Norms, Public Opinion, and the Use of Nuclear Weapons

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Abstract

This paper explores public attitudes regarding the use of nuclear weapons. Some scholars argue that the public is uniquely opposed to the use of nuclear weapons, while skeptics counter that the public prioritizes short-term military utility and harbors no special aversion to nuclear weapons. Drawing from insights in political behavior research, we argue that citizens may hold *latent* attitudes about nuclear weapons – attitudes that emerge only in the presence of public discourse that helps them make sense of complex policy issues. We test this theory using a survey experiment designed to probe the nature of nuclear attitudes in the United States. We find that when we introduce conditions simulating the debate that would likely accompany an actual nuclear attack, a strong public aversion to nuclear weapons emerges.

Introduction

For the past quarter-century, the role of norms in world politics has been a central question in international relations research. Scholars operating in this tradition have identified norm-driven behavior in a diverse collection of issue areas, including crisis bargaining, international environmental protection, human rights, the treatment of prisoners and civilians in wartime, the use of weapons such as landmines and chemical munitions, the assassination of foreign leaders, and many other issues.[1] The central claim of this research program is straightforward: state behavior is driven, at least in part, by normative standards about what constitutes appropriate behavior.

In theoretical accounts of norm diffusion, domestic populations often play a crucial role. Nongovernmental organizations, social movements, and the public at large are thought to help shape the emergence, spread, and adoption of international norms. The public, in this view, performs two important functions. First, it plays a *constraining* role, helping to enforce normative standards by punishing leaders that violate them. Second, the public plays a *persuading* role, helping leaders internalize norms and adopt new values and interests. Through these two mechanisms, the public can be a prime mover in the process of norm diffusion, establishing expectations for behavior and then ensuring that national leaders adhere to them (e.g., Cortell and Davis 1996; Checkel 1997).[2]

At the heart of this story is an assumption that the public holds strong normative views about what constitutes appropriate foreign policy behavior. In this study, we investigate the validity of this assumption in the specific context of public attitudes regarding the use of nuclear weapons. Since the early days of the nuclear age, scholars and policymakers have suggested that an international norm has inhibited the use of nuclear weapons in wartime (e.g., Huth and Russett 1988; Paul 1995, 2009; Tannenwald 1999, 2005; Schelling 2006, 2009; Quester 2006; Pinker 2011). Some scholars argue the norm against nuclear first-

[1] As a sample, see Nadelmann (1990); Katzenstein (1996); Finnemore (1996); Finnemore and Sikkink (1998); Price (1998); Klotz (1999); Thomas (2001); Gelpi (2003); Carpenter (2003); Watkin (2004).

[2] To be sure, scholars have emphasized a variety of other actors in the norm diffusion process, including governmental elites (Hooghe 2005), intergovernmental organizations (Finnemore 1996; Johnston 2001), and bureaucracies (Legro 1996), to name just a few.

use is so strong that it has prevented leaders from employing nuclear weapons even when doing so might have served their immediate security interests. These observers further argue that the public has played a central role in the emergence and survival of this norm (Ball 1983; Tannenwald 2007). Importantly, according to this perspective, the public holds strong normative beliefs about the appropriateness of nuclear weapons, viewing nuclear weapons as fundamentally distinct from – and more objectionable than – nonnuclear weapons.

Yet scholars recently have argued that even if some leaders appear to subscribe to a norm against the use of nuclear weapons, the public does not. Survey research has suggested that the U.S. public in particular is perfectly willing to support using nuclear weapons if doing so would support military objectives (Press et al. 2013). In this view, the public cares more about whether a military operation action succeeds than whether it is normatively appropriate. Citizens tend to support foreign policy actions that serve clear national interests, have a high likelihood of success, and incur acceptable costs (e.g., Shapiro and Page 1988; Jentleson 1992; Page and Shapiro 1992; Richman 1995; Eichenberg 2005; Gelpi et al. 2009). In other words, the public prioritizes foreign policy *outcomes* over the *means* with which they are achieved. On foreign policy issues such as the use of nuclear weapons, normative appropriateness therefore plays a secondary role to short-term calculations about material interests.

These differing perspectives share an important commonality: they both see public opinion on nuclear issues as fixed at any given point in time. Either the public harbors an inherent aversion to nuclear weapons, or it does not. Yet this assumption neglects the role played by political discourse in shaping public opinion. For decades, scholars have observed that public opinion on foreign policy issues is often unstable and susceptible to change (Almond 1950; Rosenau 1961). Instead of having firm preferences about foreign policy, the public often relies instead on signals from elites, social networks, and public political discourse to help them determine which policy positions to support and oppose (e.g., Zaller 1992; Lupia and McCubbins 2000; Berinsky 2009). The instability of public opinion – and the public's reliance on external cues – is most acute when voters have little information about the issue at hand. The less information voters have, the more they rely on the opinions of others to

guide their judgments. And for most voters, the topic of nuclear weapons is a quintessentially "low-information" issue: an arcane and highly technical subject about which the public knows little. It is therefore reasonable to suspect that public opinion about the use of nuclear weapons may be susceptible to cues from political discourse.

In this paper, we reassess public attitudes about the use of nuclear weapons in the United States, incorporating insights from political behavior research on the role of cues in in shaping – and reshaping – how citizens think about complex foreign policy issues such as the use of nuclear weapons. We conduct a survey experiment in which we measure individuals' support for the use of nuclear weapons under a set of hypothetical, but plausible, circumstances. There are three main findings. First, we find that the public holds no "pure" aversion to using nuclear weapons. Consistent with Press et al. (2013), we find that when presented with a scenario in which the use of force is needed to accomplish a military objective, the public appears indifferent between the use of nuclear and conventional weapons, other things being equal. Second, however, when confronted with competing external cues, the public expresses a strong preference for using conventional weapons over nuclear weapons. In other words, the U.S. public does express a unique aversion to nuclear weapons, but only in the presence of cues that help guide their thinking on the issue. Third, in contrast to other foreign policy issues, these effects cross party lines: cues from the opposite party evoke antinuclear attitudes just as effectively as cues from one's own party. Overall, our findings suggest that the U.S. public is not as indifferent to the use of nuclear weapons as some scholars suggest: in a scenario in which the United States considered (or actually used) nuclear weapons, public political discourse could create a strong undercurrent of normative opposition among the U.S. public. These results hold important implications for current policy debates, particularly in light of President Donald Trump's suggestion that he might be willing to use nuclear weapons against the Islamic State (Trump 2016).

Nuclear Weapons and Public Opinion

Norms are collective expectations about what constitutes appropriate behavior by members of a group. In international politics, norms stipulate what kinds of behavior are acceptable and proper for states and nongovernmental organizations.[3] They set standards of behavior that upstanding members of the international community are expected to follow. Those that fail to conform with these standards are condemned as outlaws or deviants. However, norms need not be formalized: in both domestic and international society, most norms exist as shared expectations rather than explicit legal obligations. Moreover, they vary widely in strength and pervasiveness. Some norms are widespread and deeply embedded, while others are weak or observed by only a few actors (Legro 1997). Yet norms share one feature in common: they shape behavior by delineating which actions are (or are not) appropriate, rather than those which yield immediate utility (March and Olsen 1989).

In recent years, scholars have devoted considerable attention to identifying specific norms in international relations, finding evidence that normative standards shape foreign policy in the areas of environmental protection, drug policy, respect for human rights, and even arms acquisition.[4] One area of special focus for this research program has been the power of normative standards in wartime. The importance of norms during military conflict is of particular importance to the social-constructivist research agenda because one might expect wartime conditions to be particularly toxic to the survival and influence of norms. In wartime, dire national interests – including the survival of the state itself – are at risk. If norms restrain the behavior of warring states, then they are likely to be even more pervasive in less hostile environments. Indeed, scholars have argued that norms play a significant role in preventing states from engaging in a host of behaviors, including mistreating prisoners of war, using chemical or biological weapons, and attacking civilian targets.[5]

[3]See Katzenstein (1996: 5); Finnemore (1996: 22); and Finnemore and Sikkink (1998: 891).

[4]Nadelmann (1990); Eyre and Suchman (1996); Ropp and Sikkink (1999).

[5]For examples of this literature, see Legro (1995); Price (1997); Finnemore (1996); Thomas (2001); Morrow (2007).

Nuclear Aversion

One item of particular interest to the literature on norms is the role of norms in restraining the use of nuclear weapons. In 1945, the United States dropped two atomic bombs on Japan, bringing an end to World War II. In the decades hence, the superpowers built tens of thousands of nuclear weapons, and nine additional countries constructed their own nuclear arsenals. Yet, puzzlingly, no nation has used nuclear weapons since the bombings of Hiroshima and Nagasaki. A common explanation in the international relations literature is that this record reflects the success of nuclear deterrence: nuclear weapons have not been used, in other words, because states fear nuclear retaliation (e.g., Gaddis 1987; Waltz 1990). But this explanation struggles to explain why nuclear weapons have not been used against nonnuclear states, especially when doing so might have staved off military defeat.

A very different and provocative explanation for the last 70 years of nuclear non-use argues that a normative prohibition has stigmatized the use of nuclear weapons, rendering them illegitimate as weapons of war and inhibiting their use. According to some scholars – most notably Tannenwald (1999, 2005, 2007) – this norm has become so strong that it has rendered the first-use of nuclear weapons "taboo" among states in the international system. While there is considerable debate about whether the norm rises to the level of a genuine taboo, a variety of scholars have concurred with Tannenwald's broader conclusion that an international norm has helped prevent the use of nuclear weapons in the seven decades since Hiroshima.[6]

Where might such a norm have originated? Scholarship about the emergence and survival of international norms emphasizes that the public – both domestic and international – often plays a central role in the life cycle of norms. Norms, in this view, first emerge as attitudes among segments of the general public, and are then adopted by elites. The public plays two distinct but complementary roles in this process.[7] First, the public plays a constraining role,

[6]Paul (2010: 863), for example, argues that "non-use is not a full-fledged taboo, but a more limited tradition which has an informal norm inherent in it." For similar views, see Sagan (2004); Schelling (2006); Quester (2006), and Paul (2009). Scholars such as Avey (2015), however, are even more skeptical, arguing that the historical pattern of nuclear non-use has been driven by strategic – not normative – considerations.

[7]Checkel (1997) provides a good overview of these two mechanisms.

putting pressure on elites to conform to the norm. Leaders that do not conform are shamed and punished at the ballot box. At this stage, elites comply with norms for strategic reasons, not necessarily because they have adopted them (Cortell and Davis 1996). Second, the public plays a persuasive role, initiating a process of learning that leads elites to internalize norms and absorb them into their identity as decision-makers. In this stage of the process, norms play a deeper "constitutive" role, reshaping the interests and preferences of elites rather than merely shaping their instrumental calculations.

The evolution of antinuclear norms in the United States appears to fit the pattern anticipated by this theory of norm diffusion. Indeed, Tannenwald (1999, 439; 2007, 48) argues that public opinion has been a critical factor constraining the use of nuclear weapons by U.S. leaders. In the early years of the nuclear age, President Dwight D. Eisenhower was skeptical of the distinction between nuclear and conventional weapons, arguing that nuclear weapons could be used "exactly as you would use a bullet or anything else."[8] During the Korean War, he and his advisers, including Secretary of State John Foster Dulles, sought to combat the perception that nuclear weapons were anything more than another tool in the arsenal of the U.S. military. Yet they begrudgingly admitted that a "tabu which surrounds the use of atomic weapons" prevented nuclear weapons from being a viable option for ending the war (U.S. Department of State 1953a: 827), and lamented the "public hysteria" surrounding the use of nuclear weapons (U.S. Department of State 1953b: 276).

As the Cold War wore on, the antinuclear movement in the United States promoted a view of nuclear weapons as uniquely horrific weapons and facilitated "both a cognitive and normative shift in how people understood nuclear weapons" (Tannenwald 2007: 188).[9] Eventually, leaders themselves began to espouse these views, arguing that using nuclear weapons was unthinkable for a modern, civilized state. When asked whether the United States would have used nuclear weapons during the 1991 Persian Gulf War, for example, former White House Chief of Staff John Sununu remarked "we just don't do things like that." Another official stated that using nuclear weapons would be "simply beyond the pale... We would no longer be accepted among the community of nations" (Tannenwald 2007: 303).

[8]See Eisenhower (1955: 55).

[9]Russett (1984) emphasizes the role of religious leaders in this process.

A variety of evidence supports the view that Americans consider nuclear weapons to be objectionable tools of warfare. A 2004 poll conducted by the Program on International Policy Attitudes found that 21% supported the view that the United States should never use nuclear weapons under any circumstances, and 60% believed the U.S. should only use them in response to a nuclear attack (Kull 2004). Even more dramatically, more than 70% of respondents to a 2005 poll agreed with either the statement that "it is all right to possess [nuclear weapons], but they should never be used" (24.5%) or "it is wrong to possess or use [nuclear weapons]" (58%) (Kobayashi 2006–07).

Nuclear Indifference

Recent observers, however, have expressed skepticism that normative factors play a significant role in public attitudes about the use of military force. According to these scholars, the public relies on short-term cost-benefit calculations – not normative standards – when evaluating the use of military force. The public's priority, in this view, is achieving immediate foreign policy objectives at an acceptable cost. According to this school of thought, three factors in particular determine public support for a military action. First, the public evaluates the policy objective. Jentleson (1992), for example, famously argued that the public tends to support military actions designed to contain adversaries' behavior rather than induce internal political change in rival states. Others have found the public to be more supportive of military actions undertaken in defense of vital national interests, compared to objectives seen as peripheral (Page and Shapiro 1992; Eichenberg 2005). Second, the public weighs the material costs of using force. Studies of public support for wars, for example, have shown that U.S. public opposition to military conflicts grows at a predictable rate as military casualties mount (Mueller 1973; Gartner 2008). Finally, the public cares about the probability of success, tending to support military actions that carry a high likelihood of achieving their objectives (Gelpi et al. 2009). Overall, this research suggests that the public prioritizes operational efficacy when assessing a military action, giving little weight to non-material factors such as norms.

According to this school of thought, the U.S. public would be quite willing to support the

use of nuclear weapons if they were needed to accomplish a vital military mission. Indeed, some survey evidence suggests that this is the case. After World War II, for example, opinion polls revealed that 77% of the American public approved of the use of nuclear weapons against Japan, versus just 19% who disapproved (Dower 1986: 54). While support for the atomic bombings has declined somewhat in the decades since, polls continue to find more support than opposition: in a 2009 Quinnipiac University poll, 61% of Americans said the United States did the "right thing" by using nuclear weapons against Japan (Quinnipiac University 2009). Likewise, a 2015 YouGov poll found that 46% judged the atomic bombings to be the "right decision," versus 29% who saw it as the "wrong decision" (Moore 2015).[10] In the context of more contemporary conflicts, the U.S. public has also expressed considerable support for using nuclear weapons: 65% of respondents to a December 2002 poll supported a nuclear response if Iraq used weapons of mass destruction against U.S. troops (Morin 2002).

Perhaps the most convincing evidence in favor of the "nuclear indifference" perspective is Press, Sagan, and Valentino's 2013 experimental study of nuclear attitudes. In this study, respondents were presented with detailed, hypothetical scenarios in which U.S. leaders launched a military strike against an Al Qaeda facility. Some respondents were told that nuclear weapons were used in the strike; others were told that the strike employed conventional weapons. The study found that support levels were statistically identical between the "nuclear" and "conventional" scenarios when objective costs and benefits were held equal. Moreover, in a variation of the experiment where respondents were asked to choose between a conventional and nuclear strike, a majority of respondents *preferred* the use of nuclear weapons over conventional weapons if they were told that nuclear weapons would be even slightly more effective. These results suggest that the U.S. public appears quite willing to support the use of nuclear weapons if they provide immediate military utility.

[10]See also Kobayashi (2006–07), who reported a 58% approval rate for the atomic attacks in a 2005 poll.

The Importance of Cues in Nuclear Attitudes

Thus far we have outlined two competing schools of thought about whether the U.S. public holds an aversion toward the use of nuclear weapons. One perspective suggests that the public would strongly oppose an actual use of nuclear weapons by U.S. leaders, while a rival hypothesis argues that the public would support the use of nuclear weapons if there is a sufficient military rationale for doing so. But these two hypotheses paint an incomplete picture of public attitudes toward nuclear weapons – and, in particular, whether the public would oppose an actual use of nuclear weapons by the United States.

Nuclear Policy as a Low-Information Issue

In general, studies of public opinion on foreign policy have found that the U.S. public knows little about foreign policy issues (Almond 1950; Rosenau 1961; Zaller 1992; Holsti 1996). Foreign policy is a subject that requires considerable expertise to understand, but most citizens lack such expertise. This is especially true for nuclear weapons issues, which can be even more arcane and complex than other foreign policy topics. Nuclear weapons issues are also increasingly obscure: a quarter-century after the end of the Cold War, nuclear conflict has largely disappeared from the popular mind, receiving only sporadic coverage in the media or in popular culture. The United States has not seriously considered using nuclear weapons in a conflict for many decades, so most citizens have not been exposed to debates about their use. And since nuclear weapons issues are not relevant to the daily lives of most citizens, the public has few incentives to seek out information and form opinions about them.

Indeed, public opinion polls have shown that the level of public knowledge on nuclear issues is quite low. For example, when asked in a 2004 poll to estimate the size of the U.S. nuclear arsenal, the median response was 200 weapons – far below the actual number (at the time) of 6,000 weapons (Kull 2004). In another poll, conducted in 2010, 71% of U.S. respondents incorrectly believed that Iran – still a nonnuclear state as of this writing – possessed nuclear weapons (CNN 2010). In short, nuclear weapons policy represents a classic "low-information" policy issue: it is a subject about which citizens know little, and understand even less.

Cues and Nuclear Weapons

Low levels of citizen knowledge are hardly unique to nuclear issues. For decades, scholars have explored the political behavior of low-information voters. One of the key insights of this body of scholarship is that when individuals know little about a particular policy issue, they rely on heuristics and information shortcuts to compensate for their own lack of policy expertise (Downs 1957). Specifically, voters often look to external "cues" – messages emanating from elite figures,[11] media outlets,[12] and their own peers and social networks[13] – to inform and guide their views on specific policy issues. This is especially true for arcane, complex policy issues. To be sure, individuals are not simply blank slates: voters do bring a set of basic values and principles to the table when confronting new policy questions (Powlick and Katz 1998; Kertzer and McGraw 2012; Kertzer et al. 2014). But without the context provided by political discourse, it is difficult for them to apply those principles to specific policy issues. Cues can provide that context.

Cues can perform three key functions in shaping public opinion. First, they contain *information* about policy issues, presenting facts and data that citizens can use when deciding which position to support. Second, they contain *opinions*, helping to activate public attitudes by appealing to citizens' broader principles. In other words, cues help citizens form policy positions that they did not previously hold by connecting those positions to voters' basic values. Third, cues reveal the *policy stances* held by other people. By showing voters who supports which positions in a policy debate, cues provide heuristics that voters can rely on when choosing sides. Citizens may harbor inclinations toward a particular policy stance, but they may need to hear a trusted source articulate that position before expressing it themselves. Conversely, citizens may be less likely to express a policy preference if that preference is shared by someone they do not identify with, such as a member of an opposing political party. In all of these ways, cues can evoke latent attitudes about policy issues, bringing implicit views to the surface among citizens that have rarely, if ever, thought about

[11]Converse (1964); Zaller (1992); Lupia and McCubbins (2000); Berinsky (2009); Brody (1991); Levendusky (2009).

[12]Baum (2005).

[13]Kertzer and Zeitzoff (2016); Druckman and Nelson (2003); Radziszewski (2013); Todorov and Mandisodza (2004).

the issue.

In particular, partisan cues appear to play an outsized role in this process. In other words, individuals look to members of their own party when deciding which policy positions to hold. On questions of war and peace, scholars have found that the public tends to mirror partisan opinion: Republican voters listen mainly to Republicans, and Democrats listen to other Democrats (Berinsky 2009).[14] In low-information environments, partisan cues reveal to the electorate the contours of the policy debate. Until citizens know what their political leaders think about a particular policy issue, their own opinions often will remain tenuous and unstable.

The implication of this logic is that cues must be an essential component of survey research about low-information policy issues like nuclear weapons. Opinion surveys about the use of nuclear weapons – even experimental surveys – are unlikely to yield reliable results unless they provide citizens with key information about the contours of the policy debate. In other words, we can not adequately judge public opinion on nuclear weapons issues by simply asking voters what they prefer. Since the public knows little about nuclear issues in general, most citizens are unlikely to have thought much about whether nuclear weapons are a legitimate tool of war for a civilized nation, and do not hold strong views one way or another. Political discourse – in the form of cues – therefore is critical for shaping voters' views, helping them connect their basic principles to specific policy positions. In a real-life scenario in which the United States actually used nuclear weapons, there would be a tremendous amount of public discussion both favoring and opposing the policy, thus providing the public with a range of cues. Providing survey respondents with a mixture of arguments therefore is necessary to gauge how the public might actually react to such an event. But survey instruments that contain no cues – or, worse, cues that only reveal part of the debate[15] – cannot correctly assess the extent of nuclear aversion among the public, and will obtain biased results.

[14]Scholars have also examined the cue-giving role of nonpartisan actors, including military officials (Golby et al. 2013), foreign leaders (Hayes and Guardino 2011), policy groups (Nicholson 2011), and international institutions (Chapman 2012).

[15]Press, Sagan, and Valentino's survey experiment, for instance, presented respondents with cues only *in favor* of using nuclear weapons for immediate military purposes.

Hypotheses

What does the logic of political cues imply for testing theories about nuclear attitudes? The "nuclear aversion" perspective argues that the public sees nuclear weapons as fundamentally distinct from conventional weapons and opposes their use. The logic of cues, however, implies that the public probably does not hold such strong views on its own. Since most voters know little about nuclear issues, they must be presented with information and opinions on both sides before they can render a reliable judgment. If the nuclear aversion school is correct, then, the public may initially express indifference between nuclear and conventional weapons, but when exposed to both sides of the debate, voters will be more persuaded by messages opposing nuclear weapons. Arguments against the use of nuclear weapons, in other words, will tend to resonate more with voters, affirming their latent suspicions about nuclear weapons. Since voters do not hold the same suspicions about conventional weapons, however, the same messages will have little or no effect on their views about the use of conventional force. Facing two otherwise identical options involving the use of military force, and presented with cues that describe arguments on both sides, the public therefore will prefer the option involving conventional weapons and reject the use of nuclear weapons. In short, the public may indeed harbor a unique aversion to nuclear weapons, but that aversion may be conditional on the presence of cues to help citizens sort out their own views.

By contrast, the "nuclear indifference" model would expect the public to have no *a priori* preference for conventional versus nuclear weapons, even after being exposed to cues that outline the contours of the policy debate on both sides. The key question for voters, according to this perspective, is whether the use of a particular weapon helped achieve a successful military operation. Cues from external actors may change the level of public support for the use of force, but they should have the same effect whether the weapon in question is nuclear or conventional. In short, even after being presented with competing cues, the public will remain indifferent between nuclear and conventional weapons, so long as their military efficacy is similar.

Research Design

To test these two views of nuclear attitudes, we designed a survey experiment that measures public opinion toward nuclear weapons in the presence of political debate. Since nuclear warfare has not occurred since 1945, it is impossible to study contemporary public reactions to an actual nuclear strike – instead, we must measure responses to a hypothetical use of nuclear weapons. Our experiment presented respondents with a hypothetical, but plausible, scenario in which the United States conducted a military strike against the Al Qaeda terrorist organization. Some subjects were told that the strike had employed conventional weapons; others were told that it used nuclear weapons. In all scenarios, relevant facts about the strike were held constant so that we could isolate the causal effect of the variables of interest on public opinion.[16] Subjects were informed that the scenario was hypothetical, but were asked to imagine how they would feel about the events if they happened in real life.[17]

We fielded our survey experiment on 1,612 American adults recruited through Amazon's Mechanical Turk (MTurk). The survey was conducted from April 1 to April 24, 2015. We limited participation to MTurk workers located in the United States who had previously completed at least 1,000 jobs and whose approval rating for previous tasks was at least 95%.[18]

[16]To ensure that our findings could be usefully compared to those of Press et al. (2013), who also assessed public attitudes toward the use of nuclear weapons using fictional news stories, the hypothetical scenario in our experimental instrument was designed to be similar to theirs. The Supporting Information document contains a more detailed comparison of the two instruments.

[17]In the international relations literature, survey experiments employing hypothetical scenarios have become increasingly common. Scholars have used hypothetical scenarios in surveys to explore the microfoundations of the democratic peace (Tomz and Weeks 2013), domestic audience costs (Tomz 2007; Trager and Vavreck 2011; Horowitz and Levendusky 2011; Kertzer and Brutger 2016; Levy et al. 2015), and sensitivity to military casualties (Gartner 2008; Gelpi et al. 2009; Gelpi 2010), to name just a few.

[18]In keeping with prior MTurk studies, our sample was more ideologically liberal (50% self-reported liberal respondents and 42% Democratic respondents), more educated (49% college graduates), and more male (53% male) than the U.S. population. Below we assess whether the non-representative nature of the sample might have altered the treatment effects observed in the experiment.

Experimental Conditions

At the outset of the experiment, respondents were instructed to carefully read a fictional news story of approximately 400–500 words. The story described a hypothetical military crisis between the United States and Yemen in which Al Qaeda was discovered to be conducting a high-level meeting in a bunker near the Yemeni village of Thamud. The news story reported a successful U.S. cruise missile strike against the bunker, which destroyed the bunker and killed the Al Qaeda leaders inside the bunker.

All versions of the news story incorporated four additional features, intended to parallel the experimental design of Press et al. (2013). First, in keeping with Press et al. (2013), all versions of the news articles presented a justification for the attack – in other words, a positive cue – from General Martin Dempsey, who served as Chairman of the Joint Chiefs of Staff from October 1, 2011 through September 25, 2015. The article quoted Dempsey as stating that the air strike was the "only viable means" for destroying the terrorist facility. Second, the article reported that U.S. intelligence sources had determined that the Al Qaeda personnel killed in the attack had been planning a campaign against U.S. military and civilian targets in the Middle East. Third, all versions of the article reported that 1,000 civilians had been killed in the attack. Finally, the article reported that the attack involved no U.S. military casualties.[19]

The news articles then varied randomly on two dimensions. First, the articles varied in the type of weapon used. In some versions, the United States struck the terrorist bunker with 100 conventionally-armed cruise missiles; in other versions, the attack was conducted using two nuclear-armed cruise missiles. Second, some conditions introduced a dissenting cue: a quote from an expert or political official expressing opposition to the strike.[20] The cue-giver randomly took one of three identities: a retired military officer, a Republican Senator, or a Democratic Senator. Overall, these test conditions yielded a 2×4 fully-crossed factorial design, including four conventional conditions and four nuclear conditions.

[19]These features closely resemble the experimental instrument used in Press et al. (2013); see page SI-5 of the Supporting Information document for a more detailed comparison.

[20]While foreign policy cues can emanate from many sources, survey experiments on foreign policy – including Press et al. (2013) – typically utilize elite cues. Future studies might investigate the effects of nuclear cues from non-elite sources, such as community members and social networks.

Conventional Condition

However, some military observers questioned the ethics of the strike. Retired Admiral David Keating sharply criticized the use of cruise missiles, calling them "immoral and inhumane." Speaking yesterday at a conference on U.S. defense policy, Admiral Keating argued that "the successful outcome does not justify using these barbaric weapons."

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Nuclear Condition

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"Preemptively attacking another nation with nuclear weapons demolishes nearly 70 years of nuclear restraint," Admiral Keating said. "It's an affront to our nation's most basic values."

Figure 1. *Dissenting cues in the Conventional and Nuclear conditions.*

The nature of the dissenting cue merits some additional discussion.[21] Scholarly literature on international norms emphasizes that normative prohibitions rest on at least two key pillars, both of which are invoked in the text of the dissenting cue. First, the cue articulates a *moral objection* to the military strike, with the cue-giver arguing that the methods used in the strike – whether conventional or nuclear – were "barbaric," "immoral and inhumane," and "an affront to our nation's most basic values." Including moral language is important because scholars have argued that antinuclear norms contain an important moral component. Tannenwald (2007: 59), for example, points out that "nuclear weapons have been the subject of a specifically moral discourse from their inception," and the norm against their use is based partly on "a sense of revulsion" that many people feel about them.[22] In the dissenting cue described above, opposition to the hypothetical military strike is therefore framed in similar moral language.

Yet, morality need not be the sole – or even the most important – basis for international

[21]The full text of the dissenting cue – for both *Conventional* and *Nuclear* conditions – is contained in Figure 1.

[22]Indeed, U.S. officials often have framed objections to using nuclear weapons in moral terms: for instance, former Army Chief of Staff General Matthew Ridgway called the use of nuclear weapons for anything other than national survival "the ultimate in immorality" and a violation of "human decency" (Ridgway 1967: 76, 247).

norms. Norms also emerge over time through repeated interaction, and are undergirded by precedent (Thomas 2001; Morrow 2014). Indeed, advocates of the nuclear aversion hypothesis argue that one factor contributing to the strength of the norm against nuclear use is the simple fact that nuclear weapons have not been used for more than seventy years. With each passing year, they argue, the norm grows stronger: "the longer nuclear weapons go unused, the greater the bright-line threshold" separating nuclear and conventional weapons in the public mind (Tannenwald 2007: 66). Former U.S. National Security Adviser McGeorge Bundy, for example, argued that U.S. nuclear restraint during the 1991 Gulf War "reinforced" norms against using nuclear weapons (Bundy 1991: 83).

Since average citizens may not be aware of the long tradition of nuclear non-use, however, they must be provided with this information. The dissenting cue in the *Nuclear* condition therefore refers to *precedent*, explaining that the nuclear strike "demolishes nearly 70 years of nuclear restraint."[23]

Procedure

The experiment proceeded as follows. After reading one of the eight possible variants of the news article, respondents answered a series of questions concerning their views about the hypothetical military strike. These include the subject's degree of APPROVAL for the hypothetical strike; the effect of the strike on their willingness to REELECT their Congressional representative if he/she voted for the strike; and their assessment of how ETHICAL the attack depicted in the article was. We also collected information on the respondents' reasons for approving or disapproving of the strike.

The next set of questions aimed to assess respondents' attention levels. Many survey experiments that use hypothetical scenarios employ brief vignettes to deliver their treatment and then summarize the important details for respondents.[24] However, these methods do not simulate how the public actually acquires knowledge of current events. We embedded

[23]Note, however, that the dissenting cue in the *Conventional* condition does not contain such language, since there is no such tradition of non-use with conventional weapons. Indeed, advocates of the nuclear aversion hypothesis have argued that this is a key reason the public considers nuclear weapons to be fundamentally different from conventional weapons (e.g., Ball 1983).

[24]For example, Trager and Vavreck (2011).

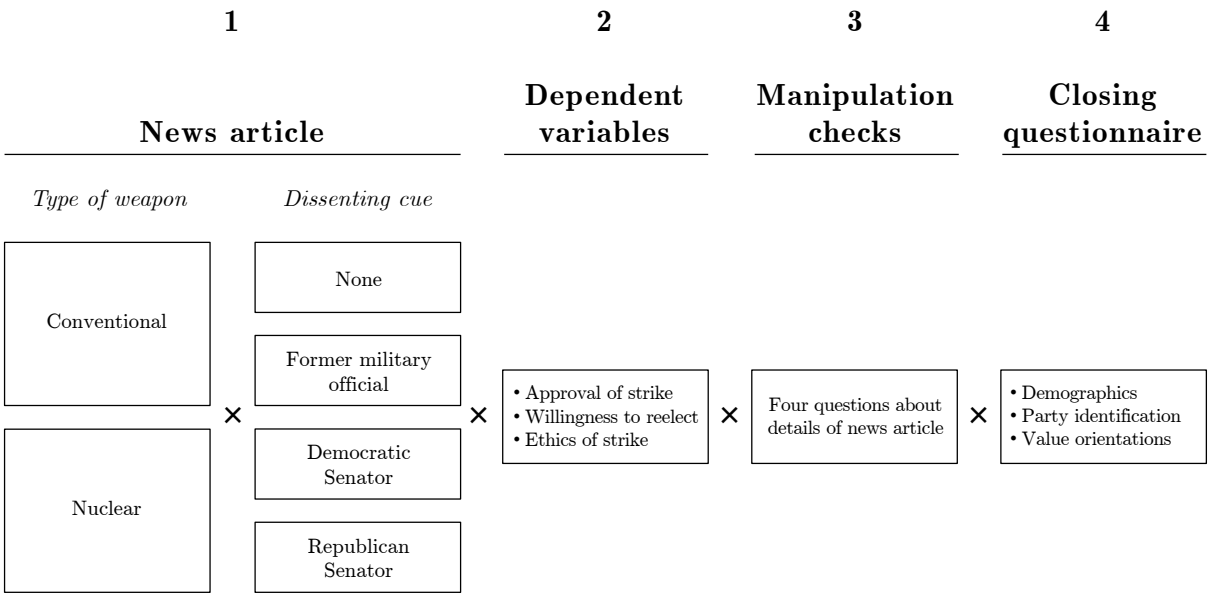


Figure 2. *Summary: sequence of the experiment.*

our treatments within full-length, fictional news articles that mimicked the appearance and detail of actual news reports. An advantage of this method is that it more closely resembles the way Americans might learn about a real nuclear strike through printed news media, but it also carries an important potential drawback: the design makes it more difficult to ensure that subjects received the full "dosage" of the treatment. In other words, subjects might become bored, distracted, or otherwise lose interest in reading the full article, thereby missing important details that comprise the experimental treatment. We therefore evaluated subject attentiveness through these manipulation checks to ensure that subjects absorbed the key facts of the report.[25] Roughly 77% of respondents in our sample answered all manipulation check questions correctly. Our primary analyses below utilize the responses of this group of respondents.[26]

Finally, we asked a series of dispositional questions to measure respondents' value orienta-

[25]The wording of these questions and the percentage of correct responses are reported in the Supporting Information document.

[26]However, we also assess the robustness of the findings by including respondents who missed one or more manipulation checks. The central findings remain unchanged.

tions. We also collected information on respondent demographics and partisanship, including gender, age, education level, party identification, and attention to news on international affairs. The complete sequence of the experiment is summarized in Figure 2.

Analysis and Results

We present the results as follows. First, we compare public approval for conventional and nuclear weapons under conditions that match the experimental design of Press et al. (2013) – specifically, conditions containing a cue in favor of the attack but no dissenting cue. Second, we modify this design by introducing a dissenting cue to balance the favorable cue, reassessing support for conventional versus nuclear weapons under these new conditions. Third, we explore whether the effects of this cue vary according to who delivers it. Finally, we investigate how cues shape respondents' ethical judgments about nuclear use.

We begin by comparing average levels of support for the hypothetical military strike under experimental conditions similar to Press et al.'s (2013) study of nuclear attitudes. Recall that in these scenarios, the news article contained no argument against the military strike, whether conventional or nuclear.[27]

Figure 3 illustrates the difference in support between the *Conventional* and *Nuclear* variants of the control condition. In brief, without a dissenting cue, respondents expressed similar levels of support for the military strike regardless of the type of weapon used. Approximately 42% of participants in the *Conventional* condition approved of the strike, compared with 37% in the *Nuclear* condition.[28] While respondents were slightly more likely to express approval for the conventional attack, the difference in approval for the conventional and nuclear strikes is substantively small and not statistically significant at the 95% level.

These results provide initial support for the view that the public is largely indifferent between conventional and nuclear weapons, other things being equal. Importantly, these findings are consistent with the results of Press et al. (2013), who also found – using a

[27]Again, it is important to recall that we incorporate a positive cue into all treatment conditions, in keeping with the procedures of Press et al. (2013).

[28]We dichotomize subject responses throughout for ease of interpretation. 1 = Strongly Approve or Somewhat Approve; 0 = Somewhat Disapprove or Strongly Disapprove.

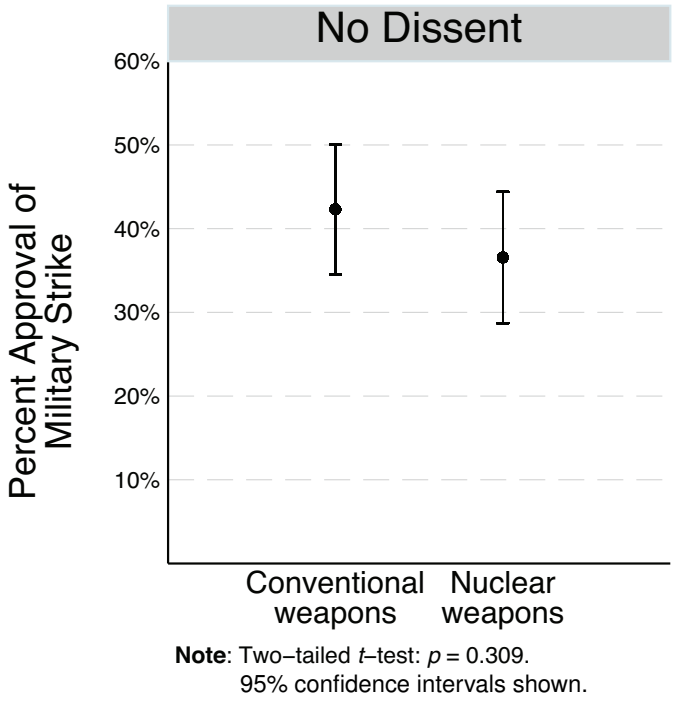


Figure 3. *Approval of military strike, No Dissent condition.*

virtually identical design – that approval rates for a hypothetical U.S. military strike were similar irrespective of the type of weapon used.[29] In their view, the similarity of approval rates for the use of conventional and nuclear weapons suggests that public aversion to nuclear weapons is weak or nonexistent. In this interpretation, the public prioritizes military utility over normative considerations when evaluating the use of force.

However, as we discussed earlier, this experimental design is potentially problematic because it includes only a cue in favor of the air strike. As a result, these scenarios may elicit a biased framing effect. Earlier studies have demonstrated that experimental participants can be easily moved by one-sided frames, sometimes regardless of the respondents' true

[29]Indeed, the difference in approval rates in our experiment was identical to the findings of Press et al. (2013: 198), who also found a five-point difference in favor of conventional weapons. Note, however, that overall support levels were lower in our experiment than in Press et al.'s study. This difference likely arises from the fact that our sample contained a larger proportion of Democrats, who were less likely in general to support the nuclear strike. Specifically, just 24% of self-identified Democrats in our sample approved of the nuclear strike in the control condition, compared to 68% of Republicans.

opinions.[30] Moreover, the one-sided nature of these treatment conditions does not accurately depict the competitive environment of politics. Military strikes often prompt public debate, with some observers condemning military actions and others expressing support. Public debate among elites would be especially contentious if the United States ever engaged in the first-use of nuclear weapons: Tannenwald (2007) shows that some of the most dedicated opponents of using nuclear weapons are found at the elite level. A decision to end more than seventy years of nuclear restraint by the United States would surely prompt vocal opposition from at least some political partisans and non-partisan experts. In order to fairly test the nuclear aversion hypothesis, a more plausible experimental treatment must include cues on *both* sides of the policy debate in order to test whether the public harbors implicit aversion to nuclear weapons. Since most Americans likely have devoted little thought to the appropriateness of using nuclear weapons, they are unlikely to summon arguments against using nuclear weapons on their own – they likely need assistance from cues to activate their opinions.

We address these issues by introducing a dissenting cue into both the *Conventional* and *Nuclear* treatment conditions. In these conditions, a cue-giver – a retired military official, a Democratic Senator, or a Republican Senator – is quoted in the news article arguing against the military strike. The addition of this cue remedies the one-sided framing problem, presenting competing cues that allow subjects to choose the policy position that most closely reflects their beliefs. Although our treatments cannot incorporate all the nuances of real political debate, they more accurately represent the competitive nature of democratic politics than do the "control" conditions.

In many ways, the *Dissent* conditions constitute a "hard test" for the nuclear aversion hypothesis. In all versions of our treatment, a high-ranking national-security official – the Chairman of the Joint Chiefs of Staff – argues that it would have been very difficult to eliminate the Al Qaeda bunker without the air strike, thereby risking U.S. national security. But the dissenter in these treatments – a Republican Senator, a Democratic Senator, or a retired military official – does not directly contest the military necessity of the strike.

[30]For example, see Chong and Druckman (2007).

Instead, the dissent appeals to a logic of appropriateness, with the dissenter arguing that the method employed was morally objectionable and contrary to established precedent. If the "nuclear indifference" perspective is correct, and the public prioritizes short-term calculations of military utility over normative appropriateness when weighing the use of military force, then these cues are likely to have little effect irrespective of the type of weapon used. Further, it is not clear whether anti-nuclear norms even apply to the scenario described in the experiment: as described by Tannenwald (2007) and others, international norms restrict the use of nuclear weapons against other states – but not necessarily against nonstate actors. It therefore is not obvious that the public would oppose the use of nuclear weapons against a terrorist organization – especially one that was preparing to conduct attacks against the United States.

However, if the nuclear aversion hypothesis is correct, what would we expect to observe? This view asserts that the public is, on the whole, less likely to support the use of nuclear weapons than conventional weapons, other things being equal. It therefore expects the dissenting cue in our scenarios to activate latent antinuclear attitudes, thereby shifting responses in the nuclear conditions – but, importantly, not in the conventional conditions. In other words, if the nuclear aversion school is correct, the dissenting cue should weaken support for the military strike to a greater degree in the nuclear scenarios than in the conventional scenarios.

Figure 4 evaluates this possibility by comparing support for the use of conventional versus nuclear weapons under treatment conditions with a dissenting cue. In these scenarios, a wide gap in approval rates appears. Note first that dissent has virtually no effect on approval rates in the *Conventional* conditions: this time, roughly 40% of respondents receiving a dissenting cue approved of the conventional strike, compared to 42% in the control condition. In other words, the dissenting cue did not reduce support for the use of conventional weapons.

However, the cue had a considerable effect in the *Nuclear* condition, causing overall approval rates to drop down to less than 24% (from 37% in the control condition). Dissenting cues, in other words, are more than six times as powerful in the *Nuclear* condition as in the *Conventional* scenario. In short, we now observe a substantial gap in approval rates for the

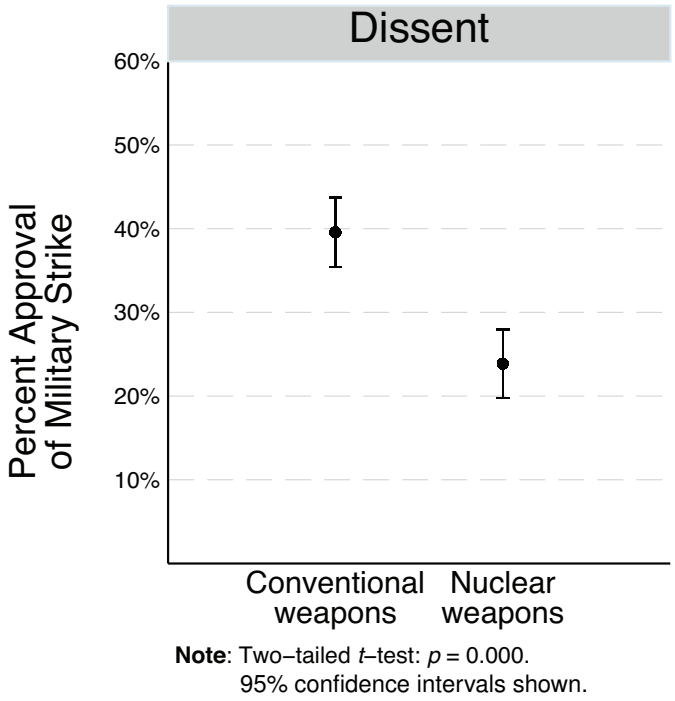


Figure 4. *Approval of military strike, Dissent condition.*

use of conventional versus nuclear weapons, but *only in the presence of a dissenting cue*.

In order for public nuclear aversion to have a restraining effect on policy decisions, the public must be willing to punish leaders who violate antinuclear norms. While the results thus far have shown that cues influence public approval of a hypothetical nuclear strike, they have not spoken directly to the question of how this approval might translate into electoral behavior. To address this question, we asked survey respondents to project whether they would be more or less willing to reelect their Congressional representative upon learning that he or she supported the strike. Specifically, we asked subjects: "Imagine that your Congressional representative voted to authorize the strike. Would this make you more or less likely to vote to reelect this person?" While it is not possible to know how accurately this question might forecast actual voting behavior, it nonetheless provides some insight into the effect of nuclear norms on individuals' political attitudes.

Figure 5 charts the proportion of respondents who indicated that they would be willing to reelect their Congressional representative upon learning that the representative had sup-

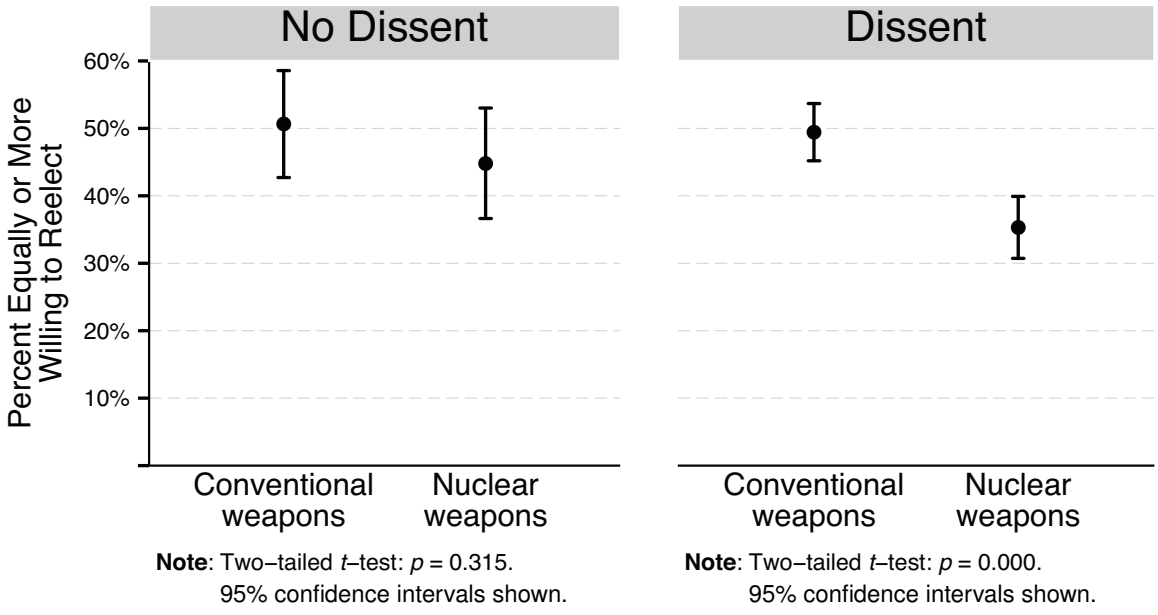


Figure 5. *Willingness to reelect a Congressman who voted for the military strike.*

ported the military strike. The left-hand side of the figure shows that, in the absence of a negative cue, respondents expressed virtually identical support for their member of Congress irrespective of the weapon used in the attack. After being exposed to an argument condemning the attack, however, public approval dropped significantly in the *Nuclear* condition – but, crucially, not in the *Conventional* condition.

Overall, these results support neither the presence of a "pure" antinuclear norm nor public indifference between nuclear and conventional weapons. Rather, they suggest that public skepticism about the use of nuclear weapons is conditional: lying beneath the surface in the public mind, it becomes salient only in the presence of cues that help voters articulate their views.

Partisan Effects

These results raise an important question: which cue-givers activate public nuclear aversion? It is possible that the source of the dissenting opinion may be driving the effect we observe. For example, Berinsky (2009) argues that voters take cues only from elites they trust –

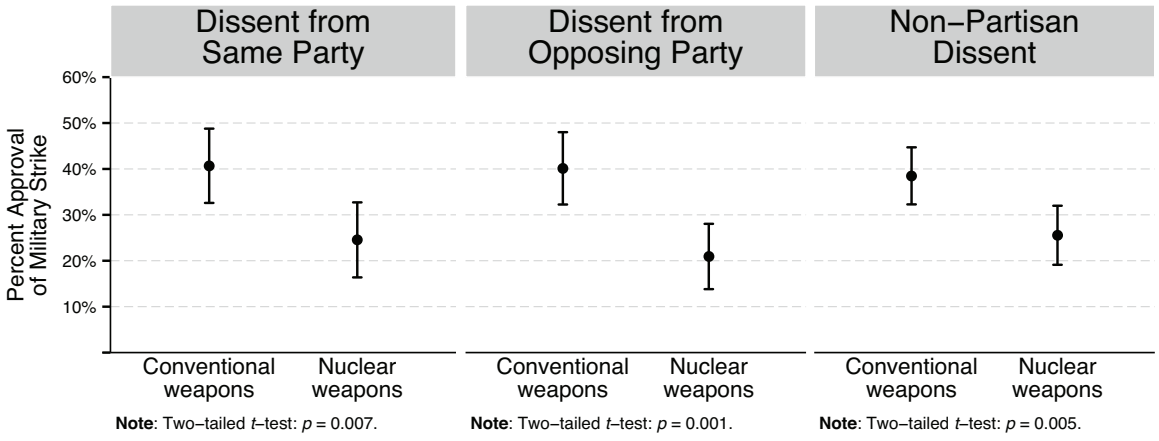


Figure 6. *Approval of military strike, by source of dissenting cue.*

particularly elites of their own party. Respondents therefore should respond more strongly to dissenting opinions from members of their own party than those of the opposite party. We can evaluate this possibility because we randomly varied the source of the dissenting opinion in our treatment conditions, with the cue being provided by a Democratic Senator, Republican Senator, or retired military official. By disaggregating these treatments, we can compare the effects of cues according to their source.

Surprisingly, Figure 6 reveals that nuclear aversion appears to cross party lines. This figure breaks down the effects of dissenting cues into three categories: cues from a respondent's own party, cues from a respondent's opposing party, and cues from a nonpartisan source. Interestingly, the results suggest that arguments against using nuclear weapons carry weight with the public even when those arguments are made by members of the opposing party. For all three cue sources, the nuclear strike received lower approval than the conventional strike, with the differences all significant at the 99% level. These results suggest that cues can evoke nuclear aversion among the public regardless of their partisan source. Nuclear weapons therefore may be distinct from other foreign policy issues in that voters respond equally to same-party and opposite-party cues.[31]

[31]This result also holds when we examine the REELECT variable. See Figure SI-2 in the Supporting Information document.

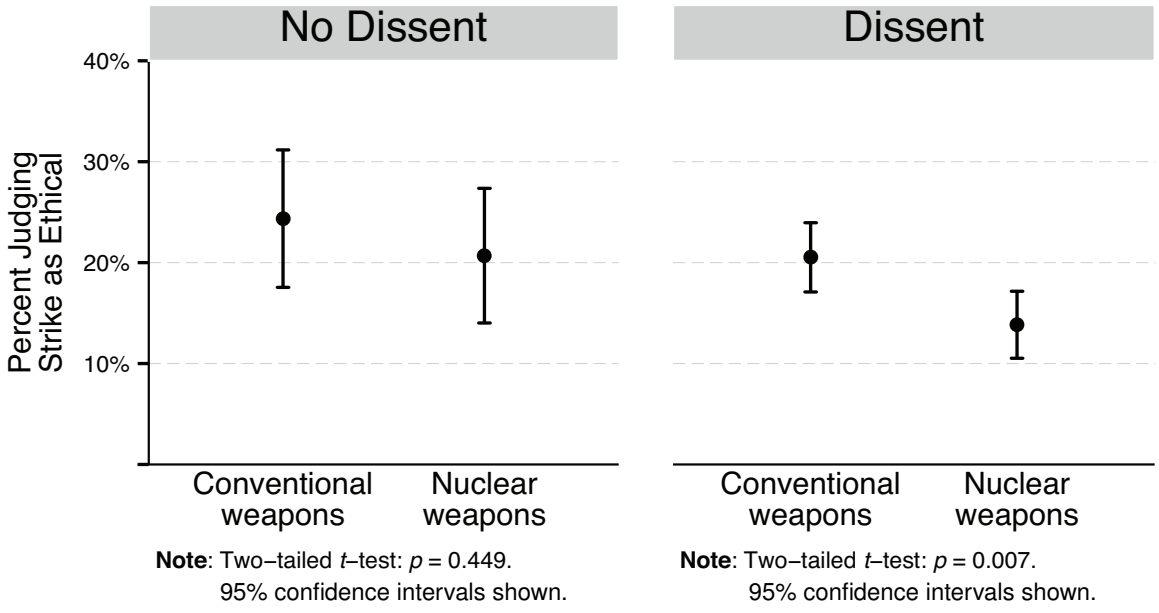


Figure 7. *Percentage of respondents judging that the strike was ethical.*

Ethical Judgments

One question raised by these results is the extent to which ethical judgments played a role in respondents' choices. Some scholars contend that even if the public holds skeptical views about the use of nuclear weapons, these sentiments are based largely on material calculations rather than moral judgments (e.g., Paul 2009, 2010; Sagan 2004; Press et al. 2013). Indeed, one can envision many potential strategic drawbacks to using nuclear weapons. A country that became the first to use nuclear weapons since 1945 could invite economic sanctions, damage its alliances, provoke adversaries to coalesce against it, encourage proliferation, and set a precedent for future nuclear attacks (Ball 1983; Quester 2006). It is therefore possible that nuclear aversion, to the extent that it exists, rests entirely on strategic factors, and that the public views nuclear and conventional weapons in largely the same moral light. If true, then we would expect respondents' moral judgments of the military strikes described in our experiment to be roughly equivalent, irrespective of the weapon used.

Does the public consider nuclear weapons to be morally equivalent to conventional weapons? To explore this question, our experiment asked respondents "In your view, how

ethical or unethical was the U.S. military operation described in this article?"[32] The results, reported in Figure 7, suggest that ethical judgments appear to have played at least some role in the findings described earlier.[33] While respondents judged the conventional attack more ethical under both *No Dissent* and *Dissent* conditions, the difference between the nuclear and conventional scenarios roughly doubled in the presence of the dissenting cue, increasing from 3% to 7%.[34] In short, the dissenting cue had a significant and negative effect on respondents' assessments of the morality of using nuclear weapons, but not conventional weapons.

This evidence suggests that the public holds a degree of latent skepticism about the morality of nuclear weapons. When presented with identical moral objections to the use of conventional and nuclear weapons, respondents judged the use nuclear weapons to be considerably less ethical. Notably, however, this gap was much smaller when respondents were not presented with a dissenting cue, suggesting that public doubts about the morality of nuclear weapons may lie beneath the surface until they are evoked by political discourse. To be sure, this evidence cannot demonstrate whether moral or strategic factors are more important in public judgments about the use of force. Yet it does suggest that the role of morality cannot be disregarded in explaining public nuclear aversion.[35]

The Validity of Mechanical Turk

One could object to the external validity of the findings of this survey experiment, given that the survey sample was obtained through Amazon's Mechanical Turk service. Mechanical Turk samples tend to be more politically liberal, more educated, more informed about current

[32]Recall that the moral language used in the dissenting cue was virtually identical in both the *Conventional* and *Nuclear* conditions.

[33]In this section, we code "highly unethical," "unethical," and "neither ethical nor unethical" responses as 0, and variants of "ethical" responses as 1. Recoding "neither ethical nor unethical" responses to 1 does not substantively alter the results.

[34]Specifically, in the *No Dissent* condition, 24% judged the conventional attack as ethical, versus 21% for the nuclear attack. In the *Dissent* condition, 21% judged the conventional attack as ethical, versus 14% for the nuclear attack.

[35]It is important to note that the literature on nuclear aversion emphasizes that the norm against using nuclear weapons is driven by *both* moral and strategic considerations: as Tannenwald (2007: 289) notes, "moral reasoning and interest-based reasoning were intertwined" as international norms against nuclear use evolved.

events, younger, and contain a higher proportion of men than the United States as a whole.[36] While the nature of the sample precludes us from accurately estimating *aggregate* levels of support for the use of nuclear weapons among the U.S. public, this is not particularly problematic given that this was not the purpose of the study. A much more serious concern is that the treatment effects described above are somehow driven by the makeup of the survey sample. Specifically, it could be the case that Mechanical Turk's overrepresented groups might be unusually receptive to our experimental treatments. If so, then the latent antinuclear attitudes we observed in the experiment might not be generalizable to the U.S. population more broadly. While several studies have found that experimental treatments have virtually identical effects on Mechanical Turk samples and nationally-representative samples (e.g., Buhrmester et al. 2011; Sprouse 2011; Berinsky et al. 2012; Huff and Tingley 2015), it is nonetheless worth examining the possibility that the sample has somehow skewed our treatment effects.

We therefore conducted a series of tests to determine whether demographic groups that are underrepresented in our Mechanical Turk sample – specifically, conservative, less-educated, politically uninformed, older, and female Americans – responded differently to our experimental treatments. These tests, reported in the Supporting Information document, suggest that the use of Mechanical Turk did not skew our central findings.[37] When we restrict the analysis to Mechanical Turk's underrepresented populations, the treatment effects described earlier in the paper continue to hold. These underrepresented groups exhibit the same patterns we identified earlier: in the absence of a dissenting opinion, they display no particular opposition to the use of nuclear weapons. However, dissenting cues sharply reduce these groups' support for the use of nuclear – but not conventional – weapons. This effect holds for respondents who are: politically conservative (or affiliate with the Republican party), did not receive post-secondary education, consume little international news, are female, or are older than 40 – all demographics that are underrepresented in Mechanical Turk samples. Indeed, our findings were actually stronger in some of these groups. For example,

[36]Indeed, our sample exhibits all of these characteristics. The Supporting Information document contains demographic details of our sample.

[37]See pages SI–7 through SI–11 of the Supporting Information document.

our analysis revealed that the treatment effect of the *Dissent* condition was much larger for conservatives than for liberals. Since conservatives were underrepresented in our analysis, the Mechanical Turk sample therefore may have actually diluted the experiment's treatment effects. All told, these tests strengthen confidence in our overall findings.

⋆ ⋆ ⋆

To sum up: these results suggest that the degree of nuclear aversion among the U.S. public is stronger than earlier studies have suggested. Using experimental treatments that simply describe hypothetical military strikes and their rationale, we detect little difference in support for a conventional versus nuclear attack. However, when both supportive and dissenting opinions are presented to respondents, we find that support for the use of nuclear weapons drops considerably – whereas support for the use of conventional weapons does not budge. In short, our experimental results demonstrate that dissenting cues trigger public opposition to nuclear weapons in a way that they do not for conventional weapons. This aversion translates both into lower support for a hypothetical nuclear attack, as well as lower self-reported willingness to reelect political leaders that support such an attack.

In her work on the nuclear "taboo," Tannenwald (1999: 462) argues that the U.S. public exhibited opposition to the idea of nuclear first-use long before American political leaders did, suggesting a bottom-up process of norm diffusion. By contrast, theories of elite-led public opinion envision a much more top-down process in which elites first adopt normative views, and the public eventually follows along. Our results suggest that both stories are partially correct. Antinuclear attitudes appear to exist to some extent in the public mind, but seem to be dormant until they are activated by cues. In other words, implicit public beliefs and explicit discourse interact to produce a public aversion to the use of nuclear weapons.

Conclusions and Implications

In this paper we have explored the degree to which the American public is averse to the use of nuclear weapons. The literature on norms and nuclear weapons offers competing predictions.

One view holds that the public prefers conventional over nuclear military options due to normative standards that forbid the first-use of nuclear weapons. A contrary view argues that the public prioritizes the success of a military operation over the type of weapon it employs. We have argued, however, that these explanations are incomplete. Because public knowledge about nuclear weapons issues is low, evaluating public attitudes about nuclear weapons requires that citizens first be provided appropriate context so that they may connect their implicit normative values to specific nuclear policies. Cues help provide that context.

Performing a survey experiment on more than 1,600 American citizens, we find that political messages play a crucial role in evoking antinuclear attitudes among the U.S. public. In experimental treatments in which respondents are not presented with arguments against the use of force, we find that the public approves of nuclear and conventional strikes at similar levels. Yet when confronted with a more realistic environment of political discourse, respondents behave differently. When we incorporate arguments against military action (whether conventional or nuclear), a clear public preference for conventional weapons over nuclear weapons emerges. Cues appear to interact with respondents' core beliefs to diminish support for the use of nuclear weapons – but crucially, they have no such effect on support for the use of conventional weapons. We argue that this pattern arises because the public harbors latent skepticism about nuclear weapons, but holds no such underlying attitude against conventional weapons.

These results have at least three potential implications for international relations scholarship. First, our findings contribute to a large and growing literature on public opinion and the use of military force. This paper demonstrates that political cues have important but conditional effects on public opinion. Our findings suggest that the public is indeed influenced by political discourse, but there are limits to the effects of that discourse. The public does not simply parrot what others tell them to think: in our experiment, cues that questioned the morality of using conventionally-armed cruise missiles had no effect on public opinion. However, frames which tap into latent, pre-existing beliefs are more likely to have an effect on public opinion. Second, our paper carries methodological implications for conducting research on public normative beliefs. Drawing insights from the literature on po-

litical behavior, our theory of latent attitudes implies that on low-information policy issues, external cues are needed to detect public views. Third, our paper speaks to the literature on nuclear security, finding support for the existence of antinuclear attitudes in the public mind. In a real-life scenario in which the United States used nuclear weapons, we would expect the U.S. public to be highly responsive to experts and politicians who questioned that decision. While not as straightforward as expected by existing literature on nuclear norms, our results suggest that the interaction of political messages and public opinion constitutes an important constraint on the first-use of nuclear weapons.

Furthermore, these findings point to several possible lines of future inquiry. First, future research might explore the effects of alternative sources of normative cues. In this experiment, all cues were delivered by elites: military officials and elected politicians. While this choice mirrors existing conventions in the field, it is possible that cues from non-elite sources – such as neighbors, friends, or family members – might have different effects. Second, further studies should investigate the origins of nuclear norms among the public. In particular, what is the balance between strategic versus moral factors in shaping public skepticism about nuclear weapons? While this study suggests that morality plays a role, it was not designed to adjudicate its importance relative to strategic calculations. Future research might explore which factors loom largest in public judgments about nuclear issues.

References

2010. "CNN Poll: Americans Believe Iran Has Nuclear Weapons." *CNN* (19 February). Available at http://i2.cdn.turner.com/cnn/2010/images/02/19/rel4e.pdf.

Almond, Gabriel A. 1950. *The American People and Foreign Policy.* New York: Harcourt, Brace and Company.

Avey, Paul C. 2015. "Who's Afraid of the Bomb? The Role of Nuclear Non-Use Norms in Confrontations between Nuclear and Non-Nuclear Opponents." *Security Studies* 24(4): 563–96.

Ball, George W. 1983. "The Cosmic Bluff." *New York Review of Books* (July 21): 37–40.

Baum, Matthew A. 2005. *Soft News Goes to War: Public Opinion and American Foreign Policy in the New Media Age.* Princeton: Princeton University Press.

Berinsky, Adam J. 2009. *In Time of War: Understanding American Public Opinion from World War II to Iraq.* Chicago: University of Chicago Press.

Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20(3): 351–368.

Brody, Richard. 1991. *Assessing the President: The Media, Elite Opinion, and Public Support.* Palo Alto, Calif.: Stanford University Press.

Buhrmester, Michael, Tracy Kwang, and Samuel D. Gosling. 2011. "Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?" *Perspectives on Psychological Science* 6(1): 3–5.

Bundy, McGeorge. 1991. "Nuclear Weapons and the Gulf." *Foreign Affairs* 70(4): 83–94.

Carpenter, R. Charli. 2003. "'Women and Children First': Gender, Norms, and Humanitarian Evacuation in the Balkans 1991–95." *International Organization* 57(4): 661–94.

Chapman, Terrence L. 2012. *Securing Approval: Domestic Politics and Multilateral Authorization for War.* Chicago: University of Chicago Press.

Checkel, Jeffrey T. 1997. "International Norms and Domestic Politics: Bridging the Rationalist–Constructivist Divide." *European Journal of International Relations* 3(4): 473–95.

Chong, Dennis and James N Druckman. 2007. "Framing Public Opinion in Competitive Democracies." *American Political Science Review* 101(04): 637–655.

Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." In *Ideology and Discontent*, edited by David E. Apter, pp. 206–61. New York: Free Press.

Cortell, Andrew P. and James W. Davis. 1996. "How Do International Institutions Matter? The Domestic Impact of International Rules and Norms." *International Studies Quarterly* 40(4): 451–78.

Dower, John. 1986. *War Without Mercy: Race and Power in the Pacific War.* New York: Pantheon.

Downs, Anthony. 1957. "An Economic Theory of Political Action in a Democracy." *Journal of Political Economy* 65(2): 135–150.

Druckman, James N. and Kjersten R. Nelson. 2003. "Framing and Deliberation: How Citizens' Conversations Limit Elite Influence." *American Journal of Political Science* 47(4): 729–45.

Eichenberg, Richard C. 2005. "Victory Has Many Friends: U.S. Public Opinion and the Use of Military Force, 1981–2005." *International Security* 30(1): 140–77.

Eisenhower, Dwight D. 1955. "Press Conference, 16 March." In *Public Papers of the President of the United States.* Washington, D.C.: GPO.

Eyre, Dana P. and Mark C. Suchman. 1996. "Status, Norms, and the Proliferation of Conventional Weapons: An Institutional Theory Approach." In *The Culture of National Security: Norms and Identity in World Politics*, edited by Peter J. Katzenstein, pp. 79–113. New York: Columbia University Press.

Finnemore, Martha. 1996. *National Interests in International Society.* New York: Cambridge University Press.

Finnemore, Martha and Kathryn Sikkink. 1998. "International Norm Dynamics and Political Change." *International Organization* 52(4): 887–917.

Gaddis, John Lewis. 1987. *The Long Peace: Inquiries into the History of the Cold War.* New York: Oxford University Press.

Gartner, Scott Sigmund. 2008. "The Multiple Effects of Casualties on Public Support for War: An Experimental Approach." *American Political Science Review* 102(1): 95–106.

Gelpi, Christopher. 2003. *The Power of Legitimacy: Assessing the Role of Norms in Crisis Bargaining*. Princeton: Princeton University Press.

———. 2010. "Performing on Cue? The Formation of Public Opinion Toward War." *Journal of Conflict Resolution* 54(1): 88–116.

Gelpi, Christopher, Peter D. Feaver, and Jason Reifler. 2009. *Paying the Human Costs of War: American Public Opinion and Casualties in Military Conflicts*. Princeton: Princeton University Press.

Golby, Jim, Kyle Dropp, and Peter Feaver. 2013. "Listening to the Generals: How Military Advice Affects Public Support for the Use of Force." Washington, D.C.: Center for a New American Security.

Hayes, Danny and Matt Guardino. 2011. "The Influence of Foreign Voices on U.S. Public Opinion." *American Journal of Political Science* 55(4): 831–51.

Holsti, Ole R. 1996. *Public Opinion and American Foreign Policy*. Ann Arbor: University of Michigan Press.

Hooghe, Liesbet. 2005. "Several Roads Lead to International Norms, but Few Via International Socialization: A Case Study of the European Commission." *International Organization* 59(4): 861–98.

Horowitz, Michael C. and Matthew S. Levendusky. 2011. "When Backing Down Is the Right Decision: Partisanship, New Information, and Audience Costs." *Journal of Politics* 74(2): 323–38.

Huff, Connor and Dustin Tingley. 2015. "'Who are These People?' Evaluating the Demographic Characteristics and Political Preferences of MTurk Survey Respondents." *Research and Politics* 2(3).

Huth, Paul K. and Bruce Russett. 1988. "Deterrence Failure and Crisis Escalation." *International Studies Quarterly* 32(1): 29–45.

Jentleson, Bruce W. 1992. "The Pretty Prudent Public: Post Post-Vietnam American Opinion on the Use of Military Force." *International Studies Quarterly* 36(1): 49–73.

Johnston, Alastair Iain. 2001. "Treating International Institutions as Social Environments." *International Studies Quarterly* 45(4): 487–515.

Katzenstein, Peter J. 1996. "Introduction: Alternative Perspectives on National Security." In *The Culture of National Security: Norms and Identity in World Politics*, edited by Peter J. Katzenstein, pp. 1–32. New York: Columbia University Press.

Kertzer, Joshua D. and Ryan Brutger. 2016. "Decomposing Audience Costs: Bringing the Audience Back into Audience Cost Theory." *American Journal of Political Science* 60(1): 234–49.

Kertzer, Joshua D. and Kathleen M. McGraw. 2012. "Folk Realism: Testing the Microfoundations of Realism in Ordinary Citizens." *International Studies Quarterly* 56(2): 245–58.

Kertzer, Joshua D., Kathleen E. Powers, Brian C. Rathbun, and Ravi Iyer. 2014. "Moral Support: How Moral Values Shape Foreign Policy Attitudes." *Journal of Politics* 76(3): 825–40.

Kertzer, Joshua D. and Thomas Zeitzoff. 2016. "A Bottom-Up Theory of Public Opinion about Foreign Policy." *American Journal of Political Science* (forthcoming).

Klotz, Audie. 1999. *Norms in International Relations: The Struggle Against Apartheid*. Ithaca, N.Y.: Cornell University Press.

Kobayashi, Toshiyuki. 2006–07. "Fading Memories of the Atomic Bomb and Growing Fears of Nuclear War." *NHK Broadcasting Studies* 5: 186–215. Available at http://www.nhk.or.jp/bunken/english/reports/pdf/06-07_no5_10.pdf.

Kull, Steven. 2004. "Americans on WMD Proliferation." 15 April. Available at http://www.pipa.org/OnlineReports/WMDProliferation/WMD_Prolif_Apr04/WMDProlif_Apr04_rpt.pdf.

Legro, Jeffrey W. 1995. *Cooperation under Fire: Anglo-German Restraint During World War II*. Ithaca, N.Y.: Cornell University Press.

———. 1996. "Culture and Preferences in the International Cooperation Two-Step." *American Political Science Review* 90(1): 118–37.

———. 1997. "Which Norms Matter? Revisiting the 'Failure' of Internationalism." *International Organization* 51(1): 31–63.

Levendusky, Matthew S. 2009. *The Partisan Sort: How Liberals Became Democrats and Conservatives*

Became Republicans. Chicago: University of Chicago Press.

Levy, Jack S., Michael K. McKoy, Paul Poast, and Geoffrey P.R. Wallace. 2015. "Backing Out or Backing In? Commitment and Consistency in Audience Costs Theory." *American Journal of Political Science* 59(4): 988–1001.

Lupia, Arthur and Mathew D. McCubbins. 2000. "The Institutional Foundations of Political Competence: How Citizens Learn What They Need to Know." In *Elements of Reason: Cognition, Choice, and the Bounds of Rationality*, edited by Arthur Lupia, Mathew D. McCubbins, and Samuel L. Popkin, pp. 47–66. New York: Cambridge University Press.

March, James G. and Johan P. Olsen. 1989. *Rediscovering Institutions: The Organizational Basis of Politics*. New York: Free Press.

Moore, Peter. 2015. "A-Bomb Legacy: Most Americans Negative About the Invention of Nuclear Weapons." 22 July. Available at http://today.yougov.com/news/2015/07/22/a-bomb-legacy/.

Morin, Richard. 2002. "Most Favor Nuclear Option Against Iraq." *Washington Post* (18 December). Available at http://www.washingtonpost.com/wp-srv/politics/polls/vault/stories/data121802.htm.

Morrow, James D. 2007. "When Do States Follow the Laws of War?" *American Political Science Review* 101(3): 559–72.

———. 2014. *Order Within Anarchy: The Laws of War as an International Institution*. New York: Cambridge University Press.

Mueller, John E. 1973. *War, Presidents, and Public Opinion*. New York: John Wiley & Sons.

Nadelmann, Ethan A. 1990. "Global Prohibition Regimes: The Evolution of Norms in International Society." *International Organization* 44(4): 479–526.

Nicholson, Stephen P. 2011. "Dominating Cues and the Limits of Elite Influence." *Journal of Politics* 73(4): 1165–77.

Page, Benjamin I. and Robert Y. Shapiro. 1992. *The Rational Public: Fifty Years of Trends in Americans' Policy Preferences*. Chicago: University of Chicago Press.

Paul, T.V. 1995. "Nuclear Taboo and War Initiation in Regional Conflicts." *Journal of Conflict Resolution* 39(4): 696–717.

———. 2009. *The Tradition of Non-Use of Nuclear Weapons*. Palo Alto, Calif.: Stanford University Press.

———. 2010. "Taboo or Tradition? The Non-Use of Nuclear Weapons in World Politics." *Review of International Studies* 36(04): 853–863.

Pinker, Steven. 2011. *The Better Angels of Our Nature: Why Violence Has Declined*. New York: Viking.

Powlick, Philip J. and Andrew Z. Katz. 1998. "Defining the American Public Opinion/Foreign Policy Nexus." *Mershon International Studies Review* 42(1): 29–61.

Press, Daryl G., Scott D. Sagan, and Benjamin A. Valentino. 2013. "Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons." *American Political Science Review* 107(1): 188–206.

Price, Richard M. 1997. *The Chemical Weapons Taboo*. Ithaca, N.Y.: Cornell University Press.

———. 1998. "Reversing the Gun Sights: Transnational Civil Society Targets Land Mines." *International Organization* 52(3): 613–44.

Quester, George H. 2006. *Nuclear First Strike: Consequences of a Broken Taboo*. Baltimore, Md.: Johns Hopkins University Press.

Quinnipiac University. 2009. "Bombing Hiroshima Was Right, American Voters Say 3–1, Quinnipiac University National Poll Finds." 4 August. Available at http://www.quinnipiac.edu/news-and-events/quinnipiac-university-poll/national/release-detail?ReleaseID=1356.

Radziszewski, Elizabeth. 2013. "Interpersonal Discussions and Attitude Formation on Foreign Policy: The Case of Polish Involvement in the Iraq War." *Foreign Policy Analysis* 9(1): 103–123.

Richman, Alvin. 1995. "When Should We Be Prepared to Fight?" *The Public Perspective* 6(3): 44–47.

Ridgway, Matthew B. 1967. *The Korean War*. Garden City, N.Y.: Doubleday.

Ropp, Stephen C. and Kathryn Sikkink, eds. 1999. *The Power of Human Rights: International Norms and*

Domestic Change. New York: Cambridge University Press.

Rosenau, James N. 1961. *Public Opinion and Foreign Policy: An Operational Formulation*. New York: Random House.

Russett, Bruce M. 1984. "Ethical Dilemmas of Nuclear Deterrence." *International Security* 8(4): 36–54.

Sagan, Scott D. 2004. "Realist Perspectives on Ethical Norms and Weapons of Mass Destruction." In *Ethics and Weapons of Mass Destruction*, edited by Sohail Hashmi and Steven Lee, pp. 73–95. New York: Cambridge University Press.

Schelling, Thomas C. 2006. "An Astonishing Sixty Years: The Legacy of Hiroshima." *American Economic Review* 96(4): 929–37.

Schelling, Thomas C. 2009. "A World Without Nuclear Weapons?" *Daedalus* 138(4): 124–29.

Shapiro, Robert Y. and Benjamin I. Page. 1988. "Foreign Policy and the Rational Public." *Journal of Conflict Resolution* 32(2): 211–47.

Sprouse, Jon. 2011. "A Validation of Amazon Mechanical Turk for the Collection of Acceptability Judgments in Linguistic Theory." *Behavior Research Methods* 43(1): 155–67.

Tannenwald, Nina. 1999. "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." *International Organization* 53(3): 433–468.

———. 2005. "Stigmatizing the Bomb: Origins of the Nuclear Taboo." *International Security* 29(4): 5–49.

———. 2007. *The Nuclear Taboo: The United States and the Nonuse of Nuclear Weapons Since 1945*. New York: Cambridge University Press.

Thomas, Ward. 2001. *The Ethics of Destruction: Norms and Force in International Relations*. Ithaca, N.Y.: Cornell University Press.

Todorov, Alexander and Anesu N Mandisodza. 2004. "Public Opinion on Foreign Policy: The Multilateral Public That Perceives Itself as Unilateral." *Public Opinion Quarterly* 68(3): 323–348.

Tomz, Michael. 2007. "Domestic Audience Costs in International Relations: An Experimental Approach." *International Organization* 61(4): 821–840.

Tomz, Michael and Jessica L.P. Weeks. 2013. "Public Opinion and the Democratic Peace." *American Political Science Review* 107(4): 849–865.

Trager, Robert F. and Lynn Vavreck. 2011. "The Political Costs of Crisis Bargaining: Presidential Rhetoric and the Role of Party." *American Journal of Political Science* 55(3): 526–45.

Trump, Donald J. 2016. "Full Transcript: MSNBC Town Hall with Donald Trump Moderated by Chris Matthews." MSNBC (March 30).

U.S. Department of State. 1953a. "Memorandum of Discussion at a Special Meeting of the National Security Council on Tuesday, March 31, 1953." *Foreign Relations of the United States, 1952–1954: Korea* 15(427): 825–27.

———. 1953b. "Memorandum of Discussion at a Special Meeting of the National Security Council on Tuesday, March 31, 1953." *Foreign Relations of the United States, 1952–1954: Korea* 15(427): 264–81.

Waltz, Kenneth N. 1990. "Nuclear Myths and Political Realities." *American Political Science Review* 84(3): 731–45.

Watkin, Kenneth. 2004. "Controlling the Use of Force: A Role for Human Rights Norms in Contemporary Armed Conflict." *American Journal of International Law* 98(1): 1–34.

Zaller, John. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.

Supporting Information for "Norms, Public Opinion, and the Use of Nuclear Weapons"

Table of Contents

This document contains supporting information for the manuscript "Norms, Public Opinion, and the Use of Nuclear Weapons."

1 Sample Characteristics

Demographics

The survey sample consisted of 1,612 American adults recruited through Amazon Mechanical Turk. Table SI-1 describes the demographic characteristics of the sample.

	Percentage of Sample
Party Identification	
Republican	17.4
Independent	40.4
Democrat	42.1
Ideology	
Conservative	20.3
Moderate	29.4
Liberal	50.3
Education	
Some high school	0.6
High school graduate	9.9
Some college	26.0
Trade school	3.7
Associate's degree	10.5
Bachelor's degree	38.6
Master's or professional	9.4
Doctorate	1.2
News Consumption	
Rarely	10.4
Monthly	7.1
Weekly	18.1
Several times a week	29.6
Daily	27.5
Several times a day	7.3
Gender	
Men	53.4
Women	46.6
Age	
18–19	2.4
20–29	37.6
30–39	31.9
40–49	13.8
50–59	9.7
60 and older	4.6

Table SI-1. *Demographics of the sample.*

	No Dissent		Dissent		
	Conv.	*Nuclear*	*Conv.*	*Nuclear*	*All Treatments*
Question 1	97.4	94.2	95.4	94.1	94.0%
Question 2	92.7	91.0	94.1	91.8	92.3%
Question 3	92.2	94.2	88.2	92.0	90.7%
Question 4	89.6	86.8	86.4	87.7	86.7%
All Questions	**81.3%**	**76.7%**	**77.3%**	**77.9%**	**77.3%**
N	**192**	**189**	**693**	**538**	**1,612**

Table SI-2. *Percentage of respondents correctly answering manipulation check questions.*

Manipulation Check Questions

To verify that our respondents paid sufficient attention to the news articles that constituted the experiment's treatment, we asked each respondent four questions about the article they read. In each analysis, we report results for the entire sample, as well as the subset that answered each of these four questions correctly. The four questions were:

1. What was the target of the U.S. military strike in the article you just read?
   Correct answer: An al Qaeda bunker.

2. What weapons did the United States use to destroy the target?
   Correct answer: Conventionally-armed cruise missiles *or* nuclear weapons (varies by treatment).

3. About how many civilians were killed in the strike?
   Correct answer: 1,000.

4. About how many American soldiers were killed in the strike?
   Correct answer: None.

Table SI-2 reports the percentage of respondents that correctly answered each question. Overall, roughly 77% of respondents (1,256) answered all manipulation check questions correctly. The analyses below are conducted on this subset of the sample.

	No Dissent		Dissent	
	Conv. *(1)*	*Nuclear* *(2)*	*Conv.* *(3)*	*Nuclear* *(4)*
AGE GROUP	0.06	0.06	0.04	−0.06
	(0.06)	(0.06)	(0.04)	(0.04)
FEMALE	0.05	−0.16	0.27**	0.07
	(0.15)	(0.16)	(0.09)	(0.10)
REPUBLICAN	0.45†	−0.34	−0.01	−0.05
	(0.24)	(0.26)	(0.15)	(0.16)
COLLEGE	0.03	0.23	0.02	0.09
	(0.15)	(0.15)	(0.09)	(0.10)
NEWS CONSUMPTION	−0.28†	0.06	−0.07	0.09
	(0.17)	(0.16)	(0.10)	(0.10)
CONSTANT	−2.99***	−2.83***	−1.41***	−1.31***
	(0.29)	(0.29)	(0.17)	(0.18)
N	1,612	1,612	1,612	1,612
Pseudo R^2	0.005	0.005	0.004	0.001

Dependent variable is assignment to the treatment group listed in the column heading.
Standard errors in parentheses. † p <0.10, * p <0.05, ** p <0.01, *** p <0.001.

Table SI-3. *Randomization checks: logit regressions with treatment categories as the dependent variable.*

Randomization Checks

Table SI-3 evaluates the randomization process by reporting the results of logistic regressions that assess the likelihood of a respondent being assigned to one of our four treatment groups. In almost all cases, the independent variables do not reliably predict allocation to any particular treatment group, with one exception. Women were more likely than men to be assigned to the *Dissent – Conventional* treatment. None of the other correlations reach statistical significance at the $p < 0.05$ threshold. This suggests that the randomization procedure used by our survey software successfully randomized respondents into each of the treatment categories.

2 Experimental Instrument

Our treatment consisted of a hypothetical news article describing a U.S. military attack against an al Qaeda bunker located in Yemen. Respondents were instructed as follows: "You are about to read a fictional news story about a military crisis involving the United States and Yemen. Imagine how you would feel about these events if they were happening in the real world today. Please read the article carefully. After reading the news story, you will be asked for your views about the article and a variety of other political issues."

In each treatment, the rationale for the military strike was that al Qaeda leaders were meeting in the bunker to plan a series of attacks against U.S. targets. Each treatment also presented quotations from U.S. defense officials justifying the attack. Likewise, each treatment article reported that the attack was successful, and that there were 1,000 civilian deaths and zero U.S. military casualties.[1]

The treatments differed in two ways. First, they differed by **weapon**: in some variations, the U.S. employed conventionally-armed cruise missiles ("Conventional" condition); in others, the U.S. used nuclear weapons ("Nuclear" condition). Second, the treatments differed by the presence of **dissent**: in some versions of the treatment, an argument against the attack was presented; others contained no opposing argument.

We further varied the source of the dissenting argument with three fictional sources: Retired Admiral David Keating; Democratic Senator David Keating; and Republican Senator David Keating.

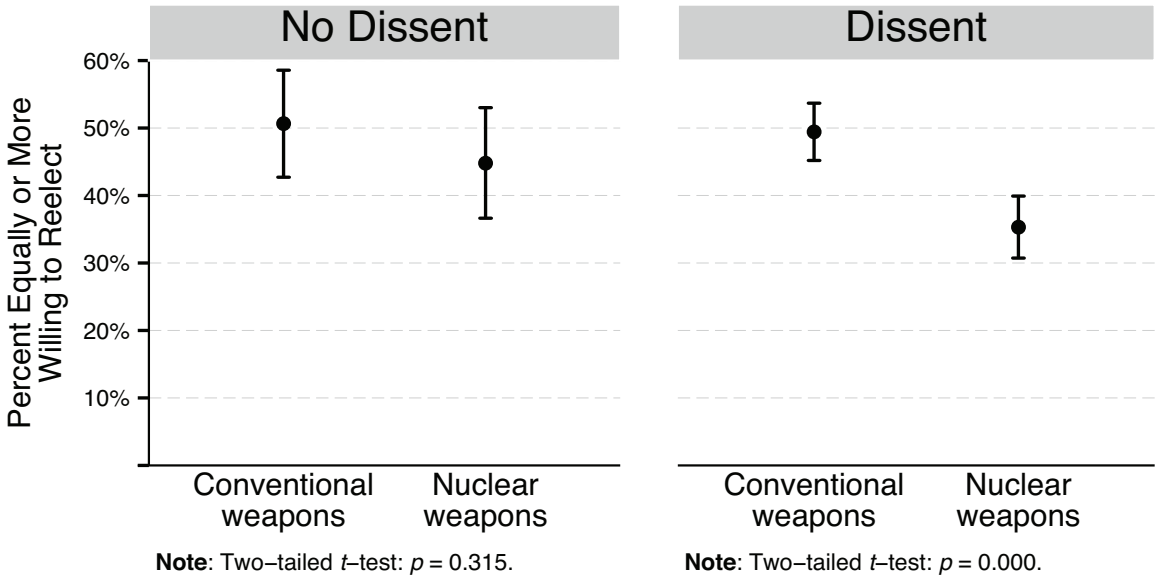
[1]Press et al. (2013) also employed a figure of 1,000 civilian deaths, though they did not specify the number of U.S. military casualties.

Comparison of Instrument to Press, Sagan, & Valentino (2013)

Table SI-4 compares our experimental treatment scenario to the instrument used by Press et al. (2013).

	Press, Sagan, & Valentino (2013)	*Current Study*
Scenario	U.S. strike against Al Qaeda nuclear weapons laboratory	U.S. strike against Al Qaeda leadership meeting
Location	Syria	Yemen
Pretext	"Self-defense against an imminent terrorist nuclear attack"	"Self-defense against an imminent terrorist attack"
Civilians killed	1,000	1,000
U.S. casualties	Not specified	Zero
Type of weapon used	Nuclear or conventional	Nuclear or conventional
Message of supporting cue	Need to destroy underground bunker	Need to destroy underground bunker
Supporting cue source	Pentagon spokesman	Chairman of the Joint Chiefs of Staff
Message of dissenting cue	None	These weapons "are immoral and inhumane"
Dissenting cue source	None	One of the following: (1) Retired military official (2) Republican Senator (3) Democratic Senator

Table SI-4. *Comparison of experimental instrument to Press et al. (2013).*



NOTE: 95% confidence intervals shown.

Figure SI-1. *Willingness to reelect a Congressional representative who voted in favor of the military strike.*

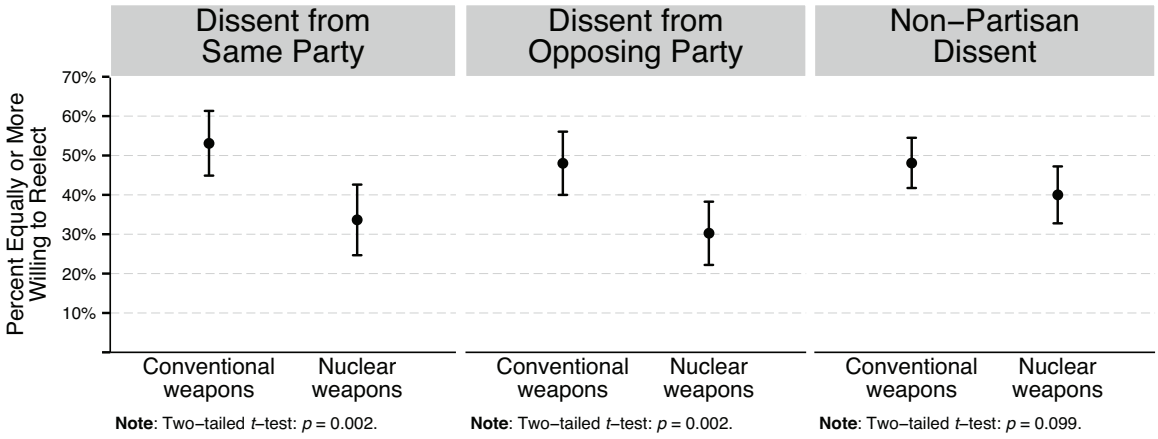
3 Additional Analysis and Results

Voting Preferences

Figure SI-1 reports the overall distribution of responses to the question "Imagine that your Congressional representative voted to authorize the strike. Would this make you more or less likely to vote to reelect this person?" First, we compare the two "control" scenarios, in which no dissent was presented. Respondents' overall willingness to reelect a Congressional representative who voted in favor of the hypothetical strike is similar across the *Nuclear* and *Conventional* conditions in the absence of dissent (51% and 45%, respectively).[2]

However, the introduction of dissent yields a different effect, illustrated on the right-hand side of Figure SI-1. Consistent with the latent attitudes hypothesis, dissent provokes stronger opposition to the use of nuclear weapons – but, crucially, not conventional weapons. In the *Dissent* condition, about 49% of respondents who received the *Conventional* treatment reported themselves equally or more willing to reelect a pro-strike Congressman – virtually unchanged from the *No Dissent* condition. But this time, public support in the *Nuclear* condition is considerably lower than before: 35% are equally or more willing to reelect, compared to 45% in the *No Dissent* condition. Put differently, the nuclear-conventional gap

[2]In this section, we code "more likely" and "neither more nor less likely" responses as 1, and "less likely" responses as 0. Recoding "neither more nor less likely" responses to 0 does not substantively alter the results.



NOTE: 95% confidence intervals shown.

Figure SI-2. *Willingness to reelect a Congressional representative who voted in favor of the military strike, by source of dissenting cue.*

in the *Dissent* condition has now more than doubled, from six percentage points to fourteen, compared to the *No Dissent* condition.

The effect of dissent on public attitudes toward nuclear weapons appears to cross party lines. Figure SI-2 illustrates the interactive effects of partisan identification and dissenting cues. The chart reveals two striking results. First, the chart shows that cues from a respondent's opposing party have the same effect on nuclear attitudes as cues from a respondent's own party. In other words, voters are equally persuaded by dissenting opinions from members of either party, regardless of their own partisan identification. Indeed, the gap in approval between conventional and nuclear weapons is slightly larger when a respondent receives a cue from the *opposite* party. A second notable result from this chart is that dissenting cues from a nonpartisan source – in this case, a retired military official – are less powerful than identical cues from a respondent's opposing party. In other words, dissent from the opposite party seems to inspire greater nuclear aversion than dissent from nonpartisan sources.

Robustness Check: Are Mechanical Turk Samples Generalizable?

One could object to the external validity of the findings of this survey experiment, given that the survey sample was obtained through Amazon's Mechanical Turk service. Mechanical Turk samples tend to differ in at least five key respects from nationally-representative samples. First, they tend to be more politically **liberal**, on average. Second, they tend to be more **educated**, with a higher proportion of people with post-secondary education than in the United States as a whole. Third, Mechanical Turk users tend to be more **politically-**

informed than the average American. Fourth, there are slightly more **men** in Mechanical Turk samples than in nationally-representative samples. Finally, Mechanical Turk samples tend to be **younger**, with a higher proportion of users under the age of 40. Any of these characteristics could skew the findings of the experiment.[3]

It is important to note that the purpose of this paper is not to investigate *aggregate levels of support* in the United States for using nuclear weapons. Rather, the objective is to investigate the *differential effects* of dissenting cues on support for the use of conventional and nuclear weapons. We therefore must ensure that the unique features of Mechanical Turk samples have not rendered the sample more or less likely to exhibit certain treatment effects. However, our study does not claim – and is not designed – to estimate the net level of support for nuclear weapons in the American population.

To be sure, numerous studies have found that Mechanical Turk samples are more representative of the general U.S. population than other "convenience samples" often used in experimental studies (e.g., Lawson et al. 2010; Arceneaux 2012; Huber et al. 2012; Grimmer et al. 2012; Huber and Paris 2013; Tomz and Weeks 2013; Kriner and Shen 2013, 2016; Ryan 2014; Testa et al. 2014; Clifford 2014; Chaudoin 2014; Dowling and Wichowsky 2015; Levy et al. 2015; Caverley and Krupnikov 2015; Bishin et al. 2016). Furthermore, a variety of studies have found that the effects of experimental treatments on Mechanical Turk samples are equivalent to those observed in nationally-representative samples (e.g., Buhrmester et al. 2011; Sprouse 2011; Berinsky et al. 2012; Huff and Tingley 2015).

Nevertheless, it could be the case that liberal, educated, politically-informed, male, and/or young Americans – all of whom are over-represented in Mechanical Turk samples – are more likely to be receptive to negative cues about using nuclear weapons. If true, then our findings may not be generalizable to the U.S. population as a whole. We test this possibility by evaluating our findings against key subsamples of the respondent pool. Specifically, we test the effects of dissenting cues on Mechanical Turk's underrepresented groups: conservative, less-educated, politically-uninformed, female, and older Americans. These tests are reported in Tables SI-5 and SI-6.

Broadly, the results suggest that the use of Mechanical Turk did not skew the paper's findings: **even when the analysis is restricted to populations that are underrepresented in Mechanical Turk samples, the paper's main findings remain intact**. Specifically, the treatment effects described in the paper continue to hold: nuclear weapons have no reliable effect on public support in treatments that contain no dissent (Table SI-5):, but nuclear weapons sharply reduce public support in treatment conditions involving a mixture of cues (Table SI-6). This pattern holds for respondents who are politically conservative (or affiliate with the Republican party), did not receive post-secondary education, consume

[3]Indeed, our sample exhibits all of these characteristics: see Table SI-1 in this appendix.

little international news, are female, or are older than 40 – all demographics that are under-represented in Mechanical Turk samples. Indeed, the paper's findings were actually stronger in some of these groups: for instance, the effect of nuclear weapons given the presence of a dissenting cue is actually *stronger* among conservatives than among liberals. Since our original sample contains far more liberals than conservatives (see Table SI-1), our findings likely would be even stronger in a nationally-representative sample.

	NO DISSENT			
	Conventional Condition	*Nuclear Condition*	*Difference*	*N*
Party Identification				
Republicans	69.4	67.8	−1.6	67
Independents	35.3	38.1	2.8	93
Democrats	31.6	23.5	−8.1	125
Ideology				
Conservatives	64.3	63.2	−1.1	80
Moderates	50.0	41.9	−8.1	73
Liberals	25.0	21.1	−3.9	148
Education				
High School or Less	40.0	50.0	10.0	29
Post-Secondary	42.6	35.1	−7.5	272
News Consumption				
Low	40.7	33.7	−7.0	200
High	45.8	41.5	−4.3	101
Gender				
Men	44.4	36.0	−8.4	167
Women	40.0	37.3	−2.7	134
Age				
Under 40	38.7	39.2	0.5	208
40 and Over	50.0	30.2	$-19.8^{\dagger}$	93
Total	42.3	36.6	−5.7	301

NOTE: Significance levels refer to two-way *t*-tests of the difference between *Conventional* and *Nuclear* conditions.
† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table SI-5. *Percentage of respondents approving of military strike, by demographic category.*

	DISSENTING CUE			
	Conventional Condition	*Nuclear Condition*	*Difference*	*N*
Party Identification				
Republicans	69.7	44.3	$-25.5^{\star\star\star}$	170
Independents	41.2	20.9	$-20.3^{\star\star\star}$	323
Democrats	25.9	20.6	-5.3	412
Ideology				
Conservatives	69.5	35.9	$-33.6^{\star\star\star}$	196
Moderates	46.9	27.4	$-19.5^{\star\star\star}$	260
Liberals	22.9	17.9	-5.1	499
Education				
High School or Less	54.4	30.6	$-23.8^{\star}$	93
Post-Secondary	37.8	23.2	$-14.5^{\star\star\star}$	862
News Consumption				
Low	39.6	24.3	$-15.3^{\star\star\star}$	614
High	39.5	23.2	$-16.3^{\star\star}$	341
Gender				
Men	40.5	21.6	$-18.9^{\star\star\star}$	481
Women	38.6	26.4	$-12.2^{\star\star}$	474
Age				
Under 40	36.0	19.6	$-16.4^{\star\star\star}$	654
40 and Over	46.4	34.7	$-11.7^{\star}$	301
Total	39.6	23.9	$-15.7^{\star\star\star}$	955

NOTE: Significance levels refer to two-way t-tests of the difference between *Conventional* and *Nuclear* conditions.
† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table SI-6. *Percentage of respondents approving of military strike, by demographic category.*

References

Arceneaux, Kevin. 2012. "Cognitive Biases and the Strength of Political Arguments." *American Journal of Political Science* 56(2): 271–285.

Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20(3): 351–368.

Bishin, Benjamin G., Thomas J. Hayes, Matthew B. Incantalupo, and Charles Anthony Smith. 2016. "Opinion Backlash and Public Attitudes: Are Political Advances in Gay Rights Counterproductive?" *American Journal of Political Science* 60(3): 625–48.

Buhrmester, Michael, Tracy Kwang, and Samuel D. Gosling. 2011. "Amazon's Mechanical Turk: A New Source of Inexpensive, Yet High-Quality, Data?" *Perspectives on Psychological Science* 6(1): 3–5.

Caverley, Jonathan D. and Yanna Krupnikov. 2015. "Aiming at Doves: Experimental Evidence of Military Images' Political Effects." *Journal of Conflict Resolution* (forthcoming).

Chaudoin, Stephen. 2014. "Promises or Policies? An Experimental Analysis of International Agreements and Audience Reactions." *International Organization* 68(1): 235–56.

Clifford, Scott. 2014. "Linking Issue Stances and Trait Inferences: A Theory of Moral Exemplification." *Journal of Politics* 76(3): 698–710.

Dowling, Conor M. and Amber Wichowsky. 2015. "Attacks Without Consequence? Candidates, Parties, Groups, and the Changing Face of Negative Advertising." *American Journal of Political Science* 59(1): 19–36.

Grimmer, Justin, Solomon Messing, and Sean J. Westwood. 2012. "How Words and Money Cultivate a Personal Vote: The Effect of Legislator Credit Claiming on Constituent Credit Allocation." *American Political Science Review* 106(4): 703–19.

Huber, Gregory A., Seth J. Hill, and Gabriel S. Lenz. 2012. "Sources of Bias in Retrospective Decision Making: Experimental Evidence on Voters' Limitations in Controlling Incumbents." *American Political Science Review* 106(4): 720–41.

Huber, Gregory A. and Celia Paris. 2013. "Assessing the Programmatic Equivalence Assumption in Question Wording Experiments: Understanding Why Americans Like Assistance to the Poor More than Welfare." *Public Opinion Quarterly* 77(1): 385–97.

Huff, Connor and Dustin Tingley. 2015. "'Who are These People?' Evaluating the Demographic Characteristics and Political Preferences of MTurk Survey Respondents." *Research and Politics* 2(3).

Kriner, Douglas L. and Francis X. Shen. 2013. "Reassessing American Casualty Sensitivity The Mediating Influence of Inequality." *Journal of Conflict Resolution* 58(7): 1174–1201.

———. 2016. "Conscription, Inequality, and Partisan Support for War." *Journal of Conflict Resolution* 60(8): 1419–45.

Lawson, Chappell, Gabriel S. Lenz, Andy Baker, and Michael Myers. 2010. "Looking Like a Winner: Candidate Appearance and Electoral Success in New Democracies." *World Politics* 62(4): 561–93.

Levy, Jack S., Michael K. McKoy, Paul Poast, and Geoffrey P.R. Wallace. 2015. "Backing Out or Backing In? Commitment and Consistency in Audience Costs Theory." *American Journal of Political Science* 59(4): 988–1001.

Press, Daryl G., Scott D. Sagan, and Benjamin A. Valentino. 2013. "Atomic Aversion: Experimental Evidence on Taboos, Traditions, and the Non-Use of Nuclear Weapons." *American Political Science Review* 107(1): 188–206.

Ryan, Timothy J. 2014. "Reconsidering Moral Issues in Politics." *Journal of Politics* 76(2): 380–97.

Sprouse, Jon. 2011. "A Validation of Amazon Mechanical Turk for the Collection of Acceptability Judgments in Linguistic Theory." *Behavior Research Methods* 43(1): 155–67.

Testa, Paul F., Matthew V. Hibbing, and Melinda Ritchie. 2014. "Orientations Toward Conflict and the Conditional Effects of Political Disagreement." *Journal of Politics* 76(3): 770–85.

Tomz, Michael and Jessica L.P. Weeks. 2013. "Public Opinion and the Democratic Peace." *American Political Science Review* 107(4): 849–865.