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Just Deserts in Iraq:
American Vengeance for 9/11

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Acknowledgments

Abstract

In January 2002 national survey data, we find a strong relationship between Americans' desire to avenge 9/11 and their bellicosity toward Iraq, even after controlling for the perceived terrorist threat, left-right ideology, and approval of U.S. political leaders. This effect could have been due to suspicions of Iraqi complicity in 9/11 stemming from prior enemy images of Iraq, or to the effects of anger and desires for revenge on out-group antipathy, displaced blame, and optimistic assessment of war risks. We test the out-group antipathy hypothesis and find evidence that anti-Arab and anti-Muslim antipathy partially mediated vengefulness's effect on bellicosity. Vengeance, in turn, was boosted by retributiveness (proxied by right-wing authoritarianism) and patriotism. While perceptions of the Iraqi threat probably assumed greater importance over the course of the following year, additional survey data shows that even as war approached, most supporters acknowledged it would satisfy a desire for revenge.

The September 11th, 2001, terror attacks on New York and Washington had a strong and immediate impact on American citizens' bellicosity toward Iraq. Support for war jumped from 52% in early 2001 to 73-74% in November 2001 and January 2002 polls, and those willing to incur substantial U.S. casualties in order to topple Saddam jumped from 30% in 1998 to 56% in January 2002 (Everts and Isernia 2005; Huddy et al. 2002). Most observers have chalked up this effect to popular feelings of insecurity following 9/11. According to this view, fear of terrorism and the rally-round-the-flag effect made Americans receptive to President George W. Bush's case that Iraq had to be prevented from supplying weapons of mass destruction (WMDs) to terrorists for even more devastating attacks on the U.S. homeland (e.g., Kaufmann 2004; Western 2005).

We contend, in contrast, that Americans' desire to avenge the 9/11 attacks played a more important role in their belligerence toward Iraq than did fear of future terror attacks. Past research on crime and punishment thinking has shown that serious crimes arouse strong feelings of anger and desires for retribution, which have a stronger effect on punitiveness than do utilitarian motives such as deterrence and incapacitation (see review by Carlsmith and Darley 2008). We should expect similar reactions to crimes committed by foreign nations against one's own, according to recent work on intergroup emotion theory (e.g., Gordijn et al. 2001; Mackie et al. 2000). Thus, misperceptions that Iraq was involved in the 9/11 attacks, perhaps prompted by prior images of Saddam as an evil nemesis, would have aroused outrage and desires for vengeance at Iraq as well as at the actual al Qaeda culprits.

Anger and vengeful desires may have had additional, prior effects on Americans' thinking about Iraq and the "war on terror." Recent experimental research has demonstrated that outrage over serious, unpunished crimes makes people more punitive toward totally unrelated suspects and offenders (Bushman et al. 2005; Goldberg et al. 1999; Rucker et al. 2004). In addition, such displaced blame and aggression appears to be magnified by superficial resemblances between the secondary target and the original, prime offender (Marcus-Newhall et al. 2000), possibly because anger tends to activate stereotypical thinking (Bodenhausen et al. 1994). Thus outrage over 9/11 could have made Americans quicker to blame Iraq for 9/11, and more hostile toward foreign Arabs and Muslims of all stripes. Another possibility, advanced in prior studies analyzing post-9/11 anger-bellicosity correlations, is that anger made citizens more optimistic about the ease and cost of war (Huddy et al. 2007; see also Sadler et al. 2005).

Our own analysis in this paper of January 2002 public opinion data shows that Americans still nursed strong desires for revenge against the 9/11 perpetrators four months after the attacks. These vengeful desires strongly predicted support for war against Iraq and states suspected of harboring

terrorists, even after controlling for concern about future terrorist attacks, political ideology, the rally-round-the-flag effect, race, and gender. Vengeance was also a strong predictor of antipathy toward Arabs and Muslims, which in turn further heightened bellicosity. Consistent with expectations from intergroup emotion theory, vengeful feelings were themselves strongly predicted by patriotism. They were also strongly heightened by right-wing authoritarianism, a personality/belief system construct closely associated with retributiveness. These results help explain prior findings that patriots, right-wing authoritarians, and death penalty supporters were disproportionately hawkish on Iraq (e,g, Federico et al. 2005; Liberman 2006; Skitka et al. 2006).

The fear that Iraq could help terrorists make WMD attacks on America, as well as citizens' political orientations, assumed greater importance after the administration began emphasizing this threat in the late summer of 2002, and as anger over the 9/11 attacks faded. But additional data collected in March 2003 found a large majority of war supporters still acknowledging that invading Iraq would satisfy or resolve a need to avenge the 9/11 attacks. Patterns in the data, as we will argue below, suggest that these feelings were a significant source of support for the Iraq War.

We lack the necessary data on risk estimates and on perceptions of Saddam to test whether anger-biased risk appraisal or prior beliefs about Saddam to test these alternative hypotheses for the relationship between anger and bellicosity. It is also difficult to test for the carryover of anger at the 9/11 perpetrators to blame and punitiveness at Iraq, at least beyond the apparent spillover of vengefulness onto antipathy toward Arabs and Muslims. But we did find that desires for revenge were a stronger motive for war and for anti-Arab/Muslim antipathy than was generic anger, not to mention fear. Thus there is reason to think that revenge is a more important or more proximate source of bellicosity than generic anger.

In the next section, we discuss in more detail past theorizing and research on punitive motivations, intergroup emotions, and cognitive effects of emotion that could explain why anger and vengeance over 9/11 would have generated bellicosity toward Iraq. We also discuss plausible alternative explanations relegating anger and vengeance to the status of spurious byproducts, or at best facilitators, of either pragmatic security thinking or elite leadership of public opinion. The subsequent two empirical sections analyze data collected primarily in January 2002 and in March 2003. We then conclude by summarizing our findings, discussing their implications for theories of public opinion and foreign policy, and considering how political leaders and citizens might manage vengeful impulses more prudently in the future.

Moral outrage, revenge, and punishment

Integral blame, anger, and revenge

Most people want criminals to be punished because they intuitively feel that the offender deserves it. Calculations that punishment will reduce future offences play a secondary role in punitiveness. This has been demonstrated by research that manipulates crime-and-punishment scenarios. Features of a scenario that are relevant for retribution, such as the intent of the crime, have a much greater impact on the preferred severity of punishment than do features relevant to either incapacitation or deterrence, such as the likelihood of recidivism and the publicity of the punishment (see research reviewed by Carlsmith and Darley 2008). Of course, punishment often serves retributive and utilitarian purposes simultaneously, and when asked about their punitive philosophies or about general policy positions, people often articulate utilitarian preferences (Carlsmith 2008). But when they contemplate punishments for specific crimes already committed, their intuitions and judgments are primarily retributive.

The role of retribution in punitiveness has also been demonstrated by behavioral economists' research on experimental games. Although strategic incentives for punishment clearly affect the punishments players impose on each other for unfair moves, players continue to impose costly punishment (i.e., punishment involving a net cost to the punisher as well as the punished) even when the structure of the game (e.g., in cases of third-party punishment or one-shot ultimatum games) eliminates all strategic incentives for doing so (reviewed by Gintis et al. 2005). The fact that costly punishment occurs only when players think they are interacting with other people, and not when they think they are playing against computers, attests to its fundamentally moral motivation.

Retributive punishment is closely connected to the emotion of anger, a finding consistent with recent research demonstrating the intuitive and emotional basis of much moral judgment (Haidt 2001). Legal systems from ancient times to the present, and philosophers developing theories of retributive justice from Immanuel Kant forward, have emphasized the judicious proportionality of "an eye for an eye" and "just deserts," seeking to distinguish it from emotional and irrational revenge. But in fact, retributive justice and revenge spring from a common moral emotion, and differ mainly in the degree to which they have been systematized, controlled, and institutionalized. We thus use the terms "revenge," "vengeance," "just deserts," and "retribution" interchangeably here.

Some studies have found anger to mediate most or all of the effect of the seriousness of a crime on the severity of the punishment deemed appropriate (Darley et al. 2000). Experimental games research has also found that unfair play arouses anger, whether measured by self-reported feelings or by neural

activity in a brain area associated with negative emotions, and that the degree of anger predicts the severity of costly punishment (Pillutla and Murnighan 1996; Sanfey et al. 2003). The negative sensation of anger itself probably influences decisions to punish; people will often engage in impulsive, self-defeating behavior to obtain relief from aversive feelings (Tice et al. 2001). But at least one brain imaging study found that the anticipation of getting even is emotionally rewarding, as can be seen in correlations between levels of activity in pleasure-related brain areas (measured while subjects decided on punishments in experimental games) and the severity of the punishment they assigned (de Quervain et al. 2004). Thus the anticipation of "sweet revenge" could have a separate causal impact on punishment.

These intuitive, and perhaps instinctive, emotional and motivational reactions to transgressions probably evolved as functional adaptations. Emotional states represent automatic and rapid physiological, cognitive, and behavioral responses to dangers to be fled, obstacles to be overcome, opportunities to be exploited, or–in the case of moral emotions–wrongs to be prevented or avenged. Though norms and instincts for "altruistic punishment" would not have directly benefited individual punishers and their kin, by raising overall levels of intra-group cooperation they would have benefited the group as a whole relative to other, less punitive and less internally cooperative societies (Gintis et al. 2005).

Emotions, though intrinsically goal-oriented, are different from motivations. They are more closely associated with pleasure, pain, and physiological arousal and they appear to shape behavior indirectly, by focusing attention on how to achieve one's goals (Barrett et al. 2007; Baumeister et al. 2007). Motivations, like a desire for revenge, represent more conscious and concrete goals that can be pursued with varying degrees of emotion. As a result, motivations are much more durable than emotions, lasting days, months, and years, whereas emotional arousal is typically fleeting, lasting under an hour. However, memories of an angering stimulus–such as a serious offence–can resurrect both social motivations–such as desires for retribution–and anger. That is why rumination–the prolonged or repeated attention to negative thoughts, memories, or feelings–over an original offense can sustain both feelings of outrage and desires for vengeance over a period of several months (Bushman et al. 2005; Konecni 1974). Americans' anger over 9/11 thus remained quite strong a full year afterwards (Fischhoff et al. 2005).

Intergroup emotion research has shown that emotions and moral judgments about social groups and nations often mirror those about individuals. Just as people who see themselves as part of a larger whole feel joy at other group members' triumphs, sorrow at their tragedies, fear at their perils, and shame at their wrongdoing, so too do they feel outrage and desires for punishment over injuries to their ingroup (Gordijn et al. 2001; Gordijn et al. 2006; Mackie et al. 2000; Yzerbyt et al. 2003). Retaliation, moreover,

against the offending outgroup even has been found to slake anger and bring satisfaction (Maitner et al. 2006). This body of research has consistently found that intergroup emotions depend on individuals' identification with the affected group. In international relations, therefore, an individual's patriotism should magnify their anger and motivation to avenge an offense against their nation or its citizens. As one American, an independent, explained on the fifth anniversary of the U.S. invasion of Iraq, "I believe that the Iraq War in the beginning was a feel-good, you know, retribution, 'We're going to go get the guys that did this from 9/11.' And I'm behind that 100 percent. I bleed American red, just like everybody in this room" (PBS NewsHour 2008).

Retributive values and instincts should also affect emotional and punitive reactions to wrongdoing. Measures of interpersonal vengefulness have been found to predict anger, rumination, and aggressiveness following unfavorable treatment (Berry et al. 2005; Eisenberger et al. 2004; McCullough et al. 2001). Belief in retributive justice also appears to be a strong predictor of death penalty support (e.g., Bohm 1992). Right-wing authoritarianism (RWA), a scale measuring punitiveness toward "bad apples" (as well as tapping moral conventionalism and submission to authority), also predicts appraisals that offenders in crime vignettes deserve punishment (Feather 1996). It seems logical that these individual differences would also affect anger and desires for retribution for offenses against one's nation.

The foregoing would explain why Americans would angrily seek revenge against the 9/11 terrorists and their accomplices, such as the Taliban. But why would this affect hostility to Iraq, a regime with no connection to the attackers? The most obvious answer is that a surprisingly large percentage of Americans believed or suspected that Iraq had been involved in the attacks. In "Have You Forgotten?", a pro-Iraq War song that topped the country music charts in February 2003, Daryl Worley proclaimed, "Have you forgotten how it felt that day?/To see your homeland under fire/And her people blown away?... And we vowed to get the ones behind Bin Laden/Have you forgotten?" (Tuathail 2003). Worley was not alone in linking Saddam to 9/11. In response to an open-ended poll question on September 14th, 2001, 27% named Saddam as "second most responsible" for the attacks. Later that month, only 8% named Saddam in response to an open-ended question about responsibility for 9/11. But when asked if Saddam was "personally involved," 33% responded it was "very likely" and 46% said "somewhat likely." In early 2003–after a long gap in poll data on this question–the percentage of Americans saying "somewhat likely" or "very likely" in response to forced-choice questions had declined by only 10% (Althaus and Largio 2004; Jacobson 2006). When asked simply whether Saddam was involved or not in several surveys over the nine months prior to the war, between 42-53% answered affirmatively (Everts and Isernia 2005). About 50% said in February 2002 that

there was "enough of a link between Iraq and terrorism to justify a U.S. military campaign" (Pew Research Center for the People & the Press 2002). Thus blaming Saddam for the 9/11 attacks could account for a substantial amount of American public support for invading Iraq.

Biased appraisals of blame, outgroups, and risk estimates

The foregoing, however, still begs the question of why Americans were so quick to blame Saddam for 9/11. Administration rhetoric tying Iraq to al Qaeda commenced with Bush's January 29, 2002 "Axis of Evil" speech, and reached full intensity only in the late summer and fall of that year, and so cannot explain the immediate appearance of public suspicions of Iraq following the attacks. A plausible explanation is that prior perceptions of Saddam as a malevolent foe, dating back to the 1990-91 Gulf War and sustained by his resistance to U.N. disarmament, led Americans to suspect his involvement in 9/11. Saddam's past regional and domestic brutality represented scant evidence that he would dare to attack a superpower. But even before 9/11, following U.S. and British air strikes on Iraq in early 2001, almost three quarters of those polled had said Saddam was likely to organize terror attacks on the United States in retaliation (Althaus and Largio 2004; Jacobson 2006).

Another possibility is that Americans' emotional response to 9/11 might itself have shaped their perceptions of Saddam's involvement in the attacks, and could have made Americans generally belligerent. As Worley put it in "Have You Forgotten?": "Some say this country's just out looking for a fight/After 9/11, man, I'd have to say that's right" (Tuathail 2003). Questioned about the lack of any evidence linking Iraq to bin Laden, a radio disk-jockey playing the song in hourly rotation replied, "the audience is so wrapped up in the emotion of what it's about, I don't think they're nitpicking at this point…everybody's viewing all the bad guys in a big bucket" (Mansfield 2003).

Experimental studies on the cognitive effects of anger and desires for retribution suggest multiple processes that could have heightened American belligerence after 9/11. We focus here on anger's effects on appraisals of causality, responsibility, and risk, although anger's depth-of-processing effects might also have been involved (see Huddy et al. 2007). These "appraisal tendencies" (i.e., biases in attribution and judgment) appear to stem partly from the motivations closely connected with specific emotions, in a process akin to motivated reasoning. The desire to punish wrongdoing, for instance, privileges information and beliefs justifying the punishment of convenient suspects even if not clearly guilty. Another hypothesized process, "affect as information," would lead angry people to perceive angering events as more likely to occur (for a more detailed discussion, see Lerner and Tiedens 2006).

Whatever the root cause, three patterns of anger-/revenge-biased appraisal could have linked feelings about 9/11 to wishes to punish Iraq: displaced blame, intergroup antipathy, and biased risk assessment. The effect of anger on appraisals of blame was first shown by an experiment that found that inducing anger made subjects more likely to blame others' dispositions rather than their situations for mishaps they were involved in (Keltner et al. 1993). Multiple studies have found that seeing autopsy photos of a murder victim leads mock jurors to be angrier and more convinced of the defendant's guilt, even though the photos contain no evidence bearing on their culpability (Bright and Goodman-Delahunty 2006; Douglas et al. 1997; see also Quigley and Tedeschi 1996).

Perhaps the most compelling demonstrations of displaced blame are those showing that an angry desire to punish one offender "carries over" toward others. In a seminal experiment, subjects were first shown a video of a man beating up a helpless teenager, and afterward asked about appropriate punishments for different people's negligence had harmed others. Those who had seen the video reported greater anger than did a control group, and recommended harsher punishments for the unrelated cases (Lerner et al. 1998). In a further manipulation, a subset of subjects who had watched the video were told that the bully had gotten off scot-free, while others were informed that he had been appropriately punished. Although both groups reported similar levels of anger, anger had a greater impact on preferred punishments for those believing that the bully had gotten away with it. In other words, unrequited desires for punishment appear to amplify anger's effect on displaced punishment (Goldberg et al. 1999). The carryover of incidental anger, further research has shown, is mediated by a desire for retributive justice, not for enhancing deterrence (Rucker et al. 2004).

Experiments on "triggered displaced aggression" have demonstrated a second-party version of the carryover effect. Subjects unable to retaliate directly for a serious insult tend to react more aggressively toward unrelated but annoying individuals (Bushman et al. 2005; Miller et al. 2003). There is suggestive evidence that the mechanism involves heightened tendencies to find fault in the annoying individuals (Pedersen et al. 2008). Both the carryover and triggered-displaced-aggression effects involve an interaction between incidental outrage and a triggering irritation or suspicion that would have been innocuous in the absence of anger.

Displaced blaming could help explain why Americans were so prone to blame Saddam for 9/11. The intervention in Afghanistan did not adequately requite American desires for punishment; two-thirds said going in that they would regard it as a failure if it failed to capture or kill al Qaeda's leader, Osama bin Laden (Huddy et al. 2002). Prior images of Saddam as a malicious rogue leader could have served as

triggering stimuli for the carryover/triggered-displaced-aggression effect. In other words, those angrily thirsting for revenge might have been more likely than the cool-headed to infer from the same prior beliefs about Saddam that he was involved in the attacks, and to want to punish him and his regime. Displaced blaming would also have made Saddam seem guiltier of seeking illicit WMD, planning regional aggression, and plotting future attacks against the United States, heightening pragmatic incentives for war. This could explain why Americans with punitive dispositions were more likely to believe that Iraq possessed WMDs in early 2003 (Liberman 2006) and why Americans angry at both terrorists and Saddam tended to perceive greater danger from Iraq (Huddy et al. 2007).

The impact of anger and desires for revenge at the 9/11 perpetrators on perceptions of Arabs, Muslims, and terrorists writ large represent a second appraisal mechanism, probably related to the first, that could have fueled American bellicosity toward Iraq. The impulse of "vicarious retribution" (Lickel et al. 2006), of wreaking revenge on offenders' ethnic kin, is even attributed to God in the Old Testament. "Exacting the penalty" for Amelek's assault on the Israelites on the road from Egypt 200 years earlier, God commanded the Israeli King Saul to exterminate their descendants—sparing "no one, but kill alike men and women, infants and sucklings, oxen and sheep, camels and asses" (Pelton 2003). God, moreover, was sorely displeased with Saul for sparing the king and the best of the sheep and the oxen!

More recent evidence for the effect of anger on outgroup antipathy is the heightened dislike of Arabs in Israel and Spain following terror attacks committed by Arabs in those countries (Bar-Tal and Labin 2001; Echebarria-Echabe and Fernandez-Guede 2006). Similarly, the 9/11 attacks heightened anti-Arab feelings, employment discrimination, and hate crimes in the United States, and the angriest Americans were also those most likely to derogate Middle Easterners, Arab Americans, and new immigrants (Skitka et al. 2004). Americans were also more prone to dehumanize terrorists as well as "enemy rulers and their followers" in the period immediately after the attacks (McAlister et al. 2006). Over half a century earlier, Pearl Harbor aroused American intense hostility toward Japanese civilians, both at home and abroad (Berinsky 2007b).

Past research has also shown that prejudice is heightened by experimentally induced anger and also correlates with "trait anger," the propensity to get angry easily and often (DeSteno et al. 2004; Tapias et al. 2007). Superficial resemblance to a provocateur also heightens ordinary displaced aggression (Marcus-Newhall et al. 2000). The similarity might serve as a reminder of the prior offense, arousing anger and propensities for displaced blame and aggression, or else anger's tendency to activate categorical or heuristic thinking might foster inferences that whole social groups share the aggressive traits of offending

individual members (Bodenhausen et al. 1994; Lickel et al. 2006).

A third process that could have linked 9/11 to bellicosity toward Iraq is suggested by findings that anger heightens optimistic estimates of risk as well as risk-acceptant behavior (reviewed in Lerner and Tiedens 2006). In preparing body and mind for confrontation, anger seems to help people to screw up their courage in part by making obstacles appear more surmountable. Thus Americans who responded to 9/11 with more anger than fear or sadness, as well as those in whom anger was experimentally induced, tended to be more optimistic six weeks later about capturing Osama bin Laden, as well as about unrelated risks such as the chance of catching the flu. The angry also tended to be less likely to take precautionary steps to protect against such hazards (Fischhoff et al. 2005; Lerner et al. 2003). Huddy et al (2007) found that anger at terrorists and at Saddam correlated negatively with expected risks from the war, but it is not clear whether this confidence actually heightened support for the Iraq War, or was a rationalization for those already inclined to fight.

Most of the experimental findings discussed above have been observed within the brief time frame of typical laboratory experiments. It thus remains unclear how long tendencies to cast displaced blame, to feel antipathy toward outgroups, and to be overly confident persist after initial exposure to an outrageous transgression such as 9/11. But, as mentioned earlier, motivations like a desire for retribution can long outlast initial emotional arousal, and reminders and rumination could sustain or revive desires for revenge and anger. As long as media continues to report on a notorious crime, and people continue to reflect about it, anger's appraisal tendencies can shape attitudes long after it was committed.

Security calculations and elite opinion leadership

In contrast to the above explanations focusing on anger and vengeance, the most commonly heard explanations for Americans' bellicosity toward Iraq emphasize security concerns and elite leadership. Might these factors account for the observed correlation between anger over 9/11 and support for war against Iraq?

A strong "rational public" account–one granting no causal force to emotion–would attribute belligerence toward Iraq to purely "cool" calculations about how to best protect the United States, albeit based on false premises about Iraqi ties to al Qaeda. Anger and desires for revenge would be merely epiphenomenal, emotional concomitants of pragmatic thinking. In a rationalist framework granting emotions a functional role (e.g., Damasio 1994; Mercer 2005), however, anger could have facilitated a pragmatic judgment that war was needed to neutralize a threat. Desires for revenge, even though not consciously

aimed at utilitarian goals, can have utilitarian consequences if they motivate the incapacitation or deterrence of future dangers. The socio-functional roles and origins of moral outrage and altruistic punishment may have intergroup analogues. For example, experimental studies have found that intergroup conflict heightens anger and contempt directed at outgroups among members of strong ingroups, and fear among members of weak ones (see review by Carlsmith and Darley 2008). But in this account, anger and desires for retribution would explain little of the variation in support for the Iraq War beyond that already explained by security concerns.

An obvious problem with both variants is the lack of evidence that Iraq had aided al Qaeda or the 9/11 attacks. Speculative suspicion is a weak reed upon which to justify war. Moreover, several widespread beliefs about the war are difficult to reconcile with a pragmatic security argument for toppling Saddam, even after the Bush administration had painted Iraq as a "grave and gathering threat." Fewer than 20% of Americans thought that invading Iraq would decrease the terror threat against the United States (Everts and Isernia 2005). A majority also believed it "very likely" that a U.S. invasion of Iraq would lead Iraq to transfer WMDs to terrorists for use against the United States (Kull 2002). And most Americans said that they would have been told the truth by the U.S. government even "if it turns out that Iraq had no significant weapons of mass destruction and there was no strong link to al Qaeda" (Everts and Isernia 2005), suggesting either indifference or confusion regarding Bush's security arguments for war.

To be sure, most Americans favoring war also told pollsters that Saddam was a threat. But this claim might have been a rationalization for supporting war rather than an actual motive, as some have argued was the case for public expectations of the war's successful outcome (Berinsky and Druckman 2007). In the domain of crime and punishment attitudes, although experimental manipulation demonstrates the dominance of retributive motivations for favoring harsh punishment, when asked to justify their punitive judgments and philosophies, people tend to emphasize the goal of protecting public safety (Carlsmith 2008). By analogy, Americans who actually favored attacking Iraq as vengeance for 9/11 may well have justified the war as necessary to remove a security threat.

A second explanation for the connection between anger over 9/11 and bellicosity toward Iraq, which also gives little causal weight to anger and revenge, can be inferred from the elite leadership model of public opinion. Elite consensus or polarization on issues tends to be mirrored in mass opinion, especially among politically aware citizens (Zaller 1992; Zaller 1994). If elite rhetoric swayed both Americans' anger over 9/11 and their support for invading Iraq, then their correlation could be spurious. Indeed, President Bush declared right after 9/11 that "civilized people around the world denounce the evildoers who devised

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and executed these terrible attacks. Justice demands that those who helped or harbored the terrorists be punished–and punished severely. The enormity of their evil demands it" (Bush 2001; see also Coe et al. 2004; Krebs and Lobasz 2007). The president and the media did not focus heavily on Iraq until the late summer of 2002, but Iraq was obviously not on America's side in Bush's insistence that in the "war on terror," "either you are with us or you are with the terrorists." In the absence of elite criticism of this image, a public rallying to Bush's side after 9/11 could have absorbed his twin messages of indignation and bellicosity.

As elite disagreements emerged and the post-9/11 rally effect faded, politically aware citizens would have become more polarized over the prospect of war with Iraq. In fact, the gap between Democrats and Republicans on support for military action against Iraq grew from about 10% in the September 2001-March 2002 period to about 35% by the end of 2002 (Jacobson 2006). The gap was especially large between politically knowledgeable Democrats and Republicans, just as the elite leadership model would predict (Berinsky 2007a). So before concluding that anger over 9/11 heightened popular support for invading Iraq, it is important to rule out elite leadership as a driving force behind both.

The above discussion has presented six plausible explanations for the correlations observed between public anger over 9/11 and support for war against Iraq, and the jump in that support after 9/11: 1. "Cool" misperceptions that Saddam was complicit in the 9/11 attacks aroused anger and desires for revenge against him, 2. Anger and desires for revenge against the 9/11 culprits caused displaced blame and punitiveness toward Saddam, 3. Anger and desires for revenge against the 9/11 culprits caused antipathy toward foreign Arabs and Muslims, 4. Anger over 9/11 heightened confidence in the ease and efficacy of war against Iraq, and 5. Anger, desires for revenge, and bellicosity were all caused by security concerns, or 6. All three were caused by elite opinion leadership. In the two empirical studies presented below, our main goal is to investigate the overarching question of the impact of vengeance on post-9/11 American bellicosity toward Iraq (whether via hypotheses #1-4), and the independence of this effect from security concerns and elite leadership (hypotheses #5 and #6). In Study 1, we analyze correlations between vengeful feelings and bellicosity toward Iraq in January 2002, while controlling for political orientation and concern about future terrorist threats. While we lack the data needed to test hypotheses #1-4 against each other, data on antipathy toward foreign Arabs and Muslims allows a specific test of hypothesis #3. Study 1 also compares the effects of anger and desires for revenge on bellicosity toward Iraq, as well as explores the impact of retributiveness (proxied by right-wing authoritarianism), patriotism,

perceived threat, and political variables on vengeance. Study 2's more modest goal is to examine the persistence of vengeance as a source of belligerence, again controlling for security concerns and political orientation, using additional opinion data collected mainly in March 2003.

Study 1: September 2001-January 2002

Data and Measures

Most of the data analyzed in our first study was collected as part of a larger survey on emotion and political tolerance, carried out by Knowledge Networks (KN).[1] The survey was completed by 605 respondents, 88% of the KN panelists sampled, between December 28, 2001, and January 14, 2002. We also use additional data on emotional reactions to 9/11, which had been collected from the same sample between September 14 and October 2, 2001, with most surveys completed by September 21 (N=585, an 85% within-panel response rate).

We measured support for war against Iraq in January, 2002, with a single item on the level of agreement or disagreement with the statement that "The war on terrorism should be expanded to Iraq and any other country suspected of harboring or supporting terrorists." Forty-three percent strongly agreed with expanding the war on terror, 17% did so moderately, 21% were neutral, 6% disagreed moderately, and 2% disagreed strongly. (Throughout this study we report weighted population estimates for proportions, and unweighted sample statistics for means, standard deviations, and inter-item reliabilities.) We reverse-scored our measure, *Prowar1/02,* on a 1-5 scale–the same range used for the rest of the variables–so that higher values represented greater support for war.

There is good reason to think that *Prowar1/02* as a measure of support for war against Iraq was not compromised by the question's reference to "Iraq and any other country suspected of harboring or supporting terrorists." This language contrasted with mention in preceding questions to "the people who did this" and "those responsible for the attacks," and so would not have implied Iraqi complicity in 9/11. If the question's wording had framed Iraq as an accomplice in 9/11, or had been read as a general question about terror-supporting states, it would have elicited stronger support for war than the sixty percent who responded affirmatively that they favored war. This was less than the 71-74% supporting "military action" to

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[1] KN maintains a large panel of subjects (about 40,000 in this time period), recruited random-digit-dialing and designed to match U.S. Census demographic criteria, from which smaller random samples are drawn for each survey. When weighted to account for sample design and nonresponse, the results of KN surveys have been found to be very similar to those of telephone-based, national probability sample surveys (Berrens 2003).

remove Saddam Hussein from power in several January polls, a level that had held fairly steady since October (Everts and Isernia 2005). Survey questions that mentioned Iraq's involvement in terror do not appear to have incited bellicosity. Even after being asked to keep in mind that "Iraqi President Saddam Hussein has harbored terrorists in the past," only 65% supported using military force against "Saddam Hussein and Iraq" in an October, 2001, NBC/Wall Street Journal poll (NBC/Wall Street Journal 2001).

Americans were more belligerent toward countries known to be actively supporting terrorism, as opposed to merely being suspected of such involvement. In the same October NBC/Wall Street Journal poll, 81% said that the United States should "take military action against a nation that knowingly aids terrorists or allows them to live in their country, if the country played no role in the September eleventh attacks." In several polls from October, 2001 through January, 2002, support ran between 78-84% for "military action" or "military force" against "any nation found to be aiding or hiding terrorists," "other countries that assist or shelter terrorists," etc. Support for the war in Afghanistan was consistently between 80-90% (Huddy et al. 2002). Because *Prowar1/02*'s marginals more closely resemble those of standard questions on Iraq, it appears to be a valid measure of American belligerence against Iraq, rather than against terror-supporting states in general or against accomplices in 9/11. And even if responses did reflect distinct feelings about states just "suspected" of abetting terrorists, it would still be a valuable measure of a rather indiscriminate or easily misdirected bellicosity.

A measure of desires to avenge 9/11, *Revenge,* is the average of four January 2002 items on feelings about the attacks. The first item, falling in a series of items on feelings experienced "right now, about the events of September 11," asked about a "desire to fight back," with response options of "not at all," "slightly," "moderately," "much," or "very much." The three other items asked how much respondents had felt, in reaction to "the events of September 11," "a desire to hurt those responsible for the attack," "a compelling need for vengeance," and "that the people who did this were evil to the core," with the same response options. The "evil to the core" item reflected a moral evaluation or appraisal rather than a desire for retaliation or revenge. But we included it because the offender's moral status is the critical criterion for retributive punishment, as noted above, and because the appraisal item correlated strongly with the other vengeance items. The mean of the resulting *Revenge* scale (M=3.62; SD=1.00; Alpha=.83) fell about halfway between "moderately" and "very much."

Additional vengeance measures were drawn from a series of items asking, "Did you do any of the following things in response to the events of September 11th...said something like 'we should just nuke them', talked about a desire to 'get' whoever was responsible for this, and tried to blow off steam by

expressing anger about the situation." As with the *Revenge* scale, the responses to these behavioral items indicate the depth of Americans' vengeful feelings: 48% acknowledged saying they wanted to "get" them and 20% acknowledged saying "we should just nuke them," and 22% said they tried to blow off steam.

Parallel items fielded immediately after the terror attacks and again in January 2002 were used to measure anger and fear. *Anger9/01* is the average of two first-wave items asking the degree to which respondents felt "hatred" and "outrage" in reaction to the terrorist attacks (M=3.49; SD=1.19; Alpha=.70), while *Anger1/02* averages second-wave items asking the degree to which respondents still felt hatred and outrage "right now, about the events of September 11" (M=3.07; SD=1.18; Alpha=.75). *Fear9/01* and *Fear1/02* were constructed from analogous items on feeling "frightened" and "vulnerable" in September 2001 (M=2.98; SD=1.28; Alpha=.77) and in January 2002 (M=2.39; SD=1.08; Alpha=.83), respectively.

An exploratory factor analysis on the items used in *Revenge* and *Anger1/02*, as well as other 2002 items on self-reported feelings of "anger" and "moral outrage," revealed that *Revenge* and *Anger1/02* represented distinct if closely related constructs. We used Mplus 4.2's weighted least squared means and variance adjusted (WLSMV) estimation, which is tailored for analyzing non-normal and categorical data (Muthén and Muthén 2007). A strong single factor was indicated by the large gap between the first Eigenvalue (of 5.03) and the next two (between 0.73-0.76), but a three-factor model was suggested by overall fit statistics (RMSEA=0.054 compared to 0.164 and 0.105 for the one- and two-factor models, respectively). After a Promax rotation, the four *Revenge* scale items loaded mainly on one factor, the anger, hatred, and outrage items loaded on a second factor highly correlated with the first (r=.70), and "moral outrage" loaded on a third factor (r's of about .40 with the other two factors). Thus there are empirical as well as theoretical reasons for distinguishing between *Revenge* and *Anger1/02*.

We measured the impact of 9/11 on hostility toward Arabs and Muslims with two questions asking how feelings had changed since 9/11 about 1. Palestinians and 2. "people living in Islamic or Middle Eastern countries," with response options of "much more positive," "more positive," "stayed the same," "more negative," and "much more negative." We collapsed the responses of the very few respondents (<6%) whose opinions had become more positive with the modal category of "stayed the same," and averaged the two items into a five-level *Anti-Arab* scale (M=1.89; SD=1.44; Alpha=.78).

As a surrogate measure for retributiveness, we used four items from Altemeyer's (1996) right-wing authoritarianism (RWA) scale, asking for level of agreement or disagreement with the following statements: "Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us;" "Our country will be great if we honor the way of our forefathers,

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do what authorities tell us, and get rid of the 'rotten apples' who are ruining everything;" "Our country will be destroyed someday if we do not smash the perversions eating away at our moral fiber and traditional beliefs;" and "The way our country can get through future crises is to get back to our traditional values, put tough leaders in power, and silence trouble makers spreading bad ideas" (M=3.33; SD=1.10; Alpha=.90). RWA has been found to predict both the perceived seriousness of an offence and the degree to which the offender deserves to be punished (Feather 1996). Statistically controlling for approval of political authority figures and for left-right ideology should correct for RWA's authoritarian conventionalism and submission dimensions, leaving *RWA* a useful proxy for the third dimension of "authoritarian aggression," which is quite similar to retributiveness (see Funke 2005).

Assuming that identification with the nation would have correlated with feeling "a surge of patriotism following the attacks," we used the self-reported intensity of the latter feeling as a measure of *Patriotism* (M=3.93; SD=1.12). The perceived terrorist threat was measured using a single item asking how "worried" the respondent was about "future terrorist attacks," "not at all," "slightly," "moderately," "much," or "very much" (M=3.09; SD=1.11). The relatively high mean of *Threat* and its positive correlation with *Prowar1/02* (r=.13) indicates that it measured threat perception more than fear or anxiety, which was reported by a minority of Americans and which tended to reduce support for forceful and risky anti-terror policies (see Huddy et al. 2005; Huddy et al. 2007).

To control for political beliefs and leadership effects, we used measures of ideology and heightened enthusiasm for the U.S. government. *Conservative* is a seven-point self-identification ideology scale, "To what extent do you generally consider yourself to be a liberal or conservative," from "very liberal" to "very conservative" (rescaled 1-5; M=3.13; SD=1.07). Our data lacked a measure of party identification, but partisanship has been highly correlated with ideology (r's of .5-.6) during this time period (Abramowitz and Saunders 2005), and was a modest predictor of support for military action against Iraq in contemporaneous survey data after controlling for ideology.[2] The variable *Rally* was based on a single question asking "How much have your feelings about American political leaders changed since September 11, much more positive, more positive, no change or neutral, more negative, or much more negative?" (reverse-scored; M=3.63; SD=.81). We also included dummy measures for *Female* (51%) and for *Black* (7.6%), as women and African-Americans tend to be more pacific, and the latter tend to be less patriotic owing to the experience of discrimination (Nincic and Nincic 2002; Sidanius et al. 1997).

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[2] Beta weight=.08 (p<.05); Authors' analysis of January 9-13, 2002 poll data collected by the Pew Center for the People and the Press, archived at the Roper Center for Public Opinion Research.

Analysis

Like in other studies, our data also showed anger to have been a stronger reaction to 9/11 than was fear. Seventy percent felt "much" or "very much" outrage right after the attacks, and 53% still felt so four months later. Just 41% reported feeling "much" or "very much" frightened in the immediate aftermath, dropping to only 15% in January. Anger was also more durable, with the mean of *Anger1/02* subsiding by .40 from the mean of *Anger9/01* (t=8.51; df=571; p<.001), compared to a drop in .59 in the mean of fear (t=11.84; df=571; p<.001). The repeated measures for anger were highly correlated across time (r=0.57; p<.001), as they were for fear (r=0.50; p<.001).

Our data also showed that the desire for retribution was a better predictor, compared to either anger or fear, of both bellicosity toward Iraq and antipathy toward Arabs. Bivariate ordered probit regressions of *Prowar1/*02 found *Revenge* (b=0.56; robust S.E. =.07; p<.001) to be a stronger predictor than *Anger1/02* (b=.28; robust S.E. =.05; p<.001), while the effect of *Fear1/02* was scarcely significant (b=.08; robust S.E.=.05; p=.107). When *Prowar1/02* was regressed on *Revenge* and *Anger1/02* simultaneously, the *Anger1/02* coefficient dropped to zero (multi-collinearity was not a problem, with a correlation between *Anger1/02* and *Revenge* of r=0.65). Similarly, an ordered probit regression of *Anti-Arab* on *Revenge*, *Anger1/02*, and *Fear1/02* together found a significant effect only for *Revenge*.

A similar pattern emerged for the behavioral indicators of revenge and anger. In probit regressions of these measures on *Revenge* and *Anger1/02*, the coefficient of *Revenge* was substantively much larger than that of *Anger1/02*. Only in the case of recollections of trying "to blow off steam" was *Anger1/02* statistically significant at the p<.05 level. The strength of these effects can be more readily grasped by comparing the likelihood of vengeful behaviors for those at the 10th and 90th percentiles of the *Revenge* scale.[3] Those at the 90th percentile of *Revenge* were 86% likely to admit having talked about a desire to "get" whoever was responsible for the attacks, compared to only 11% of those in the 10th percentile (a 75% difference). The highly vengeful were also 45% likely to admit having said something like "we should just nuke them," a 41% increase over the 4% of those feeling little desire for vengeance. Even the likelihood of having expressed anger about the situation was boosted more, 24%, by a 10th-90th percentile shift in *Revenge* (holding anger constant) than the 15% increase from a corresponding shift in *Anger1/02* (with revenge held constant). Thus self-reported verbalization of vengefulness and venting was, like bellicosity

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[3] The probabilities presented here and below were estimated with the program *Clarify* (King et al. 2000).

and anti-Arab hostility, more strongly influenced by desires for revenge than by plain anger, indicating further that the former had a more potent impact on American thinking about 9/11.

We used path modeling to test simultaneously the effects of *Revenge* and *Anti-Arab* on *Prowar1/02*, the mediation of *Revenge*'s effect on *Prowar1/02* by *Anti-Arab*, and whether *Revenge* in turn mediated the effects of *RWA* and *Patriotism*, all while controlling for ideology, the rally effect, and perceived threat. Our first model included regressions of *Patriotism* and *Conservative* on *RWA, Black,* and *Female*, as well as a cascade of regressions of *Rally, Revenge, Threat, Anti-Arab* on the aforementioned variables, with each independent variable becoming a dependent variable in the next regression. (This model assumes that *Anti-Arab* and *Threat* were endogenous to *Revenge,* premises checked below with alternative specifications.) Finally, *Prowar1/02* was regressed on all the preceding variables. Mplus 4.2's WLSMV estimation was used to fit the model, generating linear regression coefficients for paths leading to *Revenge* and *Conservative* and ordered probit coefficients for paths leading to the rest. Dropping cases with missing values sacrificed less than 4% of the January 2002 sample of N=605.

[Figure 1 goes about here]

Figure 1 shows the results after removing paths falling short of the p<0.05 significance level. The fit indices all suggest that Model 1 is a very good fit with the data.[4] *Anti-Arab* and especially *Revenge* had substantial direct effects on *Prowar1/02*, suggesting that desires for revenge and worsened opinions of Arabs had significant effects on bellicosity toward Iraq (and other nations suspected of harboring terrorists). These relationships were not spurious byproducts of concern about the terrorist threat, political ideology, approval of U.S. political leaders, patriotism, RWA, gender, or race, all of which are controlled in the model.

Again, the strength of these relationships is more readily seen from comparing the probabilities of strong support for war against Iraq (i.e., the maximum value of *Prowar1/02*) for selected independent variables at their 10th and 90th percentiles, with the remaining Model 1 variables held at their means or modes. (For convenience, this was estimated using *Clarify* and an ordered probit regression of *Prowar1/02* on the other Model 1 variables, rather than using the path model). Slightly vengeful but otherwise average citizens were just 22% likely to strongly favor war, while the highly vengeful were 59% likely to do so, a difference of 36%. An analogous shift in *Anti-Arab* heightened strong support for war by 16%, and a joint

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[4] Acceptable fit-index thresholds for WLSMV models with categorical outcomes include an Chi-square p>0.01; Comparative Fit Index (CFI) >=0.96; Tucker-Lewis Index (TLI, or Non-Normed Fit Index) >=0.95; Root Mean Square Error of Approximation (RMSEA) <=0.05; and Weighted Root Mean Square Residual (WRMR) <0.90 (Muthén and Muthén 2007).

shift in both of these *Revenge* and *Anti-Arab* increased the likelihood of strongly favoring war by 50%. This effect surpassed the impact from comparable shifts in *RWA* (35%), *Rally* (16%), and *Rally* and *Conservative* combined (27%).

In Model 1, *Revenge*'s estimated additional indirect effect on *Prowar1/02*, via its impact on *Anti-Arab*, was based on the assumption that *Revenge* caused *Anti-Arab*. If prior prejudices had both contaminated *Anti-Arab* and affected desires for vengeance, however, then the causal direction would have run in the opposite direction. But a variation on Model 1, with the direction of the path between *Revenge* and *Anti-Arab* reversed, fit the data poorly (Chi^2=26.254, df=6, p=.0002; RMSEA=0.076; CFI=0.958; TLI=0.823; WRMR =0.755); the Chi-square, TLI, and RMSEA indices failed to meet acceptable thresholds. In a third variant with reciprocal paths between the two variables, the path from *Revenge* to *Anti-Arab* was significant but the reverse path was not. These results are consistent with Model 1's assumption that *Revenge* heightened *Anti-Arab* rather than vice-versa, and with the conclusion that vengeful desires had an indirect effect on bellicosity, in addition to its direct effect, through anti-Arab/Muslim antipathy.

Model 1 is also consistent with our expectations that desires for revenge were heightened by ingroup identification, as measured by *Patriotism*, and by retributiveness, as proxied by *RWA*. *Patriotism*'s effect on *Prowar1/02*, according to the model, was mediated mainly by *Revenge* and, to a lesser extent, by *Rally*. RWA too had substantial indirect effects on bellicosity via *Revenge*, but in addition had a large direct effect. Because *Rally* and *Conservative* should control for RWA's authoritarian-submission and moral-traditionalism dimensions, it seems unlikely that these dimensions would account for this finding. It could some other dimension or covariate of RWA that affects bellicosity. Or it could reflect authoritarians' vengeful feelings being not fully captured in the *Revenge* scale, which could be subject to social desirability bias in light of Christian and utilitarian taboos on revenge.

Perceptions of the terrorist threat had no direct effect on *Prowar1/02* in Model 1. Thus, vengeance and anger could not have been epiphenomenal to utilitarian security thinking. But threat still might have had an indirect effect if, contrary to Model 1's assumption, *Threat* caused *Revenge* rather than vice-versa. One could plausibly expect either the causal direction to flow either way. On the one hand, intergroup conflict has been found to heighten anger and contempt among those identifying with relatively strong ingroups (Mackie et al. 2000), suggesting that perceived threat could have affected desires for revenge against the 9/11 terrorists. This would be consistent with the theory that views emotion as playing an important role in rational judgment and decision. On the other hand, the appraisal of the terrorists as evil, so closely bound up with desires for revenge, would have made them appear more dangerous. The highly vengeful might

also have emphasized the terrorist threat as a motivated rationalization for supporting a punitive "war on terror."

Modifying Model 1 again, this time by reversing the path from *Revenge* to *Threat*, yielded very similar overall fit indices to the original model. For additional statistical leverage, we specified simpler path models using *Anger9/01* and *Fear9/01* as instrumental variables predicting *Revenge* and *Threat*, respectively. Anger over the attacks should have had a much greater effect on desires for revenge than on the perceived terror threat, while fear should have had influenced threat perceptions much more than desires for revenge. Therefore, if *Threat* caused *Revenge*, *Fear9/01*'s influence on *Revenge* would have been indirect one, through *Threat*, and *Anger9/01* would have been unrelated to *Threat* after controlling for *Fear9/01*. These assumptions are represented in the path model in the top panel of Figure 2 (Model 2A), with the absence of a link between *Anger9/01* and *Threat* reflected in the lack of a direct or indirect path running from the former to the latter. The model in the middle panel (Model 2B) reflects the converse inferences from the assumption that *Revenge* caused *Threat*: *Anger9/01* would have affected *Threat* via *Revenge*, and *Fear9/01* would have been unrelated to *Revenge* after controlling for *Anger9/01*.
[Figure 2 goes about here]

According to the fit indices generated by Mplus, utilizing WLSMV estimation, Model 2B fit the data much better than did Model 2A. The former passed all indices with flying colors, while the latter flunked four and barely met the acceptable threshold for the fifth (WRMR). In a third model with reciprocal paths between *Revenge* and *Threat*, Model 2C, the path from *Revenge* to *Threat* was statistically significant, but the reverse path was not. (These results were not affected by allowing the residuals of *Revenge* and *Threat* to be correlated.) These findings indicate that, as Model 1 assumes, moral condemnation and/or desires for revenge heightened the perception of a future terror threat, rather than vice-versa, and that the perceived terror threat lacked even an indirect impact on bellicosity.

Political affinities also failed to account for either revenge or its impact on bellicosity. The absence of a relationship between *Conservative* and *Revenge* in Model 1 might still be consistent with elite leadership if the public had absorbed both a desire for revenge and for war from elites expressing both. But this seems quite unlikely in light of the finding that *Rally* was unrelated to *Revenge* and only moderately related to *Prowar1/02*. Moreover, in other regressions not detailed here, we found no evidence that education level–a rough proxy for political awareness and hence susceptibility to elite leadership (see Zaller 1994)–heightened *Revenge* or *Prowar1/02*. Nor were there significant interaction effects between education and *Conservative* in probit regressions of *Prowar* or *Revenge,* as would be anticipated from

opinion following a polarized elite.

It is worth mentioning a few more findings from Model 1 that are tangential to our main focus here, but that bear on other theoretical issues in social and political psychology. One issue is the relationship between patriotism and outgroup prejudice. Recent work has found that love of country, unlike more ethnocentric forms of nationalism, does not cause prejudice (de Figueiredo and Elkins 2003). The lack of a relationship in our Model 1 between *Anti-Arab* and *Patriotism*, after controlling for *Revenge*, is consistent with this conclusion. Second, the mediation of *RWA*'s effect on *Anti-Arab* by *Revenge* are consistent with prior findings that intergroup emotions mediate the effect of another predisposition, social dominance orientation, on prejudice (Miller et al. 2004). Third, *Revenge*'s mediation of RWA's effect on perceived threat suggests a novel explanation for the correlation commonly observed between these two variables in a variety of contexts (e.g., Duckitt 2006; Lavine et al. 1999; McFarland 2005). Finally, our results accord with common findings on African-Americans' and womens' lack of enthusiasm for war, but the typical explanation emphasizing their liberal political orientations does not hold here. Model 1 indicates that African-Americans were less belligerent because they were not as patriotically identified with the nation, as well as other unknown reasons for being less vengeful than other Americans. And women's slight pacifism on Iraq in early 2002 was entirely due to their feeling less vengeful than men.

Study 2: March 2003

Study 1 showed that the desire to avenge 9/11 was a strong source of American bellicosity toward Iraq in early 2002, an effect independent of–and much larger than–left-right ideology, approval of U.S. political leaders, and concern about the terror threat. But security motivations probably assumed a greater importance over the following year, particularly after the Bush administration began charging Iraq with trying to acquire WMDs and supporting anti-American terrorists. Desires for revenge were also dissipating over time. At the same rate of decline seen in our measure of anger, from an average of halfway between "moderately" and "much" in September 2001 to "moderately" four months later, it would have fallen to just "slightly" by the Fall of 2002. The burst of media reminiscence on the first anniversary of the attacks probably renewed popular anger and desires for vengeance, heightening Americans' receptivity to Bush's charges of malfeasance and aggressive intent against Saddam. But the intensity of feelings about 9/11 would eventually have resumed its long-term decline.

Under these conditions, it would not be surprising if security concerns and allegiance to the president displaced vengeance as a driving force behind public belligerence toward Iraq in 2002-3. As prior

research has shown, war support and perceptions of the Iraqi threat in this period were both strongly affected by individuals' party identification, approval of the president, and source of news (Kull et al. 2003-04; Jacobson 2006). To determine whether the vengeance effect evaporated over 2002-3, we turn now to another survey, one conducted on the brink of war.

Data and Measures

A different survey was fielded to a different, larger sample of KN panelists between 13 March and 9 April 2003 (N=3,534, with 76% completions by the beginning of the war on March 19th). Bellicosity toward Iraq was measured with a single question asking, "How much do you support or oppose going to war with Iraq." Seven response options ranging from "strongly support" to "strongly oppose" were rescaled along with all the other variables in this study from 0-1, and reversed so that higher scores of the variable *Prowar3/03* reflected greater bellicosity (Mean=0.63; SD=0.37).

Three questions asked specifically whether the Iraq War fulfilled their own desires for vengeance for 9/11: "To what extent would [changed to "did" after March 20th] going to war satisfy or resolve each of the following for you:...A desire to hurt those responsible for the 9/11 attacks; A compelling need for vengeance for the 9/11 terrorist attacks; A sense of moral outrage about the 9/11 terrorist attacks." Responses (ranging from "not at all," "slightly," "moderately," "much," to "very much") were highly inter-correlated, so we combined the items into an additive scale of retributive satisfaction, *Vengwar* (Mean=.43; SD=0.29; Alpha=0.90).

For those whose positions on war were shaped by their moral and emotional impulses, *Vengwar* would have reflected a vengeful motive for war rather than just an anticipated side-benefit. (The social taboo on revenge makes it improbable that respondents would have mentioned vengeance as a rationalization). As a check on whether *Vengwar* really reflected a moralistic motive for war, we explored whether moralists, those who indicated strong agreement with the statement that "My feelings about whether we should go to war reflect something about my core moral values and convictions" (M=.62; SD=.33), tended to have a stronger correlation between *Vengwar* and *Prowar3/03.* This can be tested by regressing *Prowar3/03* on the cross-product term, *Vengwar*Moralism*.

We control for partisan political allegiances with a seven-point party identification scale, *Republican* (Mean=0.46; SD=0.35) and a 7-point left-right ideological self-placement scale, *Conservative* (M=.53; SD=.23). To control for security motives for war, we used data from a Program on International Policy Attitudes (PIPA) survey administered to 1,256 KN panelists in May 14-18, 2003, including 194 respondents

from our March 2003 sample. A PIPA question asked, "Please indicate your position on the question of whether, just before the war, Iraq had weapons of mass destruction. Please answer on a scale of 0 to 10 with 0 meaning you are completely certain that Iraq did NOT have weapons of mass destruction, 10 meaning that you are completely certain that Iraq DID have weapons of mass destruction, and 5 meaning you are unsure." Belief in Iraqi possession of WMD (Mean=0.69; SD=0.29) is an adequate proxy for perceptions of the Iraqi threat. In mid-May the failure to discover any actual Iraqi WMDs was not yet obvious or publicized enough to have systematically biased this measure, and the view of some experts that Iraq would be deterred from using or transferring any WMDs had not been widely represented in the media.

We used multiple imputation to avoid inefficiently dropping cases with missing data, which is particularly serious (30-32%) for *Conservative* and *Republican* due to the fact that these items were collected for only two-thirds of the March 2003 sample (as part of KN's political profile items). Even confining our analyses using the PIPA data to the small merged sample (N=192), missingness is high for *WMD* (55%) due a split-sample design in the PIPA survey. For both the whole March 2003 sample and the smaller merged sample, we generated ten multiply imputed data sets using the program *Amelia II*, and combined the estimated parameter means and standard errors using *Clarify* (King et al. 2000; King et al. 2001).

Analysis

Among those who said either they either "moderately" or "strongly" supported going to war with Iraq, 83% said going to war would to some degree "satisfy or resolve…a sense of moral outrage about the 9/11 terrorist attacks" (17% "slightly," 26% "moderately," and 39% "much" or "very much"). Seventy-six percent of war supporters admitted the war would "satisfy or resolve…a desire to hurt those responsible for the 9/11 attacks" (16% "slightly," 25% "moderately," and 35% "much" or "very much"). Despite the taboo on vengeance, 70% of war supporters acknowledged that the war would "satisfy or resolve…a compelling need for vengeance for the 9/11 terrorist attacks" (18% "slightly," 25% "moderately," and 28% "much" or "very much").

A series of linear regressions of *Prowar3/03* are shown in Table 2. As Model 3A shows, Americans who felt that war would bring retributive satisfaction tended to be its more ardent supporters, even after

controlling for partisanship and ideology.[5] Those who said their positions on the war reflected their "core moral values and convictions" were, on average, somewhat disinclined toward war. But the significant, positive *Vengwar*Moralism* interaction in Model 3B indicates that the relationship between *Vengwar* and *Prowar3/03* was greater for moralists than non-moralists.[6] This is what we would expect to see if *Vengwar* actually reflected a moral motive for war. Further evidence for the validity of *Moralism* can be seen in the weak interaction between *Moralism* and *WMD*, which represents more of a a pragmatic than moral incentive for war, shown in Model 3E. (We report unweighted results for the merged sample, which is too small for precise population estimates but nevertheless useful for testing relationships.[7])

[Table 2 goes about here]

Although belief in Iraqi WMD was a significant predictor of bellicosity, *Vengwar* remained a substantial predictor of support for war even after controlling for *WMD* (see Model 3D). Comparing Models 3C and 3D shows that *Vengwar*'s effect is attenuated when controlling for *WMD.* One plausible explanation is that underlying concerns about the Iraqi threat influenced both *Vengwar* and *Prowar3/03,* and so some of the correlation between them (evident in Models 3A-3C) was spurious. Alternatively, *WMD* might have mediated some of the effect of *Vengwar* on *Prowar3/03*, for instance if desires for vengeance though displaced blame disposed Americans to believe allegations that Saddam was guilty of amassing WMDs.

What shaped vengeful satisfaction from war? We ran additional regressions of *Vengwar* on several political and demographic variables and found that greater vengeful satisfaction was expressed by Republicans (unstandardized b=0.11; p<.001), those who identified their race as "other" (not black, white, or Hispanic; b=.08; p<.05), and older respondents (b=.12; p<.01). Lesser vengeful satisfaction was expressed by regular churchgoers, self-described moralists, those with higher incomes (all b=-.07; p<.05 or

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[5] The estimated effects of *Vengwar* and *Vengwar*Moralism* were little changed in additional regressions (not detailed here) controlling for education, income, gender, race, church attendance, interactions between education and the political variables, and an interaction between *Moralism* and *Conservative*, so we dropped these variables from our analysis. However, we found a strong positive interaction between education and *Conservative*, consisten with a polarizing elite leadership effect; a positive *Moralism*Conservative* interaction; and modest negative effects for African-American and female.

[6] We centered *Vengwar, Moralism,* and *WMD* before creating the cross-product terms and running the regressions, so the main-effect terms *Vengwar* and *Moralism* in Models 3B and 3E represent the impact of each variable when the other is at its mean.

[7] Although the overlap between the two surveys was presumably random, the demographic differences between it and the full weighted March 2003 sample (it was somewhat older, more Black and Midwestern, and less educated and Hispanic) were not lessened by utilizing KN's March 2003 or May 2003 probability weights. Dropping cases with missing data on *WMD* resulted in the same substantive findings; standard errors increased but still met the p<.05 statistical significance level.

better), and especially by the more educated (b=-.31; p<.001). The educated might have known better than to blame Iraq for 9/11 (see Kull et al. 2003-04), or they might just have been disinclined to admit vengeful feelings. Churchgoers may have been less retributive or more sensitive to mainstream Christianity's taboo on vengeance.

Discussion and implications

To sum up our main findings, desires to avenge 9/11 substantially heightened support for war against Iraq in early 2002, and did so in part by impugning the image of foreign Arabs and Muslims. These effects were largely independent of security concerns and political orientation. The desire for vengeance was highly correlated with anger in January 2002, and strongly predicted by anger felt in the immediate aftermath of the attacks, RWA, and patriotism. Even in March 2003, most war supporters acknowledged that it would resolve or satisfy desires to avenge 9/11. This appears to have been a moralistic motive for war, largely independent of the effects of partisanship, ideology, and the belief in Iraqi WMD.

These results are consistent earlier findings that support for the Iraq War in early 2003 was predicted by anger at Saddam and terrorists (Huddy et al. 2007), death penalty support (Liberman 2006), and right-wing authoritarianism (McFarland 2005), the last two because death penalty supporters and right-wing authoritarians tend to be retributive. Our findings are also broadly consistent with expectations derived from prior research on punitive judgment and on intergroup emotions. Most Americans saw 9/11 as a heinous crime deserving severe punishment, but retributive citizens (those high in RWA) and patriots (identifying with the injured nation) were especially vengeful.

Our findings are also consistent with prior work on the tendency of anger to bias cognitive appraisals. Americans' desires for vengeance heightened their bellicosity by worsening their opinion of foreign Arabs and Muslims, whether through displaced blame (e.g., "most foreign Arabs and Muslims conspired to attack the United States on 9/11") or dehumanization (e.g., "the worthlessness of Arabs and Muslims makes it acceptable to kill them in large numbers"). This mechanism represented only a small part of the total effect of vengeance-seeking on bellicosity in our data, however. Prior knowledge of Saddam, anger-biased blame of Saddam independent of anti-Arab antipathy, and anger-biased risk appraisal all could have played a role in the remaining direct effect, but our data does not permit a more fine-grained analysis.

Our approach differed from experimental demonstrations of anger's carryover effect in other important respects. Experimental research has observed the short-term effects of incidental emotion. In our

observation of a "natural experiment" four months after exposure to an outrageous crime, we found that the desire for revenge was a stronger and more proximate source of bellicosity (and antipathy to the offenders' outgroup) than was anger. It seems that vengeful desires either mediated the effects of anger on bellicosity and anti-Arab antipathy, or else was a wellspring for all three. This is consistent with research on rumination, showing that protracted attention to an injustice and to one's own unrequited desires for retribution can be an enduring source of anger and punitiveness. Our measures are not sufficiently validated and differentiated to draw strong conclusions on this score, but it is reasonable to conclude that further basic research should be devoted to retributive motivation and its differences and relationships with appraisals of malevolent intent, generic anger, and moral outrage.

Our results found that neither elite leadership nor pragmatic security concerns had much of an impact on bellicosity in January 2002. The security incentive for war against Iraq and other terrorist-supporting countries was to prevent, either through incapacitation or intimidation, future terrorist acts against the United States. But our data show that at this stage Americans favored war against Saddam as a vengeful end in itself rather than for self-protection. Even if not pragmatic or utilitarian, vengeance could still have been rational in the broadest sense of "being based on reasons" (Lupia et al. 2000). But it is unclear whether Americans were consciously reasoning that war was needed to avenge 9/11, or if the effect of vengeance was more subliminal. It is especially difficult to articulate the logic by which outrage and revenge led to anti-Arab hostility, leading to support for war against Iraq. Security concerns and elite opinion leadership did have a substantial impact on support for the Iraq War in our March 2003 data, but even then the desire to avenge 9/11 independently continued to influence bellicosity toward Iraq.

The generalizability of our findings to other international crimes remains an open question. Desires for vengeance may have been unusually strong in this case; one may have to go back as far as Pearl Harbor to find such intense American indignation. Failing to comprehend al Qaeda's aims, aims that were ambitious to begin with, led Americans to see it as a fanatical and bloodthirsty enemy. Terror attacks with more clearly limited goals, such as the 2004 Madrid bombings, are less likely to be viewed as acts of pure evil (see Rose et al. 2007). Offenses against other nations are also likely to elicit weaker reactions, especially for citizens who do not identify with the victims. However, the fact that death penalty supporters were significantly more likely to favor U.S. intervention in the 1991 Gulf War, despite little knowledge of Iraq's Kuwaiti victims, suggests that citizens will support retribution for crimes against foreign nations as well as against their own (Liberman 2006, 2007).

Political communication and international constraints should also condition the intensity and effects

of revenge. Vilifying adversaries and vividly describing their atrocities is a time-honored strategy for mobilizing popular support for war (Ben-Porath 2007), undoubtedly because it is so effective in playing on citizens' retributive impulses. Obvious practical constraints will also rein in the impact of moral emotions on bellicosity; it was easier to take a nation like Iraq to the woodshed for its crimes, real or imagined, than to do the same to a stronger state. But because uncertainties about foreign threats and the costs of war are endemic in international politics (Jervis 1998; Tetlock 2005), there could be a range of conflicts in which desires for retribution could play a role. In investigating retributive motivations further, researchers should keep in mind that they might underlie debatable security arguments for sanctions or force against "criminal" regimes, just as retributively motivated criminal punishment is often rationalized in utilitarian terms (Carlsmith 2008).

The perils of vengeful wars, even against relatively weak targets, warrant their being studied further. In addition to taking the lives of thousands of Americans and hundreds of thousands of Iraqis, strengthening Iran's position in the Persian Gulf region, and costing the United States an estimated $3 trillion dollars (Stiglitz and Bilmes 2008), the Iraq War accomplished what bin Laden originally had sought to achieve by the 9/11 attacks: to ensnare the United States in a prolonged occupation of a Muslim country, firing up anti-American hatred and destabilizing U.S.-friendly Muslim states like Saudi Arabia (Doran 2002). Should another catastrophic terror attack occur against the United States, impulses to lash out could once again swell public support for misdirected and self-defeating military action.

Unfortunately, there are no easy antidotes to vengeful impulses, which spring from culturally rooted and perhaps even instinctive dispositions. Obviously, foreign states should avoid gratuitously waving red flags at a maddened superpower if they wish to avoid becoming lighting rods for displaced aggression. Political leaders in injured and enraged states should focus retaliation against actual culprits, argue against military diversions, and trumpet successful prosecutions to slake popular thirst for revenge.

Publicizing the existence of emotion-induced biases might help citizens and decision-makers to correct for them (DeSteno et al. 2000; Lerner et al. 1998; Petty and Wegener 1993; Rucker et al. 2004). Citizens also might be encouraged to cope with a national tragedy by donating blood, volunteering to help victims, or other value-affirming activities that might distract citizens from vengeful rumination (Skitka et al. 2004). Another approach might be to acknowledge the grievances, real or imagined, that might have motivated a hostile act. Extenuating circumstances and intent are important criteria in making retributive justice judgments. Introspection about one's own capacity for harm has also been shown to increase forgiveness (Exline et al. 2008). This suggests that political leaders might limit vengeful reactions by

acknowledging the past injuries their nation has done to others, in crises as well as in times of peace. But as outraged citizens will have little patience for national soul-searching, it would require strong and temperate leadership to avoid indulging in us-versus-them, good-versus-evil rhetoric after a painful attack.

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Figure 1. Path Model of Reactions to 9/11 and Support for Attacking Iraq, January 2002
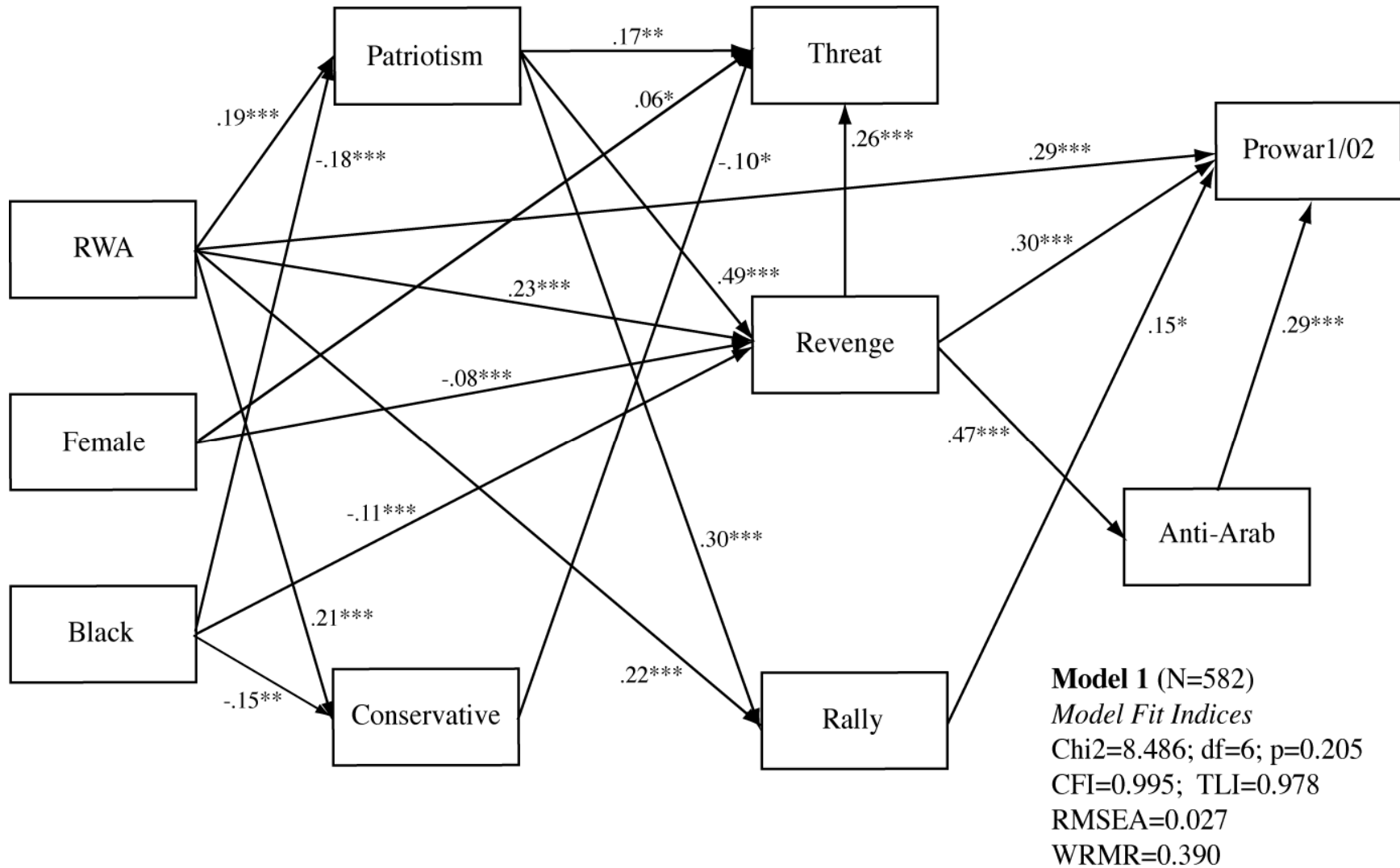
Note: Paths insignificant at p<.05 (two-tailed) omitted. The paths leading to *Patriotism, Threat, Rally, Anti-Arab,* and *Prowar1/02* are unstandardized ordered probit regression coefficients; those to *Revenge* and *Conservative* are unstandardized linear regression coefficients. Two-tailed significance levels indicated by: * p<.05; ** p<.01; ***p<.001; RWA=Right-Wing Authoritarianism.
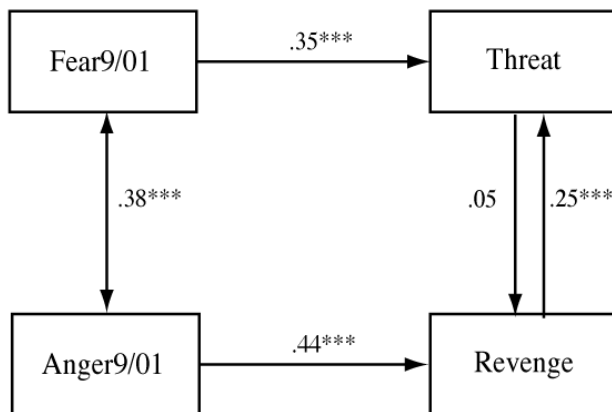
Figure 2. Path Models Testing The Impact of Perception of Terrorist Threat on Desires for Revenge against the Terrorists, and Vice-Versa, January 2002
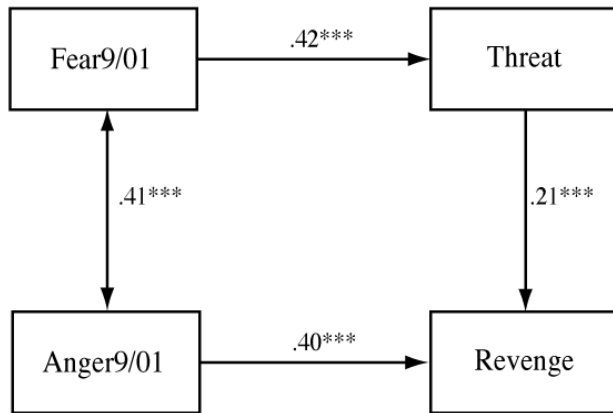
Model 2A (N=561)
Model Fit Indices
Chi2=13.074; df=2; p=0.001
CFI=0.918
TLI=0.835
RMSEA=0.099
WRMR=.831
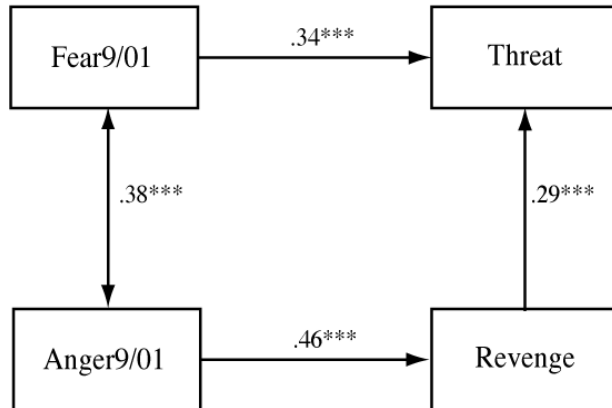
Model 2B (N=561)
Model Fit Indices
Chi2=0.772; df=2; p=0.680
CFI=1.000
TLI=1.018
RMSEA=0.000
WRMR=0.194

Model 2C (N=561)
Model Fit Indices
Chi2=0.052; df=1; p=0.819
CFI=1.000
TLI=1.028
RMSEA=0.000
WRMR=0.044

Note: The terms on the paths leading to *Threat* are unstandardized probit coefficients, the paths leading to *Revenge* show unstandardized OLS regression coefficients, and the correlation between *Fear9/01* and *Anger9/01* is shown on the arrow between them. Two-tailed significance levels indicated by: * p<.05; ** p<.01; ***p<.001.

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Table 2. Effects of Vengeful Satisfaction from War against Iraq on War Support, March 2003

	Model 3A b/(se)	Model 3B b/(se)	Model 3C b/(se)	Model 3D b/(se)	Model 3E b/(se)
Republican	.32***	.32***	.32***	.28***	.29***
	(.03)	(.03)	(.08)	(.07)	(.08)
Conservative	.25***	.23***	.41**	.41**	.38**
	(.06)	(.06)	(.13)	(.12)	(.13)
Moralism	-.09***	-.09***	-.09	-.09	-.10
	(.03)	(.03)	(.07)	(.07)	(.08)
Vengwar	.37***	.37***	.28***	.22**	.24**
	(.03)	(.02)	(.07)	(.07)	(.08)
Vengwar*Moralism		.33***			.40†
		(.08)			(.24)
WMD				.31*	.30**
				(.11)	(.11)
WMD*Moralism					.10
					(.27)
Constant	.35***	.36***	.25***	.26***	.28***
	(.02)	(.02)	(.06)	(.06)	(.06)
N	3534	3534	194	194	194

Note: Multiple imputation estimates for least-squares regression of the dependent variable *Prowar3/03;* Models 3A and 3B employ probability weighting and report robust standard errors. All regression coefficients are unstandardized, and two-tailed significance levels are indicated by: †p<.10; * p<.05; ** p<.01; ***p<.001.