participants were more supportive of violent responses to current, unrelated interstate tensions after the past interstate violence reminder, we submitted the composite score for support for future violence against the six foreign countries ( $M = 3.71$ ,  $SD = 1.69$ ) as the DV to a t-test using the general linear model (GLM) procedure in SAS 9.3. This procedure outputs F, not t, values. Therefore Fs are reported throughout this paper; note that F equals  $t^2$ . The analysis yielded a marginally significant effect of condition,  $F(1, 163) = 3.59$ ,  $p = .060$ ,  $\eta^2 = .02$  ( $LCI = .00$ ,  $UCI = .08$ ). As predicted, participants supported future interstate violence somewhat more strongly after reading about interstate war ( $M = 3.98$ ) as compared to intrastate war ( $M = 3.49$ ).

**2.2.2.3 Symbolic and realistic threat.** Due to the strong correlation between symbolic and realistic threat ( $r = .94$ ), we first conducted a factor analysis to test whether these two types of threat are indeed two distinct constructs in our data. Only one factor emerged,

however, indicating that we should treat symbolic and realistic threat as one construct in the subsequent analyses (as suggested by a scree plot and the “Eigenvalue > 1” criterion; see Table 1 for the factor loading patterns).<sup>3</sup> A GLM with perceived threat from Coebia as the DV ( $\alpha = .96$ ,  $M = 3.85$ ,  $SD = 1.76$ ) revealed a significant effect of condition, such that participants who had been reminded of interstate war reported significantly greater perceived threat ( $M = 4.42$ ) compared to participants who had been reminded of intrastate war ( $M = 3.45$ ),  $F(1, 159) = 8.56$ ,  $p = .004$ ,  $\eta^2 = .05$  ( $LCI = .01$ ,  $UCI = .13$ ).

**2.2.2.4 International images.** We also conducted a factor analysis on all international image items to test whether the three subscales indeed measured three distinct images in our study: enemy, imperialist, and ally.<sup>4</sup> Two factors emerged from the analysis (as suggested by a scree plot and the “Eigenvalue > 1” criterion; see Table 2 for the factor loading patterns). Items for enemy and imperialist images loaded onto a single factor, while items for ally image defined the second factor. Although enemy and imperialist images are considered two distinct constructs according to image theory, their factor loadings indicate that they should be treated as one single construct in our data.<sup>5</sup>

Therefore, we created a new variable, *negative image* ( $\alpha = .97$ ,  $M = 4.22$ ,  $SD = 1.52$ ), including both enemy and imperialist image. The analysis revealed a significant effect of condition on negative image,  $F(1, 159) = 5.67$ ,  $p = .018$ ,  $\eta^2 = .03$  ( $LCI = .00$ ,  $UCI = .11$ ).

Consistent with our hypothesis, participants reported greater perceived negative image of Coebia after being reminded of interstate war ( $M = 4.50$ ) as compared to intrastate war

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<sup>3</sup> The following results are virtually the same if we treat symbolic and realistic threat as two separate variables.

<sup>4</sup> We also conducted a confirmatory factor analysis to test whether perceived threat and negative images were distinct constructs. The analysis revealed that while threat and negative images were positively correlated, the model that freely estimated the correlation between these variables fitted significantly better than the model that fixed the correlation to 1 (equivalent to a model collapsing across factors into one factor), indicating that threat and images were distinct factors.

<sup>5</sup> The following results were virtually the same if we treated both images as separate variables.

( $M = 3.93$ ). The same analysis with perceived ally image of Coebia ( $\alpha = .96$ ,  $M = 4.88$ ,  $SD = 1.54$ ) as the DV, however, did not yield a significant effect of condition,  $F(1, 159) = 1.25$ ,  $p = .265$ ,  $\eta^2 = .01$  ( $LCI = .00$ ,  $UCI = .06$ ). The interstate war reminder did not decrease the perceived ally image as compared to the intrastate war reminder.

### 2.2.3 Mediation Analyses.

To test our hypothesized multi-step mediational model of the effect of condition on support for future interstate violence through (a) perceived threat, and (b) perceived images of foreign countries (see Figure 1), we conducted two sets of mediational analyses with 5,000 bootstrap samples and 95% confidence intervals (one analysis for each of the two steps of our model), and a path model testing the whole model at once.<sup>6</sup> In the first set of mediational analyses, condition was introduced as the IV, perceived threat as the mediator, and perceived negative image and ally image as the DVs, respectively (Hayes, 2012, model 4). In line with our mediational hypothesis, there was a significant indirect effect of condition on perceived negative image through perceived threat (*boot coefficient* = .23,  $LCI = .079$ ,  $UCI = .400$ ). In line with the non-significant effect of condition on ally image reported above, the indirect effect of condition on perceived ally image through threat was not significant (*boot coefficient* = .04,  $LCI = -.018$ ,  $UCI = .159$ ).

In the second set of mediational analyses, condition was introduced as the IV, perceived negative image and ally image as the mediators, and support for future interstate violence as the DV. Consistent with our mediational hypothesis, the indirect effect of condition on support for violence through perceived negative image was significant (*boot coefficient* = .05,  $LCI = .005$ ,  $UCI = .150$ ). The indirect effect of

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<sup>6</sup> As path analysis only provides evidence for indirect effects but not for mediation, separate mediational analyses were necessary to establish the mediating roles of threats and images.

condition through perceived ally image, however, was not (*boot coefficient* = .01, *LCI* = -.010, *UCI* = .070).

To test all steps of our mediational model simultaneously, we conducted a path analysis, in which condition was entered as an exogenous variable, and perceived threat, negative and ally images, and support for future interstate violence were entered as endogenous variables. Mirroring our GLMs described above, we modeled the effect of condition on perceived threat as the “step 1 mediator.” Perceived threat in turn affected perceived negative image as the “step 2 mediator,” which then affected support for future interstate violence as the ultimate outcome variable. The model, as depicted in Figure 2, fit the data well, with the desirable non-significant exact-fit index,  $\chi^2(5) = 4.29, p = .508$ , and very good close-fit indices, *CFI* = 1.00, *NFI* = .97, *SRMSR* = .04. Significance and directions of the paths were in line with our expectations. We also tested several alternative models using both mediation and path analyses (see Supplementary Materials).

Study 1 provided preliminary evidence for our war contagion hypothesis. When reminded of the ingroup’s own conflict behavior in the past, people are more likely to adopt aggressive approaches to resolving new tensions with previously uninvolved third parties, including countries with rather amicable relationships to the ingroup (Australia, The Netherlands). Study 1 further demonstrated the mediating roles of perceived threat and negative international images. When reminded of interstate war, American participants viewed an uninvolved, even fictitious, third-party state as more threatening, which in turn predicted heightened perceived negative international images of that state.



Negative images then led to increased support for violent responses to new, unrelated interstate tensions with other, real states.

**2.2.4 Statistical power.** A post-hoc power analysis using the G\*Power program (Erdfelder, Faul, & Buchner, 1996) revealed that on the basis of the average effect size for the main effects of condition ( $\eta_{avg}^2 = .03$ ), and a sample size of 164, the power to detect these main effects was 0.65. Although the power is relatively low, it is greater than the average power of 0.35 in the field of psychology (Bakker, van Dijk, & Wicherts, 2012), and we obtained significant, a priori hypothesized effects.

## CHAPTER 3

### STUDY 2

The main goal of Study 2 was to investigate potential moderators, thereby establishing boundary conditions of war contagion. If we accept that past interstate violence influences how citizens of the participating states perceive other interstate tensions and conflicts in the future, past interstate violence should then have the most profound impact on those citizens who are most psychologically invested in their own national groups. It has been well-documented that people who attach higher importance to their group are more sensitive to outgroup threat and display stronger intergroup bias when the ingroup is threatened (Branscombe, Ellemers, Spears, & Doosje, 1999; Riek, Mania, & Gaertner, 2006). Recent research on social identification proposes a bidimensional view of group identification, distinguishing between ingroup attachment and glorification (Roccas, Klar, & Liviatan, 2006). Whereas attachment refers to one's subjective identification with the ingroup, glorification refers to beliefs in the superiority of the ingroup over outgroups and emphasizes loyalty and deference to ingroup norms and authorities. Research has revealed that glorification is negatively related to collective guilt for ingroup-committed transgressions, whereas attachment is positively related to collective guilt for ingroup-committed transgressions (Roccas et al., 2006). Similarly, when the ingroup (rather than an outgroup) was responsible for intergroup violence, glorification but not attachment predicted dehumanization of outgroup victims and decreased demands for justice (Leidner, Castano, Zaiser, & Giner-Sorolla, 2010), as well as a shift from violence-condemning harm and fairness morals to violence-legitimizing loyalty and authority morals (Leidner & Castano, 2012).

In line with past research on group identification, we predicted that the extent to which individuals are psychologically invested in their national group will moderate the effects of past interstate violence on responses to ongoing interstate tensions. Strongly glorifying group members, at the very least those who are high on both glorification and attachment, should be most affected by past interstate violence, and therefore perceive other states as most negative and threatening, which should ultimately lead to most violent responses to new interstate tensions. In contrast, the ingroup's past conflict with other states are unlikely to affect low glorifiers due to their lack of motivation or psychological need to defend the ingroup. Study 2 was therefore designed to examine the moderating roles of ingroup glorification and attachment in the war contagion phenomenon. In an effort to directly replicate our main findings in Study 1 (for the primacy of direct replications over conceptual replications see Simons, 2014), we employed the same manipulation materials in this study.

### **3.1 Method**

**3.1.1 Participants.** The sample consisted of 180 Americans recruited through MTurk. A prescreening procedure was employed to prevent people who participated in Study 1 from taking part in this study. After excluding eight participants who did not pay sufficient attention to the manipulation (as indicated by their summaries of the manipulation materials and incorrect answers to attention check questions), six participants who spent less than 30 seconds reading the manipulation material or significantly longer than the rest of the sample (outliers), 166 participants were retained for data analysis (49% men; age  $M = 33$ ,  $SD = 12.08$ ).

**3.1.2 Procedure.** Participants followed a similar procedure as in Study 1. Participants in the intra and interstate war conditions read the same New York Times articles about the American Civil War and the American Revolutionary War, respectively. Following the reading task, participants completed the same manipulation checks as in Study 1, and then summarized the news article in their own words. Afterwards, they filled out the dependent measures in the order outlined below.

### **3.1.3 Materials.**

**3.1.3.1 *Support for violent responses to current interstate tensions.*** To measure support for violent and nonviolent solutions to new interstate tensions, participants were presented with three of the six international conflict scenarios that were used in Study 1. To maximize ecological validity, realism, and real-world applicability of our findings, we focused on countries that, at the time, had real tensions with participants' own country (United States). Thus, the three scenarios described the tensions with Iran, North Korea, and China.

**3.1.3.2 *National attachment and glorification.*** *Attachment* was measured with eight statements about the United States, tapping the importance of the U.S. to participants' identity and their commitment to the U.S. (e.g., "*Being American is an important part of my identity.*"). *Glorification* was measured with eight statements tapping participants' belief in American superiority over other countries, and their deference to American authorities (e.g., "*The U.S. is better than other nations in all respects;*" "*It is disloyal for Americans to criticize the United States.*"). These statements were adapted to the American context from Roccas et al.'s (2006) scales. Following others (e.g., Feygina,

Jost, & Goldsmith, 2009; Leidner et al., 2010), the moderators were administered at the end of the study in order to avoid raising participants' suspicion about the study goal.

### **3.2 Results and Discussion**

**3.2.1 National attachment and glorification.** Neither attachment ( $\alpha = .94$ ,  $M = 6.30$ ,  $SD = 1.84$ ),  $F(1, 165) = 0.71$ ,  $p = .193$ ,  $\eta^2 = .01$ , nor glorification ( $\alpha = .85$ ,  $M = 4.56$ ,  $SD = 1.42$ ),  $F(1, 165) = 0.31$ ,  $p = .580$ ,  $\eta^2 = .00$ , was significantly affected by condition, thus allowing us to use them, together with condition, as independent variables (IVs) in subsequent GLMs.

**3.2.2 Support for violent responses to current interstate tensions.** A composite score for support for violent responses to the conflict scenarios<sup>7</sup> ( $\alpha = .76$ ,  $M = 4.71$ ,  $SD = 2.35$ ) was submitted as a DV to a moderated regression analysis with condition as a categorical IV and glorification and attachment as continuous moderating variables (and all interaction terms between these variables). The analysis yielded the expected two-way interaction between glorification and condition (see Figure 3),  $F(1, 165) = 5.37$ ,  $p = .022$ ,  $\eta^2 = .03$  ( $LCI = .00$ ,  $UCI = .10$ ). Follow-up analyses revealed that participants who strongly glorified their ingroup (1 SD above the mean) were more likely to favor future interstate violence after reading about interstate war ( $M = 6.70$ ) as compared to intrastate war, ( $M = 5.03$ ),  $t(165) = 2.45$ ,  $p = .015$ . In contrast, exposure to interstate or intrastate war did not have a significant effect on low glorifiers' support for future violence; if anything, they showed the opposite tendency,  $t(165) = -1.19$ ,  $p = .238$ .<sup>8</sup>

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<sup>7</sup> As in Study 1, we also conducted mixed ANOVA to test the within-subject effect of conflict scenario. The results again converged (see Supplementary Materials).

<sup>8</sup> Concerned about the potential effects of demographic factors on participants' attitude toward the Civil War and current U.S. foreign policies, we also conducted the same analysis while controlling for whether our American participants came from the Southern or Northern U.S., as well as their political orientation,

The interaction between attachment and condition was also significant,  $F(1, 165) = 5.93, p = .016, \eta^2 = .04$  ( $LCI = .00, UCI = .10$ ). Participants who were low on attachment (1 SD below the mean) showed a similar pattern to those high on glorification--a reminder of interstate war ( $M = 5.90$ ) increased these participants' support for violence as compared to a reminder of intrastate war ( $M = 4.12$ ),  $t(165) = 2.45, p = .015$ . Strongly attached individuals did not show significantly differential support for future violence depending on condition; if anything, they exhibited the opposite pattern compared to weakly attached participants,  $t(165) = -1.39, p = .166$ . These findings suggest that highly glorifying and weakly attached participants in this study reacted in a similar manner after being exposed to inter- rather than intra-state war. The analysis also revealed a significant main effect of glorification,  $F(1, 165) = 16.29, p < .001, \eta^2 = .09$ , indicating that glorification was positively associated with support for future violence regardless of condition,  $\beta = 1.06$ .<sup>9</sup> No other effects reached significance,  $F_s(1, 165) < 1.20, p_s > .275, \eta^2_s < .01$ .

Study 2 confirmed our extended hypothesis that reminders of past interstate violence should matter the most, in terms of their effects on support for aggressive responses to contemporary interstate tensions, to people who strongly glorify their own country. Even though we did not hypothesize a moderating effect of attachment, previous research has demonstrated the positive role of attachment in intergroup relations (Roccas et al., 2006). In line with this research, strongly attached participants responded similarly to those who only weakly glorified their ingroup (i.e., no increased support for violence after reminders of interstate war). While it is not yet clear why interstate as compared to

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and the results remained unchanged. Using these demographic characteristics as moderators also did not have any significant interaction effects on support for future interstate violence.

<sup>9</sup> When the effect is very strong,  $\beta$  values can slightly exceed 1.00 due to estimation errors.

intrastate war led to more support for future interstate violence among weakly attached individuals, resembling the reactions of high glorifiers, this “mirror effect” among weakly attached individuals has emerged in other intergroup research as well.

**3.2.3 Statistical power.** A post-hoc power analysis revealed that the statistical power to detect the interaction between condition and glorification was 0.62. Again, however, the a priori hypothesized interaction effect was significant, with patterns confirming our hypotheses.

## CHAPTER 4

### STUDY 3

The main goal of Study 3 was to replicate and, most importantly, integrate the mediation and moderation findings of Study 1 and Study 2, respectively (see Figure 4 for the full conceptual model depicting the effects of past interstate war on future violence through perceived threat and images, moderated by glorification). We further tested whether the direction of the war contagion effect is indeed in the direction that we predicted. That is, inter-state warfare should increase the likelihood for other, unrelated wars. While the use of intrastate violence as the comparison condition in Study 1 and 2 allowed us to rule out mere priming effects of past violence in general, it also raised the question of whether reminders of interstate war *increased* support of violence against other states – as the war contagion literature would predict – or whether reminders of intrastate war *decreased* support of violence. Thus, Study 3 included a baseline condition to clarify the direction of the previously observed effects.

Additionally, we aimed to conceptually replicate the mediating role of a generalized negative perception of third-party states. To this end, we examined participants' perceived threat from and perceived images of a real, rather than fictitious, country to investigate the hypothesis of a generalized effect for *any* third-party states. It is possible that in Study 1, participants perceived Coebia as more hostile after the interstate war reminder simply because they used the American response to the British colonial power as an anchor when making up their mind about an entirely unfamiliar country with no prior relationships with the United States. To further corroborate our interpretation of Study 1's finding that the change in perceptions of Coebia reflected a general change in



perceptions of any foreign country, Study 3 investigated perceptions of a real country, China, where participants do have at least a general sense of the country and its relations to the United States. We also used more elaborate measures of international images and threat to further examine the different aspects of threat and image, as well as their distinct roles in predicting future interstate violence.

#### **4.1 Method**

**4.1.1 Participants.** The sample consisted of 311 Americans recruited through MTurk. After excluding seven participants who did not pay sufficient attention to the manipulation material (as indicated by their summaries of the materials and incorrect answers to attention check questions), 15 participants who did not take the experiment seriously (as indicated by suspicious response patterns, i.e. selecting the same answer for all questions), 18 participants who spent less than 30 seconds reading the manipulation material or significantly more time than the rest of the sample, 271 participants were retained for data analyses (40% men; age  $M = 36$ ,  $SD = 13.55$ ).

**4.1.2 Procedure.** Participants followed a similar procedure as in Study 1 and 2. First, they were randomly assigned to one of three conditions: intrastate war, interstate war, and baseline. As in Study 1, participants in the intra and interstate war conditions read the same New York Times articles about the American Civil War and the American Revolutionary War, respectively. Following the reading task, participants in these two conditions completed the same manipulation checks as in the previous studies, and summarized the news article. Afterwards, they filled out the dependent measures in the order outlined below. In the baseline condition, participants completed the dependent

measures without reading any manipulation material or responding to manipulation checks.

#### **4.1.3 Materials.**

**4.1.3.1 Symbolic and realistic threats.** Three items measured perceived symbolic threat from China (e.g., “*The family values in the U.S. are not compatible with those in China.*”). Three items measured perceived realistic threat from China (e.g., “*China’s economic development poses a threat to the American economy.*”).

**4.1.3.2 International Images.** In addition to enemy, imperialist, and ally images, we also assessed perceived barbarian image of China (e.g., “*Power in the hand of China is a dangerous thing.*”) to test whether the effects observed in Study 1 can generalize to a different negative image. To enhance scale reliability, we also increased the number of items in each measure, again adapted from Alexander et al. (2005).

**4.1.3.3 Support for violent responses to current interstate tensions.** As in Study 1 and 2, participants responded to the scenarios describing the nuclear program in Iran and the increasing tensions between the U.S. and North Korea.

**4.1.3.4 Ingroup attachment and glorification** were measured identically to Study 2.

### **4.2 Results and Discussion**

#### **4.2.1 Main Analyses.<sup>10</sup>**

**4.2.1.1 Ingroup attachment and glorification.** Neither attachment ( $\alpha = .95$ ,  $M = 6.34$ ,  $SD = 1.78$ ),  $F(2, 270) = 1.30$ ,  $p = .274$ ,  $\eta^2 = .01$ , nor glorification ( $\alpha = .85$ ,  $M = 4.84$ ,  $SD = 1.50$ ),  $F(2, 270) = 0.06$ ,  $p = .938$ ,  $\eta^2 = .00$ , were affected by condition, thus allowing us to use them, together with condition, as IVs in the same GLMs as in Study 2.

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<sup>10</sup> To directly replicate the findings of Study 1 and 2, we also analyzed the data with only participants in the intra and interstate war conditions, excluding those in the baseline condition. The results converged with the previous studies (see Supplementary Materials).

**4.2.1.2 Support for violent responses to current interstate tensions.** The same moderated regression analysis with the composite score for support for new interstate violence<sup>11</sup> ( $\alpha = .80$ ,  $M = 5.34$ ,  $SD = 2.25$ ) as the DV yielded a significant main effect of condition,  $F(2, 272) = 3.35$ ,  $p = .037$ ,  $\eta^2 = .03$  ( $LCI = .00$ ,  $UCI = .07$ ), in that reading about interstate war ( $M = 5.81$ ) increased participants' support for future interstate violence as compared to reading about intrastate war ( $M = 5.14$ ),  $t(272) = 2.56$ ,  $p = .011$ , and marginally so to the baseline ( $M = 5.14$ ),  $t(272) = 1.75$ ,  $p = .082$ . In contrast, the intrastate war condition did not differ significantly from the baseline,  $t(272) = -0.97$ ,  $p = .333$ . The main effect of condition was qualified by a three-way interaction of condition by glorification and attachment (see Figure 6),  $F(2, 272) = 3.23$ ,  $p = .041$ ,  $\eta^2 = .02$  ( $LCI = .00$ ,  $UCI = .07$ ). Follow-up analyses revealed that participants who strongly glorified *and* were strongly attached supported more violent solutions after reminders of interstate war ( $M = 7.15$ ) as compared to the baseline ( $M = 6.28$ ),  $t(272) = -2.01$ ,  $p = .046$ , and the intrastate war condition ( $M = 6.18$ ),  $t(272) = -2.00$ ,  $p = .047$ . The intrastate war condition did not differ significantly from the baseline,  $t(272) = 0.21$ ,  $p = .836$ . Participants who were high on glorification but low on attachment exhibited a similar pattern, such that they were significantly more supportive of future interstate violence after reading about interstate ( $M = 6.69$ ) rather than intrastate war ( $M = 4.48$ ),  $t(272) = -1.98$ ,  $p = .049$ ; the difference between the interstate war condition ( $M = 6.69$ ) and the baseline ( $M = 5.12$ ) was trending in the same direction,  $t(272) = -1.39$ ,  $p = .166$ . Again, responses in the intrastate war condition and the baseline were not significantly different,  $t(272) = .60$ ,  $p = .546$ . In contrast to strongly glorifying participants high or low on attachment, participants low on

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<sup>11</sup> As in previous studies, we also conducted mixed ANOVA to test the within-subject effect of conflict scenario. The results again converged (see Supplementary Materials).

both dimensions tended to be more supportive of future violence in the intrastate war condition ( $M = 4.50$ ) than the baseline ( $M = 3.81$ ),  $t(272) = -1.59, p = .114$ . The opposite pattern, though again not significantly so, occurred for individuals low on glorification but high on attachment,  $t(272) = 1.44, p = .152$ . No other simple effects reached significance,  $ts(272) < 1.18, ps > .240$ . The moderated regression analysis also revealed main effects of glorification and attachment,  $Fs(1, 272) > 8.85, p < .003, \eta^2 > .03$ , indicating that both glorification and attachment were positively associated with support for future violence,  $\beta_s > .53$ . No other effects reached significance,  $Fs < 1.46, p > .235, \eta^2 < .01$ .<sup>12</sup>

**4.2.1.3 Factor analyses.** As in Study 1, we first conducted factor analyses to assess whether the measures of perceived threats and international images loaded onto distinct factors as theory predicts (see Table 3 and 4 for the factor loading patterns). The factor analysis on all threat items revealed two factors (according to a scree plot and the “Eigenvalue > 1” criterion) corresponding to symbolic and realistic threat, respectively, thus allowing us to use them as two separate variables in subsequent analyses. The factor analysis on all image items, however, indicated that all four images loaded onto one factor, with items of ally image loading negatively and items of the other three images loading positively. Based on the factor analysis, we reverse scored the items of ally image and then created a new variable, *negative image*, combining all image items.<sup>13</sup>

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<sup>12</sup> As in Study 2, controlling for whether participants come from the South or the North, as well as their political orientation, did not change the results. Using these demographic characteristics as moderators also did not have any significant interacting effects on support for future interstate violence.

<sup>13</sup> The following results were virtually the same if we treated the negative images as three separate variables.

**4.2.1.4 Symbolic threat.** As predicted, a moderated regression analysis with perceived symbolic threat ( $\alpha = .76$ ,  $M = 4.11$ ,  $SD = 1.77$ ) as the DV yielded a significant interaction between condition and glorification (Figure 7),  $F(2, 272) = 3.62$ ,  $p = .028$ ,  $\eta^2 = .03$  ( $LCI = .00$ ,  $UCI = .07$ ). Simple effects revealed that participants who strongly glorified the U.S. perceived significantly more symbolic threat from China after reading about interstate war ( $M = 5.45$ ) as compared to intrastate war ( $M = 4.05$ ),  $t(272) = -2.76$ ,  $p = .006$ , and the baseline ( $M = 4.46$ ),  $t(272) = -1.99$ ,  $p = .048$ . Low glorifiers, on the other hand, did not differ significantly in perceived symbolic threat depending on the condition they were assigned to,  $ts(272) < 1.37$ ,  $ps > .172$ . The main effect of glorification was also significant,  $F(1, 272) = 12.41$ ,  $p < .001$ ,  $\eta^2 = .05$ , indicating that glorification was positively associated with perceived symbolic threat, regardless of condition,  $\beta = .53$ . No other effects reached significance,  $F_s(1, 272) < 1.04$ ,  $ps > .350$ ,  $\eta_s^2 < .01$ .

**4.2.1.5 Realistic threat.** The same moderated regression analysis with perceived realistic threat ( $\alpha = .85$ ,  $M = 5.69$ ,  $SD = 1.87$ ) as the DV yielded a significant main effect of attachment,  $F(1, 272) = 7.83$ ,  $p = .006$ ,  $\eta^2 = .03$ , with attachment positively associated with perceived realistic threat from China,  $\beta = .45$ . The interaction between glorification and attachment was trending,  $F(1, 272) = 2.45$ ,  $p = .119$ . No other effects reached significance,  $F_s(1, 272) < .46$ ,  $ps > .633$ ,  $\eta_s^2 < .001$ .

**4.2.1.6 International images.** Analysis with perceived negative image of China ( $\alpha = .81$ ,  $M = 5.19$ ,  $SD = 1.42$ ) as the DV yielded a significant interaction between glorification and condition (Figure 8),  $F(2, 272) = 4.03$ ,  $p = .019$ ,  $\eta^2 = .03$  ( $LCI = .00$ ,  $UCI = .07$ ). High glorifiers held a significantly more negative image of China in the interstate war condition ( $M = 5.82$ ) as compared to the baseline ( $M = 4.95$ ),  $t(272) = -2.34$ ,  $p = .020$ ,

and marginally significantly so as compared to the intrastate war condition ( $M = 5.19$ ),  $t(272) = -1.67, p = .095$ . Importantly, perceived negative image among participants in the intrastate war condition was not significantly different from that in the baseline,  $t(272) = -.66, p = .511$ . The manipulation did not have any significant effects on low glorifiers; if anything, they held a somewhat less negative image of China after the interstate war reminder ( $M = 4.62$ ) than the intrastate war ( $M = 5.24$ ) or no reminder ( $M = 5.15$ ),  $ts(272) > 1.70, ps < .090$ . The analysis also revealed a main effect of ingroup attachment,  $F(1, 272) = 4.58, p = .033, \eta^2 = .02$ , with attachment positively associated with perceived negative image of China,  $\beta = .24$ . The interaction between glorification and attachment again reached significance,  $F(1, 272) = 6.98, p = .009, \eta^2 = .03$ . Among highly attached participants, glorification was positively associated with perceived negative image,  $\beta = .35, t(272) = 2.91, p = .004$ . In contrast, among weakly attached participants, this positive relationship disappeared,  $\beta = -.05, t(272) = -0.36, p = .722$ . No other effects reached significance,  $F_s(1, 272) < .78, ps > .461, \eta_s^2 < .01$ .

#### **4.2.2 Mediation Analyses.**

To test the multi-step mediational model of the effect of condition by glorification and attachment on support for violence in response to current interstate tensions through (a) perceived symbolic and realistic threat, and (b) perceived negative images of foreign countries (see Figure 4), we again conducted two sets of moderated mediational analyses, and a path model testing the whole model at once. In the first mediational analysis, condition was introduced as the IV, perceived symbolic and realistic threats as the mediators, glorification and attachment as the moderators, and perceived negative image as the DV (Hayes, 2012, model 8). The analysis revealed a significant indirect effect of

condition on perceived negative image through symbolic threat (*boot coefficient* = .30, *LCI* = .023, *UCI* = .590) when both glorification and attachment were high, but not when both dimensions of identification were low or only one of them was high. The indirect effect of condition through realistic threat was not significant, *boot coefficient* = .15, *LCI* = -.075, *UCI* = .367.

In the second mediational analysis, condition was introduced as the IV, perceived negative image as the mediator, glorification and attachment as the moderators, and support for future violence as the ultimate DV. Consistent with our mediational hypothesis, the indirect effect of condition on support for violence through perceived negative image was significant when both glorification and attachment were high (*boot coefficient* = .47, *LCI* = .078, *UCI* = .991), but not for other combinations of glorification and attachment.

To test all steps of our mediational model simultaneously, we conducted a path analysis in which condition was dummy coded with the baseline as the reference group. The dummy variables, glorification and attachment, and all interactions were used as exogenous variables. Perceived symbolic and realistic threat, negative image, and support for future interstate violence were introduced as endogenous variables. Mirroring our GLMs described above, we modeled the interaction between condition and glorification on perceived symbolic and realistic threat (the “step 1 mediators”). Perceived symbolic and realistic threat in turn significantly affected perceived negative image as the “step 2 mediator”, which then led to support for future interstate violence as the ultimate outcome variable. In addition, glorification also directly affected perceived symbolic threat and support for future violence, whereas attachment directly affected realistic

threat and future violence. All the paths hypothesized in Figure 4 were significant. This model fit the data very well, with the desirable non-significant exact-fit index,  $\chi^2(40) = 54.50, p = .063$ , and satisfactory close-fit indices,  $CFI = .99, NFI = .98, SRMSR = .04$ .<sup>14</sup>

Study 3 essentially replicated the effects found in Study 1 and 2 with an additional baseline condition. Although we did not replicate the statistical two-way interaction effect of Study 2 – as Study 3 found a three-way interaction with regards to support for future interstate violence – this three-way interaction was driven by the low- (but not high-) glorification cells and the additional baseline (but not the intrastate war condition). Specifically, the difference between the interstate war condition and the baseline was only significant at high levels of both glorification and attachment, but not at high level of glorification and low level of attachment, whereas the difference between inter and intra state war was significant for both sets of participants. Thus, Study 2’s finding that high glorifiers support future interstate war more after reminders of past inter (rather than intra) state war was replicated in Study 3—as this difference was found in both high-glorification cells. Most importantly, our mediational analyses replicated the effects of perceived threats and images regarding a fictitious country in Study 1 with a real third-party country in Study 3, confirming that interstate violence is contagious because past experience of interstate violence induces a generalized perception of third-party states as threatening and hostile.

While we were able to disentangle realistic and symbolic threat in this study, we again could not distinguish between different types of images. A potential explanation is that when the target country is completely unfamiliar or a strong rival like China, people

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<sup>14</sup> See Supplementary Materials for results of the alternative models.



may hold more general negative perceptions without clearly differentiating between the multiple sub-aspects of negative perceptions.

**4.2.3 Statistical power.** A post-hoc power analysis revealed that the statistical power to detect the three-way interaction of condition by glorification and attachment for support for future violence was 0.63, and the average power to detect the two-way interaction between condition and glorification for realistic threat and negative images was 0.80.

## CHAPTER 5

### **GENERAL DISCUSSION**

The current research demonstrated that interstate violence can spread across time and space by past interstate violence leading to more support for contemporary interstate violence, even with states not involved in the past violence, through increasing generalized perceived threat and negative images of foreign countries. Further, we identified boundary conditions of the generalization effect by examining the roles of national glorification and attachment. While these findings suggest that the proposed war contagion effect occurs among a subgroup of the population (i.e., high glorifiers), they should not be taken as reducing the importance of the phenomenon; rather, they add another layer of complexity important for the understanding of war contagion. Further, it is important to note that leaders and decision makers of a country are usually high glorifiers who have strong ties to the country they represent.

#### **5.1 The Generalization of Interstate Attitudes and Behavior**

The studies presented here contribute to the literature on the “violence begets violence” phenomenon by investigating how and why violence spreads across large social groups. The findings revealed a striking generalization effect of engaging in interstate violence in the remote past on attitudes and behavior toward uninvolved third-party states. Extending prior research on the contagion of international war, the present work demonstrates that aggressive interstate behavior can be transferred to nation states that are both temporarily and spatially independent from the original war. This phenomenon speaks directly to the long-standing social psychological question of how attitudes in different domains link to each other across time and space (Bouman et al.,

2013; Ranganath & Nosek, 2008; Shook et al., 2007). When explaining the indirect influence of contact between two primary groups on attitude towards secondary groups that are not involved in the initial contact, Pettigrew (2009) speculated that such transfer effects can emerge between two different attitudinal domains that are psychologically, but not necessarily logically, related to each other (also see Alvaro & Crano, 1997; Martin & Hewstone, 2008; Tausch et al., 2010). This notion is also applicable to our work on interstate war, the direct opposite to positive intergroup contact. Such negative (if vicarious) intergroup contact presents a similar psychological “trap” that attracts secondary outgroup targets that bear some resemblance to the primary target of violence – in our case, other foreign states – even though the new intergroup situation is not logically related to the original one.

## **5.2 Alternative Explanations of the Contagion of Interstate Violence**

Although the findings from the present studies support our hypothesis that heightened negative perceptions of foreign states in general explain the increased support for future interstate violence, several alternative explanations exist for the observed war contagion phenomenon.<sup>15</sup> Discussing generalized intergroup contact effects, Pettigrew (1997) also proposed that initial contact with an outgroup encourages ingroup members to adopt a more critical view on ingroup norms, cultures, and lifestyle, which leads to less psychological distance from outgroups in general. The possibility thus exists that the observed increase in support for future interstate violence after a reminder of past interstate war resulted from participants’ reappraisal of their own nation—for instance, they might have perceived the U.S. as more cohesive and powerful after reading about

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<sup>15</sup> We tested several possible alternative explanations such as negative and positive affect, ingroup pride, perceived severity and reprehensibility of the war. None of these variables explained the war contagion effect (see Supplementary Materials).

the Revolutionary War, which led to increased violent responses to new interstate tensions. Future research should examine the various aspects of ingroup appraisal, thus establishing a more complete account of why interstate violence is contagious.

### **5.3 Generalizability of Interstate Violence Contagion**

Despite our focus on interstate violence, the contagion of violence may very well be generalizable to other intergroup contexts such as conflicts that take place within a nation. As briefly explained before, the Civil War reminder employed in our studies might increase negative perceptions of other subgroups within the U.S., which might consequently instigate support for aggressive policies or aggressive responses to contemporary tensions with minority groups belonging to the same superordinate national group. Therefore, our findings with regard to interstate violence have implications for understanding the perpetuation of group-based violence in general.

Another important question that arises from the present research is the extent to which negative interstate experiences can generalize to influence attitude toward other uninvolved states. Will interstate wars other than the Revolutionary War elicit the same effects we demonstrated? Recognizing the value and importance of direct replication (Simons, 2014), we employed the same manipulation materials and the effects largely replicated across three studies. Yet, this approach necessarily neglects conceptual replication (e.g. for different interstate wars in the past). Thus it is unclear whether the observed carry-over effects of past interstate violence will hold for other interstate wars. The often-glorified American victory in the Revolutionary War begs the question of whether citizens of a state will be equally likely to support future interstate violence after being reminded, for instance, of a war perceived as unjust. Future research is thus

warranted to further examine the boundary conditions and generalizability of the current findings. Yet, considering the ubiquity and importance of the Revolutionary War and American Independence (e.g. Independence Day), rivaled by few, if any, other events in American history, the importance of the effects of this particular war should not be underestimated in any case.

#### **5.4 Concluding Remarks**

Three experiments provided convergent evidence that exposure to a state's past involvement in interstate violence increases its citizens' support for future violence when confronted with tensions with previously uninvolved third-party states. The carry-over effects of past violent behavior were most pronounced among individuals who strongly glorify their country, and were explained by an increase in negative perceptions of other foreign states in general. The present work lays the foundation for future research on the scope of attitude generalization in intergroup violence in general and international conflict in particular.

## APPENDIX A

### TABLES

Table 1  
Factor pattern for symbolic and realistic  
threats (Study 1).

	Factor1
Symbolic1	0.96
Symbolic2	0.95
Realistic1	0.90
Realistic2	0.70

Table 2  
Rotated factor pattern for ally, enemy, and  
imperialist images (Study 1).

	Factor1	Factor2
Enemy1	0.96	0.00
Enemy2	0.94	-0.01
Imperialist1	0.93	0.02
Imperialist2	0.90	-0.01
Ally1	-0.02	0.92
Ally2	0.02	0.92

Table 3  
 Rotated factor pattern for symbolic and realistic threats (Study 3).

	Factor1	Factor2
Realistic threat 1	0.84	-0.08
Realistic threat 2	0.77	0.04
Realistic threat 3	0.72	0.11
Symbolic threat 1	0.05	0.80
Symbolic threat 2	0.10	0.78
Symbolic threat 3	0.04	0.48



Table 4  
Factor pattern for ally, enemy, imperialist, and barbarian images (Study 3).

	Factor 1
Barbarian 1	0.82
Barbarian 2	0.81
Enemy 1	0.80
Enemy 2	0.80
Imperialist 1	0.79
Enemy 3	0.78
Barbarian 3	0.76
Imperialist 2	0.70
Imperial 3	0.65
Enemy 4	0.61
Barbarian 4	0.59
Enemy 5	0.36
Ally 1	-0.43
Ally 2	-0.64
Ally 3	-0.65
Ally 4	-0.67
Ally 5	-0.72
Ally 6	-0.74
Ally 7	-0.79

## APPENDIX B

### FIGURES

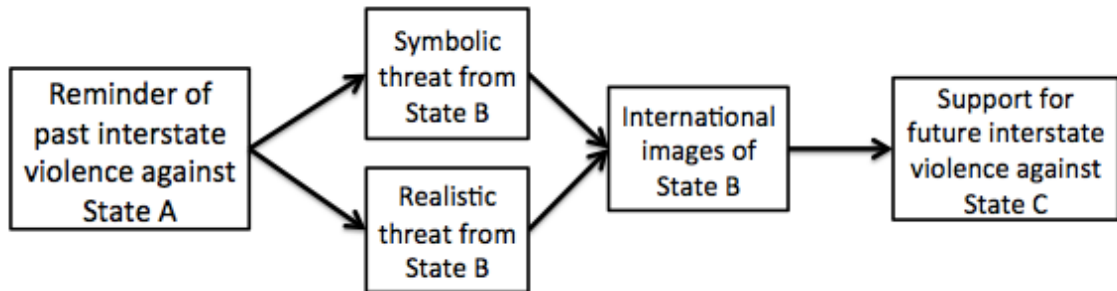


Figure 1. The conceptual model depicting the hypothesized effects of reminders of past interstate violence (as opposed to reminders of past intrastate violence) against State A on support for future interstate violence against State C through perceived symbolic and realistic threats, and international images of State B (as a stand-in for *any* foreign state).

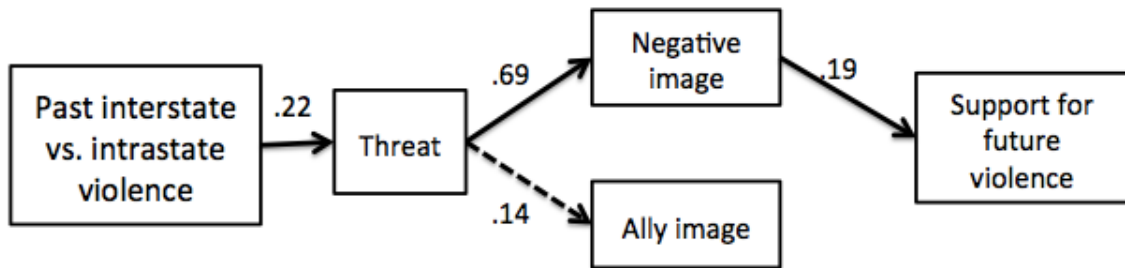


Figure 2. The indirect effect of condition (past interstate vs. intrastate violence) on support for future interstate violence through perceived threat, negative and ally images. Solid paths were significant, dashed paths were not.

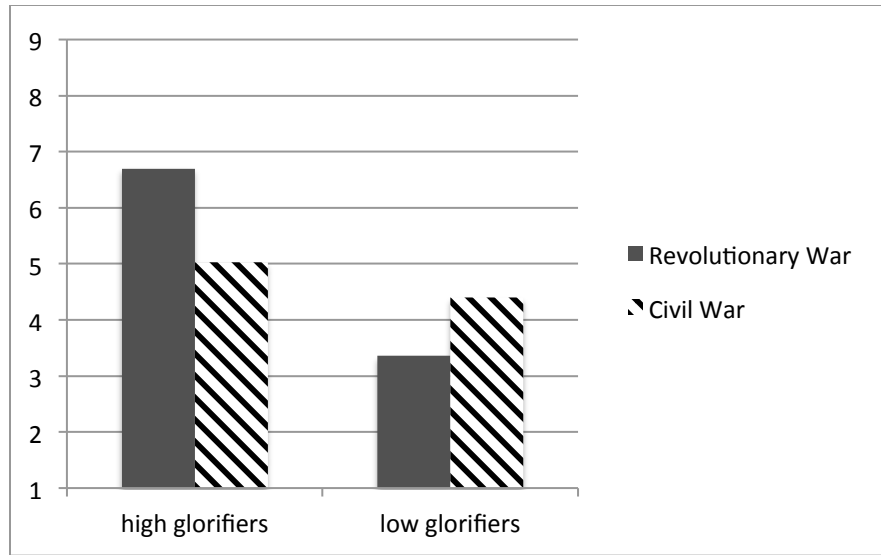


Figure 3. Support for violence as a function of past violence reminders (Revolutionary War vs. Civil War) and national glorification (Study 2).

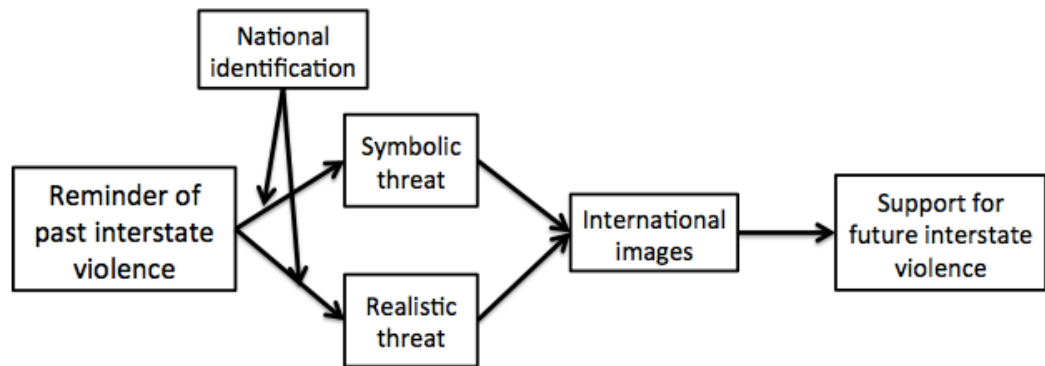


Figure 4. Conceptual model of the hypothesized effects of reminders of past interstate violence (as opposed to reminders of past intrastate violence) on support for future interstate violence through perceived threats and international images of foreign countries, moderated by national identification.

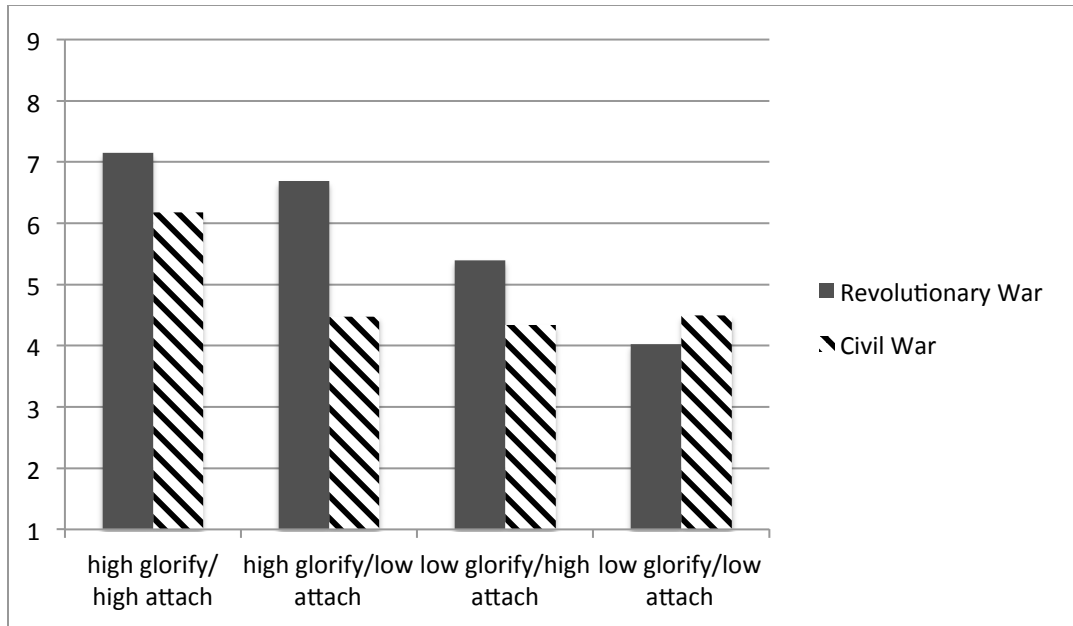


Figure 5. Support for future violence as a function of past violence reminders (Revolutionary War vs. Civil War) and national glorification and attachment (Study 3).

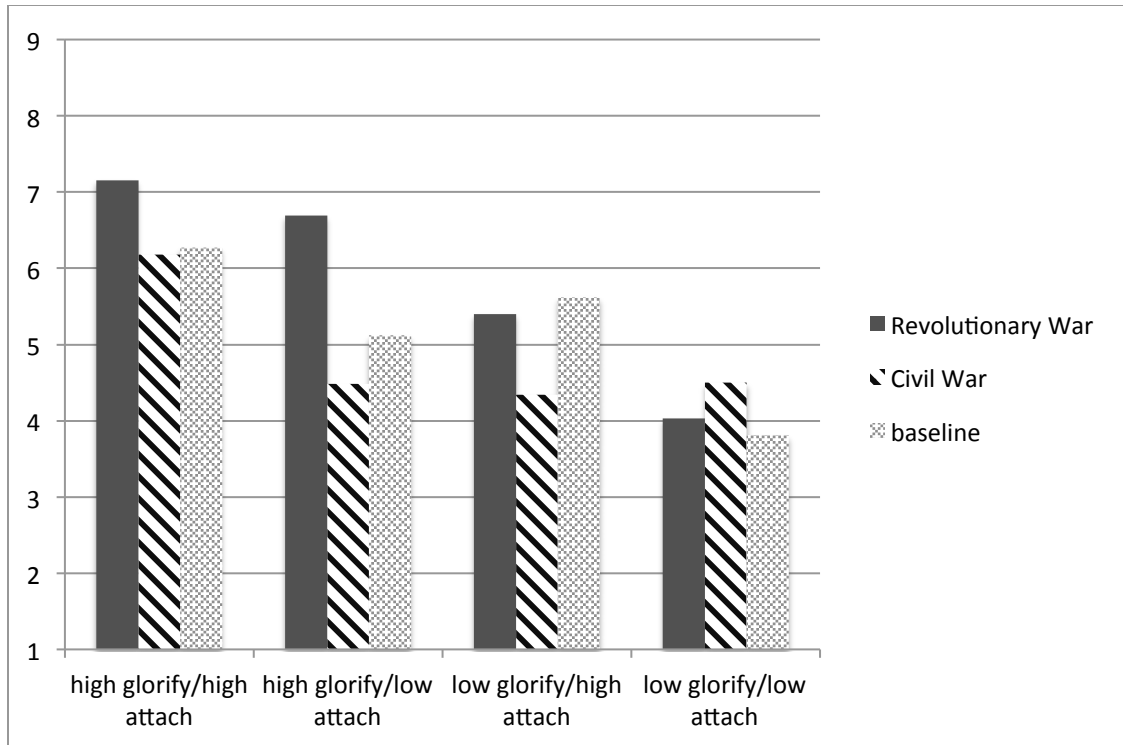


Figure 6. Support for future violence as a function of past violence reminders (Revolutionary War, Civil War, no reminder) and national glorification and attachment (Study 3).

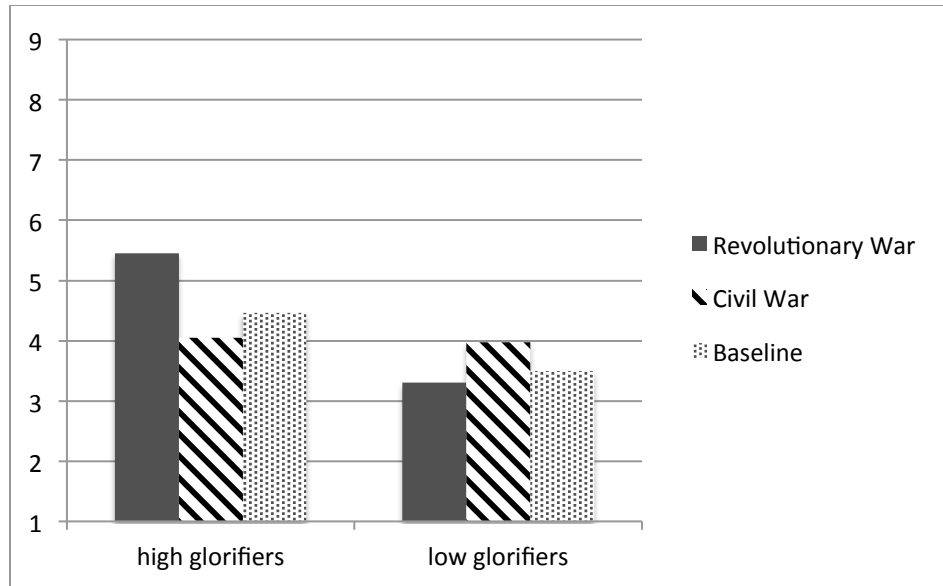


Figure 7. Perceived symbolic threat as a function of past violence reminders (Revolutionary War, Civil War, no reminder) and national glorification (Study 3).



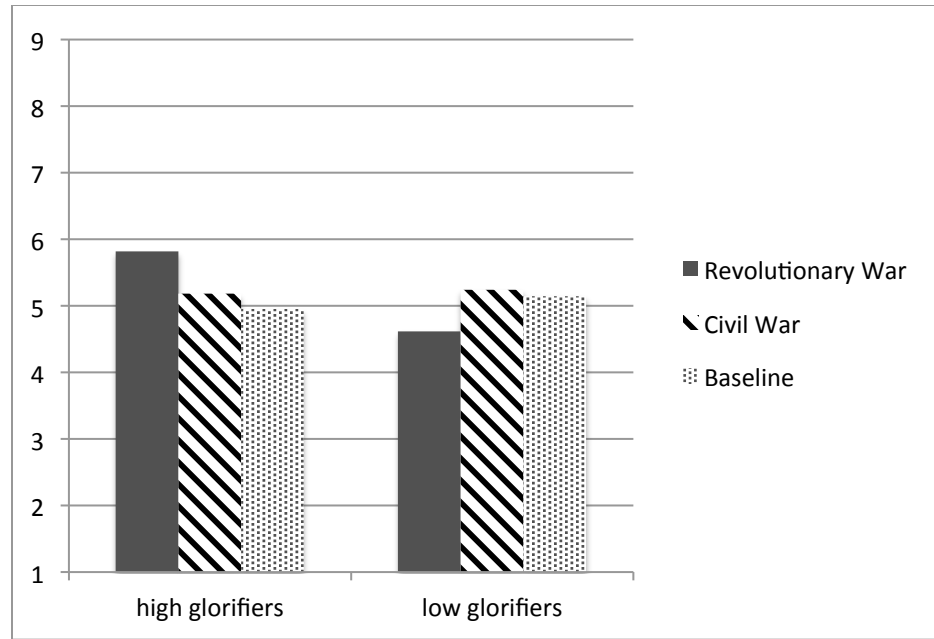


Figure 8. Perceived negative images as a function of past violence reminders (Revolutionary War, Civil War, no reminder) and national glorification (Study 3).

## APPENDIX C

### SUPPLEMENTARY MATERIALS

#### Correlational analyses

**Study 1.** In line with our hypothesis that negative perceptions of a third-party state are related to support for violence toward *any* third-party states in general, perceived images and threats of Coebia were correlated with support for violent responses to current tensions with Iran, North Korea, China, Russia, Australia, and the Netherlands. Support for future interstate violence against other third-party states was positively associated with perceived enemy image of Coebia,  $r = .16, p = .050$ , imperialist image of Coebia,  $r = .21, p = .010$ , realistic threat of Coebia,  $r = .17, p = .045$ , and marginally so with symbolic threat of Coebia,  $r = .14, p = .093$ .

**Study 3.** In line with our hypothesis that negative perceptions of a third-party state are related to support for violence toward *any* third-party states in general, perceived images and threat of China were significantly correlated with support for violent solutions to current interstate tensions with Iran and North Korea. Support for future interstate violence with Iran and North Korea was negatively associated with perceived ally image of China,  $r = -.29, p < .001$ , and positively associated with perceived enemy image of China,  $r = .42, p < .001$ , barbarian image of China,  $r = .43, p < .001$ , imperialist image of China,  $r = .39, p < .001$ , symbolic threat of China,  $r = .41, p < .001$ , and realistic threat of China,  $r = .32, p < .001$ .

#### Mixed ANOVA for Support for Future Interstate Violence

**Study 1.** To provide a more fine-grained analysis that takes into account the differences between the six scenarios about contemporary international conflicts, we then conducted a mixed ANOVA in which condition was treated as a two-level between-subjects variable (condition: Revolutionary War vs. Civil War) and the different conflict scenarios as a six-level within-subject variable (scenario: Iran, North Korea, China, Russia, Australia, the Netherlands). Consistent with

the GLM, this analysis yielded a significant between-subjects effect of condition,  $F(1, 161) = 4.17, p = .043$ , such that participants supported significantly more future violence after being reminded of the Revolutionary War than the Civil War. Not surprisingly, the within-subject main effect of conflict scenarios was also significant,  $F(5, 805) = 87.64, p < .001$ , indicating that support for interstate violence differed depending on the specific conflict scenario regardless of condition. The average score on each scenario indicated that support for violent responses toward the tension with North Korea was the strongest ( $M = 5.68$ ), followed by Iran ( $M = 4.87$ ) and Russia ( $M = 3.89$ ), both of which were stronger than China ( $M = 2.68$ ), Australia ( $M = 2.73$ ), and the Netherlands ( $M = 2.59$ ). Most importantly, however, the main effect of condition was not moderated by the type of scenario,  $F(5, 805) = .56, p = .730$ , indicating that the effect of condition was not specific to some but not other scenarios, but occurred across all.

**Study 2.** To account for the potential differences between the three conflict scenarios, we again conducted a mixed ANOVA with one two-level between-subjects factor (condition: Revolutionary War vs. Civil War) and one three-level within-subject factor (scenario: Iran, North Korea, China). Additionally, we added glorification and attachment as two continuous moderators. Consistent with the GLM above, the analysis yielded significant two-way interactions between condition and glorification,  $F(1, 158) = 7.31, p = .008$ , and between condition and attachment,  $F(1, 158) = 7.49, p = .007$ . The main effect of glorification was significant as well,  $F(1, 158) = 12., p = .001$ . There was also a significant within-subject effect of conflict scenario,  $F(2, 316) = 58.05, p < .001$ . Participants' average score on each scenario indicated that support for violent responses toward the tensions with North Korea ( $M = 4.60$ ) and Iran ( $M = 4.87$ ) were stronger than with China ( $M = 2.55$ ). The two-way interaction between scenario and glorification was significant,  $F(2, 316) = 5.93, p = .003$ , indicating that glorification significantly predicted support for future violence against Iran,  $\beta = 1.05, t(316) = 3.59, p < .001$ , and North Korea,  $\beta = 1.08, t(316) = 1.32, p < .001$ , but not significantly so against China,  $\beta = .20,$

$t(316) = .88, p = .381$ . The interaction between scenario and condition approached significance,  $F(2, 316) = 2.38, p = .094$ , indicating that condition had a marginally significant main effect on support for future violence against Iran,  $F(1, 165) = 3.84, p = .052$ , but not against North Korea or China,  $Fs(1, 165) < .04, ps > .840$ . In line with expectations, the three-way interaction of scenario by condition and glorification did not reach significance, nor did the interaction of scenario by condition and attachment,  $Fs(2, 316) < .70, ps > .500$ . No other effect reached significance,  $Fs(2, 316) < 1.75, ps > .175$ . Thus, the interaction effect of condition by glorification on support for future interstate violence was not limited to any one country, but occurred across all three.

**Study 3.** To account for the within-subject effect of conflict scenario, we then conducted the same mixed analysis as in Study 2. Once again, the results were consistent with the previous GLM. The analysis yielded a significant main effect of condition on support for future interstate violence,  $F(2, 261) = 3.35, p = .037$ , which was qualified by a three-way interaction of condition by glorification and attachment,  $F(2, 261) = 3.23, p = .041$ . The main effect of glorification was again significant,  $F(1, 261) = 15.22, p < .001$ , and so was the main effect of attachment,  $F(1, 261) = 8.85, p = .003$ . There was also a significant within-subject main effect of conflict scenario,  $F(1, 261) = 5.28, p = .022$ . Support for violent responses toward the tension with North Korea ( $M = 5.47$ ) was stronger than with Iran ( $M = 5.20$ ). The interaction between scenario and glorification was marginally significant,  $F(1, 261) = 3.46, p = .064$ . Once again, the association between glorification and support for future violence was stronger when the target country was Iran,  $\beta = .85, t(261) = 4.34, p < .001$ , than when it was North Korea,  $\beta = .51, t(261) = 2.57, p = .011$ . No other effect reached significance,  $Fs(1, 261) < 1.46, ps > .235$ . As scenario did not moderate the main effect of condition or its interactions with glorification and attachment, again the results reported above for the three-way interaction hold across both scenarios.

### **Alternative Model Testing**

**Study 1.** In the “first-step” mediational analysis, we tested the alternative model with perceived negative image and ally image as the mediators and perceived threat as the DV. In this model, condition had a significant indirect effect on perceived threat through negative image (*boot coefficient* = .22, *LCI* = .037, *UCI* = .402), but not through ally image. Despite the statistical significance of both models, our hypothesized model is in line with image theory (i.e. perceived threat leads to the formation of negative international images), whereas the alternative model is not. We thus believe that the proposed model is a better model from a theoretical perspective, despite the statistical significance of the alternative model. We also tested the alternative model with condition as the IV, negative images, ally image, and threats as mediators in parallel with one another, and support for future violence as the DV. In this model, there was no significant indirect effect of condition on future violence through any of the mediators. We also conducted path analyses to test the alternative mediational models as specified above; unlike in the case of the analyses presented above, the alternative path models fit the data worse than the hypothesized path model, lending further support to our theory.

**Study 3.** Again, in the “first-stage” mediation analysis, we tested the alternative models with perceived negative image as the mediator and perceived symbolic and realistic threats, respectively, as the outcome variable. These analyses yielded a significant indirect effect of condition on symbolic threat through negative image when both glorification and attachment were high (*boot coefficient* = .36, *LCI* = .038, *UCI* = .751) but, again, not when both dimensions of identification were low or only one of them was high. The indirect effect of condition on realistic threat did not reach significance (*boot coefficient* = .25, *LCI* = -.019, *UCI* = .610). These results are consistent with those in Study 1. Yet, as in Study 1, we contend that the hypothesized model is superior, as it is in line with image theory, whereas the alternative model is not. We also tested the alternative model with negative images, symbolic and realistic threats as mediators in parallel with one another. In this model, there was no significant indirect effect of condition on

future violence through any of the mediators. We also conducted path analyses to test the alternative mediational models as specified above. The alternative path models fit the data worse than the hypothesized path model, thus lending further support to our theory.

### **Replication with only two conditions in Study 3**

To test whether our findings of Study 1 and 2 replicated in Study 3, we first conducted a moderated regression analysis with only participants in the Civil War and the Revolutionary War conditions, thus excluding those in the baseline condition (i.e. analyzing the same two conditions as in Study 1 and 2). This preliminary analysis yielded a significant main effect of condition, such that participants in the Revolutionary War condition ( $M = 5.81$ ) were more supportive of future interstate violence than those in the Civil War condition ( $M = 5.14$ ),  $F(1, 159) = 6.13, p = .014, \eta^2 = .04$ . The main effect of condition was further qualified by a three-way interaction of condition by glorification and attachment,  $F(1, 159) = 5.17, p = .024, \eta^2 = .03$  (Figure 5). Participants who were high on both attachment and glorification tended to support more future violence after reading about the Revolutionary War ( $M = 7.15$ ) than the Civil War ( $M = 6.18$ ),  $t(159) = -1.94, p = .055$ . Strongly glorifying but weakly attached participants exhibited the exact same pattern, favoring more violent conflict resolution in the Revolutionary War ( $M = 6.69$ ) than in the Civil War condition ( $M = 4.48$ ),  $t(159) = -1.92, p = .057$ . The manipulation did not significantly affect participants who were low on both dimensions of ingroup identification or those who were high on attachment but low on glorification,  $ts(159) < 1.14, ps > .255$ . The main effect of glorification was also significant, indicating a positive relationship between glorification and violent conflict resolution,  $F(1, 159) = 11.16, p = .001, \eta^2 = .07, \beta = .78$ . Furthermore, analyses of the simple slopes indicated that among participants who read about the Revolutionary War, ingroup glorification significantly predicted stronger support for violent conflict resolution,  $\beta = 1.10, t(159) = 3.56, p = .001$ . In contrast, among participants who read about the Civil War, this

positive association between glorification and violent conflict resolution disappeared,  $\beta = .46$ ,  $t(159) = 1.31$ ,  $p = .194$ . No other effects reached significance,  $F_s(1, 159) < 3.35$ ,  $p_s > .069$ ,  $\eta_s^2 < .02$ . Although these effects are not perfectly in line with Study 2 where we found a two-way rather than a three-way interaction, they rendered further support for the hypothesis that experiencing interstate violence increases high ingroup glorifiers' disposition to support violence when confronted with new international crises. Importantly, the three-way interaction in Study 3 was driven by the low glorifier cells, not by the high glorifier cells; regardless of their level of attachment (high or low), high glorifiers showed the same (marginally) significant effects as in Study 2. Therefore, the occurrence of the war contagion effect for high but not low glorifiers was essentially replicated.

To account for the potential within-subject effect of conflict scenario, we then conducted a mixed analysis with one 3-level between-subjects factor (condition: Revolutionary War vs. Civil War vs. baseline), one two-level within-subjects factor (scenario: Iran, North Korea), and two continuous between-subjects moderators (glorification and attachment) (and all the interactions between these variables). Consistent with the GLM above, this analysis yielded a significant main effect of condition on support for future interstate violence,  $F(1, 152) = 6.13$ ,  $p = .014$ . The main effect of condition was further qualified by a three-way interaction of condition by glorification and attachment,  $F(1, 152) = 5.17$ ,  $p = .024$ . The main effect of glorification was again significant,  $F(1, 152) = 11.16$ ,  $p = .001$ , and the main effect of attachment approached significance,  $F(1, 152) = 3.35$ ,  $p = .070$ . The analysis also revealed a trending two-way interaction between condition and glorification,  $F(1, 152) = 1.92$ ,  $p = .168$ . The within-subject main effect of conflict scenario was also trending,  $F(1, 152) = 2.49$ ,  $p = .117$ . Participants' average score on each scenario indicated that support for violent responses toward the tension with North Korea ( $M = 5.58$ ) was somewhat stronger than with Iran ( $M = 5.35$ ), regardless of condition. The two-way interaction between scenario and glorification was marginally significant,

$F(1, 152) = 3.70, p = .056$ , indicating that the association between glorification and support for future violence (regardless of condition) was stronger for Iran,  $\beta = 1.00, t(152) = 3.90, p < .001$ , than for North Korea,  $\beta = .56, t(152) = 2.12, p = .036$ . No other effect reached significance,  $F_s(1, 152) < 0.61, p_s > .436$ . As the within-subject variable of country did not interact with condition or condition's interaction with the moderators, the mean differences for the main effect of condition as well as the simple effects of the three-way interaction between condition, glorification, and attachment are the same as reported in the GLM results above.

### **Alternative Explanations**

Although the findings support our contention that the war contagion effect is due to the generalized negative perceptions of third-party states, a number of alternative explanations are also plausible. First, the manipulation materials might have differed in dimensions other than inter- vs. intra-state conflict, and such differences could potentially explain the observed effects on the main dependent variable of interest (i.e. support for violent response to current interstate tensions). For instance, the Revolutionary War reminder might have elicited more positive affect, stronger ingroup pride, or heightened perceived ingroup homogeneity than the Civil War reminder. Or the Civil War reminder might have elicited perceptions of diversity and heterogeneity within the state, and might have been perceived as more severe and reprehensible than the Revolutionary War reminder. To test these alternative explanations, we also measured the following variables that might account for the war contagion effects we obtained.

**Positive and negative affect.** Participants' positive affect (PA) and negative affect (NA) were assessed using the Positive and Negative Affect Schedule (PANAS; see Watson, Clark, & Tellegen, 1988), which consists of two 10-item mood scales for PA and NA, respectively. Participants were asked to rate the extent to which they were experiencing each particular affect



at this moment. Items from this measure were rated on a 9-point scale (1 = not at all; 9 = very much).

**Diversity beliefs.** Based on Adesokan, Ullrich, van Dick, and Tropp (2011), participants' beliefs about diversity in the United States were measured with seven items (e.g., *"American society generally benefits from the involvement of people from different cultural backgrounds;"* *"Life in the United States would be more harmonious if the people living here were more similar to each other."*).

**Perceived homogeneity of Americans.** Eight items were developed to measure perceived homogeneity of Americans (e.g., *"Americans mostly share the same characteristics with respect to personality, attitudes, and behavior;"* *"You cannot make inferences about all Americans based on your knowledge of one single American."*).

**Ingroup pride.** The ingroup pride measure was adopted from Cheryan & Monin (2005), with ten items tapping the extent to which participants took pride in the U.S. (e.g., *"I am proud of America;"* *I criticize America;"* *"I am ashamed of America;"* *"Every time I hear the American national anthem, I feel strongly moved."*).

**Perceived severity and reprehensibility.** Participants indicated how severe they perceived the war described in the news article (*"How deadly was the conflict described in the article?"* *"How severe was the conflict described in the article?"*). Perceived reprehensibility of the war was also measured with two items (*"How reprehensible do you think it was for Americans to fight this war?"* *"How wrong do you think it was for Americans to fight this war?"*). Items of these two measures were rated from 1 = not at all to 9 = extremely.

**Results.** The intrastate and interstate violence scenarios did not differ in terms of elicited negative affect, beliefs about diversity in the U.S., ingroup pride, and perceived homogeneity of the ingroup. However, the two conditions did differ in terms of elicited positive affect, and perceived severity and reprehensibility of the war. Participants reported significantly less positive affect, perceived the war as more severe and reprehensible when they were in the Civil War than the Revolutionary War condition. Yet, these (unsurprising) differences were not moderated by glorification, attachment, or the interaction between them, nor were they mediating any of the effects revealed by the subsequent analyses reported below. Thus, the differential effects on support for a violent response to interstate tensions among high and low glorifiers we report below cannot be traced back to these differences between the scenarios.

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