The Greater Good: Public Opinion on the Morality of Using Nuclear Weapons

Brian C. Rathbun  
School of International Relations  
University of Southern California

Rachel Stein  
Department of Political Science  
George Washington University

Abstract

Recent work makes the case that ethical considerations are irrelevant in utilitarian foreign policy calculations of the American mass public and that support for the use of nuclear weapons is grounded in the absence of moral values. We find instead that in the aggregate the mass public makes utilitarian judgments that weigh both egoistic and prosocial considerations, most importantly the extent of civilian casualties in nuclear strikes abroad. When the level of projected civilian casualties escalates with the use of nuclear weapons, support for their use plummets, indicating that respondents are seeking to maximize the greater good, a distinct ethical postulate. We also show that ethical considerations not only proscribe but prescribe. Based on research in moral psychology we expand our conception of morality to include non-liberal ethical beliefs. Both “binding” moral foundations and retributive beliefs are important predictors of willingness to use nuclear weapons, regardless of their degree of effectiveness. In sum, we argue that in order to properly understand public attitudes towards nuclear weapons, and foreign policy more generally, we need an understanding of consequentialism that is more than egoistic and an understanding of egoism that is more than amoral and instrumental.
International relations scholars have long argued that foreign policy is a world apart, subject to its own moral rules. What is unthinkable in domestic politics is routine in international politics. The international system is an amoral or immoral realm, where violence is used to secure state interests without ethical qualms (Carr 1964; Morgenthau 1946). The constraints of the international system force decision-makers to be egoistic and consequentialist, making the best (but often still unpalatable) choices possible. This “realist” claim was contested by early “liberal” and “idealist” scholars who claimed that ethical progress was indeed possible in international relations. States might also be constrained by considerations of right and wrong. The first “great debate” in international relations scholarship was essentially one about the limits of morality in international relations (Osiander 1998; Thies 2002).

This debate has recently been revived in explorations of the presence of the “nuclear taboo” at the mass level. Press, Sagan and Valentino (2013; hereafter, PSV) argue that the American public approaches the use of nuclear weapons in a utilitarian fashion. Their support for a nuclear strike increases as a function of its utility in securing American goals. In the aggregate at least, they claim that there is no ethical restriction against the use of these weapons of mass destruction, which should be the case if there is truly a “nuclear taboo,” as has been claimed by others (Tannenwald 1999, 2005, 2007). This finding seems to lend credence to the realist claim that little regard is given to moral considerations when forming foreign policy attitudes. States do what they have to do and the public goes along. The public judges foreign policy situations by their consequences, adopting a utilitarian and egoistic calculus.

In this article we present new data that takes issue with the realist claim that ethical considerations are irrelevant in utilitarian foreign policy calculations and that support for the use of destructive weapons is grounded in the absence of moral values. We argue that in the aggregate the mass public makes utilitarian judgments that weigh both egoistic and prosocial considerations, most importantly the extent of civilian casualties in nuclear strikes abroad. Consequentialist thinking might be egoistic, but it also might be partially altruistic and prosocial in character. Indeed, utilitarianism can be an ethical principle of decision-making in which one pursues the “greater good”, weighing the benefits of some action to some group as a whole over the costs to a smaller number of individuals.

In a new survey, we find that when the level of civilian casualties (set artificially low in PSV’s initial survey experiment at 1,000) escalates with the use of nuclear weapons, support for their use plummets. We believe this confirms what gave rise to the nuclear “taboo” in the first place – its destructive consequences. Nuclear weapons are (only) unthinkable when they kill lots of people. What is “taboo” is mass killing. We find that the willingness to use nuclear weapons is remarkably shallow, only present in the most limited of circumstances. PSV’s operationalization of the taboo argument, as a deontological prohibition regardless of its consequences, is something of a straw man (although one that “taboo” proponents inadvertently help build with poor conceptualization). Respondents do, as in their study, respond strongly to the effectiveness treatment. However, the significance of this is questionable since support for nuclear strikes in both treatment groups drops precipitously at higher levels of casualties, quickly converging.

We also show that ethical considerations not only proscribe but prescribe. Realists and liberal idealists alike assume that moral considerations only serve as a break on power politics, not as an accelerant. This is based on an impoverished understanding of the variety of different ethical considerations in international politics, and in social life in general, one common in the international relations literature. Morality is generally conceived of in a “liberal” sense, in which ethical action is that which does not harm others and where every individual has inherent worth or dignity. This is, however, just one “moral foundation” (Graham et al 2009, 2011). Research on morality has found that just as important are the “binding foundations” of deference to authority, loyalty to the ingroup, and the maintenance of purity. The binding foundations define morality in nationally egoistic terms, which PSV presume to be inherently amoral. Also important are the ethics of
retribution and revenge. Eye-for-an-eye beliefs might not be liberal, but they are moral principles all the same. It is not just “good” liberal foreign beliefs that have ethical underpinnings.

Unlike Press et al (2013) who focus almost exclusively on the main experimental effects, we add a set of dispositional variables, finding that both binding foundations and retributive beliefs are important predictors of willingness to use nuclear weapons. Morality does not always constrain the use of nuclear weapons at all. Indeed, in many cases, these moral considerations are more important empirically than liberal morality, the latter being marked by the moral foundations of preventing harm to others and treating everyone equally. Importantly, neither binding morality nor retribution are driven by consequentialist logic. Both types of ethical considerations predict support for the use of nuclear weapons regardless of whether this kind of strikes is more effective. This suggests an alternative path to nuclear weapon support that exists alongside consequentialist considerations, but which is more emotional and impulsive than reflective.

In sum, we argue that in order to properly understand public attitudes towards nuclear weapons, and foreign policy more generally, we need an understanding of consequentialism that is more than egoistic and an understanding of egoism that is more than amoral and instrumental. In the sections that follow we first present the existing controversy over the nuclear taboo, arguing that it is the most recent manifestation of a debate between realists and liberals. We argue that the difference is not one of the logic of consequences as opposed to the logic of appropriateness; rather both schools assume a consequentialist logic but admit, sometimes implicitly, different elements into the utility function. Studies to date have not been set up to mediate between the two. Second, we note that both sides of the taboo debate, as was true with very first liberal-realist divisions, have a restricted sense of what constitutes moral behavior that is exclusively liberal in character. This leads both sides to miss that moral considerations might lead to support for highly destructive weapons like nuclear bombs. For each of these first two main arguments we introduce a set of hypothesis and counter-hypotheses. Third, we introduce our survey instrument. It uses the same methodology as PSV – respondents are experimentally assigned different fake news articles and asked whether they support nuclear or conventional strikes. Even the text of the news articles was kept identical. However, we add in the new elements of tolerance of increasing levels of civilian casualties as well as individual-level measures of ethical values of retribution, individualizing and binding foundations. We present our results which confirm our hypotheses and consider the implications for international relations in the conclusion.

**Theoretical Review**

What explains the non-use of nuclear weapons since 1945, and under what conditions, if any, will nuclear weapons be employed in warfare again? The current debate on the use of nuclear weapons is framed between those who argue that attitudes towards these weapons are determined by their military utility for specific state purposes (Press et al 2013), and others who argue that nuclear weapons are regarded as “taboo,” a violation of a now deep-seated prohibitive norm (Tannewald 1999, 2005, 2007). For the former, the choice between use or non-use is based on consequentialist considerations, i.e., whether nuclear weapons offer added value in undertaking some kind of military operation. This is essentially a traditional realist argument. The taboo school explains the non-use of nuclear weapons as adherence to a norm of appropriateness: good, civilized states do not use nuclear weapons. This is the familiar battle of the decision-making logics developed by March and Olson (1998) and imported into international relations.

We argue that these two arguments are not based on different decision-making logics at all. Rather, the debate amounts to a claim by the consequentialist school that egoistic state preferences trump other considerations in international relations. The “taboo” school, on the other hand, believes that states take
into account broader, prosocial considerations in their decision-making calculus. Norms such as the nuclear taboo are said to constrain egoistic impulses on the part of states. Ultimately, this is a debate about whether states are purely egoistic actors or whether their pursuit of self-interest can be restrained by idealistic, humanitarian or altruistic considerations. Others have noted that in laying out their two logics, March and Olson are smuggling in assumptions about egoistic vs. more prosocial orientations. The “consequentialist” option is always the one that favors the egoistic actor. The “appropriate” response is always the one that takes into account the norms of a broader community in which the ego is embedded. Goldmann writes that March and Olsen tend to confuse the “form of an argument” – that is, the logic of decision-making – “with its content...In their approach, consequentialist reasoning—a method—is associated with the pursuit of self-interest—a substantive feature—and non-consequentialist reasoning with the application of rules grounded in socially constructed identities” (2005: 40). In other words, egoism is confused for a utilitarian way of making decisions, based on costs and benefits, which may or may not incorporate only egoistic considerations. Appropriateness is confused for deontological decision-making in which there are certain things that someone simply does not do, regardless of situation – i.e., taboos. However, utilitarian consequentialists can be prosocial as well. Indeed utilitarianism has deep roots in moral philosophy. By some ethical logics, the “appropriate” action is which takes into account the broader, social whole even if it comes at the cost of particular ego. The utilitarian choice can be that which serves the greater good. And there are normative restrictions against some behaviors, inappropriate in nature, that do not rise to the level of taboo.

This same problem has been imported into the international relations literature. Debates about whether states operate according to the logic of consequences or the logic of appropriateness are really debates about whether states are constrained by obligations to others. This explains why all the norms postulated by constructivists are “liberal” in character, prompted by a concern for the rights of all individuals, even those outside their state (Kaufmann and Pape 1999). States are bound by the moral legitimacy of supranational institutions like the United Nation (Hurd 2007), norms requiring ethical treatment of prisoners of war (Finnemore 1996), and norms against the use chemical weapons (Price 1997). They have normative obligations to engage in humanitarian action (Finnemore 2003).

We see this in the nuclear taboo debate as well. A close look at the arguments on both sides reveals that they are both based on a consequentialist decision-making logic. For the “military utility school,” this is straightforward. PSV write that this perspective “suggests that when choosing among different possible weapons or tactics, states focus primarily on the immediate efficacy of each alternative” (2013: 2). Left unstated, but fairly obviously implied, is that the main criterion is the efficacy as defined by the state’s own egoistic interests. In fact, it is this factor that is manipulated in their survey experiment: the probability that the use of nuclear weapons will achieve the state’s intended goal, that of the destruction of a weapons laboratory whose products can be used against American citizens.

On the other side of the debate, Tannenwald describes the origins of the nuclear taboo as rooted in the obligation to place value on the lives of all human beings, even those who reside outside national borders: “[T]he taboo possesses an important moral component, for which power and interest explanations cannot fully account. At its core is the belief that nuclear weapons, because of their immense destructive power, violate long-standing moral principles...[which] have at their core the moral intuition that it is wrong to kill

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1 One could argue that action in both cases is self-interested. When states are behaving according to the logic of appropriateness, it is because norms have reconstituted their interests so that they include the well-being of others. However, even if we accept this argument, it does not address the question of whether state interests are purely egoistic or whether they have prosocial content.
noncombatants, or more generally, the innocent, and to cause excessive destruction” (2005:11). In other words, we have obligations even to our enemies.

This moral utilitarianism is evident in the evidence Tannenwald marshals for her “taboo” case. For instance, she notes that Dean Rusk objected to McArthur’s advocacy of using nuclear weapons in Korea by opposing the “mass destruction of Chinese cities.” Truman said, “I could not bring myself to order the slaughter of 25,000,000” (1999: 445; also 2005: 30). The presumption of course is that the decision might have been different had casualties been lower. Truman was weighing the utility for the United States against the effects on innocent civilians. Eisenhower’s response to moral objections to the use of nuclear weapons was to recommend reducing their destructiveness, pointing out that it was the harm to others, i.e. the consequences of nuclear weapons, that prohibited their use. In other words, the nuclear taboo is rooted in the consequences of nuclear use, a fact that is inherent in the very term “weapons of mass destruction.” These weapons are regarded as unacceptable precisely because of what they do.

Thus, both the military utility argument and the nuclear taboo argument are fundamentally based on a consequentialist decision-making logic. The real difference between the two accounts is that they admit different elements into that cost-benefit calculation. The military utility argument is egoistic; the taboo argument holds that decision-makers balance egoistic security considerations with the effect on others outside of American borders. What makes nuclear weapons taboo is that their potential destructiveness of life and property overcomes their national security utility. The debate between the two schools of thought is, therefore, better understood as one that pits those who view these decisions as purely egoistic against those who view decision-makers as weighing those considerations against humanitarian imperatives.

One reason for the confusion is that the logic underlying the normative case for the non-use of nuclear weapons is mistakenly regarded as an absolute normative prohibition against these weapons regardless of their effects, and therefore deontological in nature. Deontological reasoning is reasoning not based on any consideration of the consequences at all, but on the application of rules that define the ethical merit of an act as intrinsic to its character (Ginges and Atran 2011). March and Olson make this same mistake of conflating logics of appropriateness with deontological logics, argues Goldmann (2005), which might explain why we find it repeated in the nuclear taboo literature. Tannenwald herself notes that the nuclear taboo might fade now that there are more destructive conventional weapons and much less destructive “mininukes” (2003: 43). If there is a deontological prohibition against nuclear weapons regardless of their consequences, this should not be true.

The use of the word “taboo” is unfortunately misleading as it implies more than Tannenwald is really arguing. Therefore from this point forward we refer to the “taboo” argument only in quotes or alternatively as the “anti-nuclear norm” argument. Norm implies that nuclear weapons evoke moral considerations that do not necessarily always trump others, as a taboo would.

Our reframing of the debate over nuclear non-use calls into question PSV’s conclusion that “norms create only weak constraints on behavior” (2013: 3). Their main finding that the public does not demonstrate a unanimous and absolute unwillingness to use nuclear weapons and that support for nuclear use increases when those weapons offer a military advantage in destroying critical targets, do not necessarily demonstrate that normative considerations are absent. The critical question at issue between the military utility school and the nuclear “taboo” school is whether Americans balance their own national security interests against the effects that the use of nuclear weapons on those who reside outside their borders. PSV’s study fails to address this question because their experimental design does not force Americans to make a tough choice about the greater good at all. In all their scenarios, civilian casualties from the nuclear strike are set at just 1,000, whereas the potential number of Americans killed if the strike fails to neutralize the threat is set...
much higher at 50,000. Given these facts, it is no wonder that the military effectiveness of nuclear weapons has a powerful effect; the countervailing normative pressure not to sacrifice innocent lives in the pursuit of national self-interest has been minimized. PSV have only tested a very strong version of the "taboo" as deontological opposition to any use of nuclear weapons, not the version which we think is much more empirically plausible: large-scale opposition to these instruments is based on their destructive consequences. A better test would pit egoistic considerations against pro-social considerations by presenting individuals with a tradeoff between an egoistic gain and a cost that will be borne by a faraway population.

A second major problem with existing research is that it is based on an impoverished understanding of the variety in moral considerations in foreign policy attitudes. PSV assume that if morality plays a role in shaping attitudes towards nuclear weapons it will do so as a break on the willingness to use nuclear weapons in pursuit of national self-interest. Morality only serves as a break on the use of nuclear weapons and national egoism in national security. The authors describe their position: “From this perspective, considerations concerning the morality and appropriateness of the use of nuclear weapons take a back seat to assessments of their advantages and disadvantages compared to other military options” (2013: 4 (emphasis added)). However, it is wrong to assume that support for the use of nuclear weapons does not have moral foundations of its own, something that even they seem to recognize at other points in their analysis, for instance, when they observe that most of those who endorse nuclear weapons feel that they are morally justified in doing so. It should also be noted that the same is true for those who believe there is a anti-nuclear norm. Moral considerations only operate on the anti-nuclear, not the pro-nuclear side. The “taboo” is the victory of morality over amoral utility.

Both arguments therefore rest on a limited and inaccurate understanding of what constitutes moral behavior. In this view, morality is defined in “liberal” terms, as protecting the rights of all individuals. The primary role of ethics therefore is to place constraints on the behavior of nation-states vis-à-vis others. This is the most common framing of the role of morality in international relations. The nuclear “taboo” debate essentially revives, although with different terms, the traditional international relations debate between immoral realists and morally-minded idealists (Carr 1964). Realists argue that in their protection of their national interests they are forced to violate those rights that liberals argue are intrinsic to mankind – in Morgenthau’s words, they are forced to “sin.” He writes, “Political ethics is indeed the ethics of doing evil. While it condemns politics as the domain of evil par excellence, it must reconcile itself to the enduring presence of evil in all political action. Its last resort, then, is the endeavor to choose, since evil there must be, among several possible actions the one that is the least evil” (Morgenthau 1946: 202). However, even egoistic behavior that disregards the rights of others can be morally grounded because liberal morality does not exhaust the ways in which we might define what is right or wrong.

The literature on moral psychology reveals two potentially important alternatives to liberal morality that provide an ethical base for supporting nuclear use. First, the “moral foundations” literature, pioneered by Jesse Graham and Jonathan Haidt, distinguishes between two broad classes of ethical systems found worldwide. The “individualizing foundations” of harm/care and fairness/reciprocity define moral behavior in liberal, Western, and Enlightenment terms. From this perspective, morality is “about how well or poorly individuals treated other individuals” (Graham et al. 2011:366). Harm/care is a concern for the suffering of others, including virtues of caring and compassion; caring for others and protecting them are good behaviors in this system. It is driven by altruistic, other-regarding behavior. Under the moral foundation of fairness/reciprocity, individuals should be treated equally; to deny a person such equality is to treat them unfairly and unjustly (Graham, Haidt, and Nosek 2009). These are the moral foundations familiar to international relations theorists, the ones that realists argue must be and often are set aside. Liberal theorists maintain that treating others with “equal concern and respect” is at the heart of the liberal project of valuing individuals (Howard and Donnelly 1986).
However, the individualizing foundations are just one part of the spectrum of ways that individuals think about right and wrong. Just as important are the “binding” foundations of authority/respect, ingroup/loyalty and purity/sanctity. These moral systems serve the same function as the others—constraining self-interested action to benefit society as a whole—but they do so by subordinating individual needs to the larger community’s needs.

The binding foundations are unified by their common function of protecting the group from threats. Strong deference to authority is necessary so that those charged with acting on behalf of the group can act decisively to neutralize threats to society. Loyalty to the ingroup is necessary to provide the requisite solidarity to keep society internally stable and to endure in the face of external aggression. Purity, with its emphasis on traditional values and disgust for those who do not conform to cultural standards of decency, also revolves around protecting society from threats. Those who value purity are more likely to experience disgust and thus to dehumanize members of outgroups—facilitating support for the use of violence against foreigners (Buckels and Trapnell 2013). Those who score high on the binding foundations and related values such as conformity and tradition are more likely to see the world as a dangerous place and have a “motivational goal” of security. Jost et al (2003) call this the “existential motive.” In group terms, this is a distinctly egoistic ethical system, one that privileges one’s own.

In addition to the binding foundations, we identify retribution as a potential source of morally-grounded support for the use of nuclear weapons. Retribution is a long-standing principle of justice, which holds that punishments should be determined by what the offender deserves rather than by what would produce the greatest good for the greatest number (Cottingham 1979; Barton 1999; Zaibert 2013; Carlsmitih et al. 2002). From this perspective, giving wrongdoers their ‘just deserts’ is a righteous act in and of itself, regardless of its future consequences. For this reason, retribution is said to be ‘backward looking’—it is the crime that justifies the punishment, and the severity of that punishment ought to be proportional to the severity of the crime. Retribution, in other words, is concerned with balancing the scales of justice rather than with achieving instrumental goals. Research on the psychology of punishment has produced ample evidence that many, if not most Americans, are natural retributivists (see Carlsmitih and Darley (2008) for a review). They want to see harm-doers get the punishments they deserve even if those punishments are unlikely to benefit either the individuals involved or society as a whole. Indeed, Americans’ support for harsh criminal penalties, such as lengthy prison sentences and capital punishment, appears to be driven primarily by the desire for retribution rather than by instrumental motives (Darley, Carlsmitih and Robinson 2000; Carlsmitih, Darley and Robinson 2002; Carlsmitih 2008; Carlsmitih, Monahan and Evans, 2007; Alter, Kernochan and Darley 2007; Carlsmitih and Darley 2008; Aharoni and Fridlund 2012).

Hypotheses

Above we argued that the anti-nuclear norm and military utilitarian arguments are best understood as articulating a different set of consequentialist arguments. If the military utility school is correct, then we would expect that:

**H1:** Support for the use of nuclear weapons will be based on their effectiveness in protecting American interests and should therefore be relatively robust to increasing costs in terms of civilian casualties on the target side.

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2 Conversely,
On the other hand, if the anti-nuclear norm is, as Tannenwald states, rooted in a “moral intuition that it is wrong to kill noncombatants, or more generally, the innocent” (2005: 11) then we should find that:

**H2**: Americans will balance national security concerns against prosocial considerations for those harmed by a nuclear strike, leading to a decline in support for nuclear weapons as civilian casualties rise, even in situations in which nuclear weapons promise much greater effectiveness.

This would indicate that individuals are making judgments about how to achieve the greater good, balancing concerns for U.S. national security with the effect on the innocent abroad.

We expect that both binding foundations and retributive beliefs will predict support for the use of nuclear weapons, regardless of their utility. Nuclear weapons, we contend, are perceived differently than conventional weapons, even in cases where the latter can match them in terms of military effectiveness. Nuclear weapons carry a connotation of power and ruination. They are the ultimate weapon, and they are linked to visceral and fearsome images of destruction in a way that conventional weapons, even if capable of achieving the same objectives are not. For many, these qualities are precisely what makes the use of nuclear weapons uncivilized or unthinkable (Tannenwald 1999). This is evident in the way that the vocabulary of nuclear weapons has made its way into the vernacular. We use the term as a verb in our colloquial parlance – “to nuke” – as a synonym for doing maximum harm. As a metaphor, the “nuclear option” is always the most severe.

The binding foundations have a strong influence on attitudes towards the use of force in general. Indeed Kertzer et al find that binding foundations predict a general hawkish orientation called “militant internationalism” found to structure mass and elite attitudes on foreign policy. Binders, as we could call them, tend to believe that all options should be on the table given the dangerous nature of human relations, a general fear likely to be exacerbated when it comes to interactions outside relatively more stable domestic confines. They are likely to embrace a good vs. evil worldview in which evildoers must be destroyed. This view of the world as an intrinsically threatening place finds a logical expression in an endorsement of coercive means to maintain the social order. Those who feel threatened are advocates of what Altemeyer (1988; 1998) calls “authoritarian aggression,” a strong state to punish and deter transgressors. Submission to this authority is simply the price that must be paid to be protected (Duckitt 2001; Duckitt and Fisher 2003; Duckitt and Sibley 2009; Feldman and Stenner 1997; Janoff-Bulman 2009a 2009b; Jugert and Duckitt 2009)). Binders should be more supportive of sending signals of resolve and demonstrating their authority through the use of overwhelming force. Thus, we hypothesize that:

**H3**: The binding foundations will be positively associated with support for nuclear use, regardless of the military effectiveness of those weapons.

For those who take a retributive, “eye for an eye” view of the world, the special status of nuclear weapons, their perceived ferocity and destructive potential, may appear as a positive, indicating a superior ability to inflict the suffering that they believe the adversary deserves. Thus, we expect that highly retributive individuals will favor the use of nuclear weapons even when they do not offer an immediate military advantage. Individual differences in retributiveness have been linked to support for the Gulf War (Liberman 2006), the Iraq War (Liberman 2006, Liberman and Skitka 2008), the killing of Osama bin Laden (Gollwitzer 2014) and U.S. intervention in Syria (Washburn and Skitka 2014). More generally, Liberman (2013, 2014) finds that stronger endorsement of retribution is related to preference for more hawkish responses to states that have violated international norms. For these individuals the use of military force is not just a way to deal with threats and secure the national interest, it is a way to achieve justice by paying back transgressors for their past misdeeds. From this perspective, the destructive potential of nuclear
weapons may therefore be an upside rather than a downside because it enhances their aura of punitiveness. This leads us to hypothesize that:

\[ H4: \text{Retribution will be positively associated with support for nuclear use, regardless of the military effectiveness of those weapons.} \]

Finally, given that the individualizing foundations capture the traditional liberal concern with the rights and welfare of other, we expect that the association of nuclear weapons with destruction and suffering will lead to a bias against their use. Our final hypothesis is that:

\[ H5: \text{The individualizing foundations will be negatively associated with support for nuclear use, regardless of the military effectiveness of those weapons.} \]

**Research Design and Data Collection**

We go about assessing our hypotheses by replicating PSV’s initial study with some additional elements. In PSV’s original design, subjects were presented with a fictional news story about a military crisis between the United States and Syria. As they describe it,

Subjects read that the United States had discovered an Al Qaeda lab in Syria producing nuclear weapons using materials smuggled out of Russia. The articles reported that U.S. officials were deciding between nuclear and conventional military options for destroying the Al Qaeda lab. The news stories described a report to the president produced by the Joint Chiefs of Staff that outlined the expected effectiveness of each military option, as well as the Syrian civilian fatalities and U.S. military fatalities estimated for each strike. Each story also provided estimates of how many U.S. civilians might be killed if Al Qaeda used these weapons against the United States.

Their main experimental treatment manipulated the relative effectiveness of nuclear weapons compared to conventional weapons in destroying the lab, creating three treatment groups. The first group read that the nuclear and conventional options would have an equal chance (90%) of destroying the lab. The second group read that nuclear weapons were somewhat more likely to destroy the lab (90% vs. 70%), while the third group read that nuclear weapons were significantly more likely to do so (90% vs. 45%).

We added two additional treatments to PSV’s original experiment in order to explore the generalizability of their findings. As the authors themselves note (PSV: 14), the high level of support that they find for the use of nuclear weapons could have been an effect of the specific target – Al Qaeda – and the extreme nature of the threat – the development of a nuclear weapon. Hence, in our experiment we manipulated the identity of the terrorist group in order to test whether Americans treat al Qaeda as an exceptional case. Half the respondents read a story about an al Qaeda weapons lab as in PSV’s original design, while the other half read a story about a Hezbollah weapons lab. We chose Hezbollah for two reasons. Most importantly, although the United States has officially declared Hezbollah to be a Foreign Terrorist Organization (FTO), the group has never carried out a successful attack against the U.S. homeland. In addition, we wanted to maintain as much realism as possible, and it was therefore important to choose a group that could plausibly be operating in Syria at the present time and that would have access to the resources necessary to set up an advanced weapons lab.

In addition, we also manipulated the type of weapon being developed at the lab in order to determine whether respondents would feel differently about using nuclear weapons on a non-nuclear target. One treatment group read that the lab was being used to develop nuclear weapons, while the other group read that it was being used to produce incendiary weapons. We chose incendiary weapons because they could
 realistically cause the same amount of harm (50,000 civilian casualties in a major city) as a nuclear weapon if used against the United States. In order to keep the number of treatment groups manageable, we reduced the number of military effectiveness treatments down to two: equal effectiveness (90%) and nukes more effective (90% vs. 45%). This gives us total of eight treatment groups in a 2x2x2 design. In all other respects, we kept the text of the PSV experiment exactly the same.  

Unlike PSV, however, we asked those respondents who indicated an initial preference for the nuclear strike a series of follow-up questions. First we asked whether they would still prefer the strike if the estimate of civilian casualties was revised upward to 10,000 for a nuclear strike, whereas the conventional strike would only kill 1,000 Syrians. If the answer was yes, we asked the same question again, this time increasing the number of civilian casualties to 50,000. Following this same procedure we increased the level of civilian casualties to 100,000. If respondents were still willing to use nuclear weapons at this point, we asked them a final question with a set of responses about how many Syrians civilian casualties they would tolerate before changing their minds. The options included: 100,000 to 250,000; 250,000 to 500,000; 500,000 to 1,000,000; 1,000,000 or more; and finally, “I prefer a nuclear strike regardless of the number of civilian casualties in Syria.” This allows us to track how preference for the nuclear strike changes as the casualty estimate increases and to identify for each individual the point at which he or she switched to preferring the conventional strike.

We also asked a series of dispositional questions about respondents’ moral views and values. To measure the moral foundations, respondents were administered a standard Moral Foundations Questionnaire (MFQ), which can be found in the appendix. To measure retribution, we asked respondents to indicate whether they agreed or disagreed with the following: (1) “Those who have done wrong deserve to be paid back for it,” (2) “In order for justice to be served, violence must be repaid with violence,” and (3) “An eye for an eye is the wrong way to deal with wrongdoers” (reverse coded).

Following Kertzer et al (2014), who examined the effect of moral foundations on general foreign policy orientations, we factor-analyzed these items with an oblique rotation allowing factors to covary. This yielded a two-factor solution with the binding foundations of authority, loyalty, and purity loading on one dimension and the individualizing foundations of fairness/reciprocity and harm/care loading on another. We generated factor scores based on these variables that allow us to test the effect of the two different systems of ethics; inserting each of the five moral foundations as individual variables would have resulted in significant amounts of collinearity that would sap them of their statistical power. We did the same for the retribution scale, confirming that these items load on a single factor and generating factor scores.

We should note that a factor analysis of both retribution items and the moral foundations items together yielded a three-factor solution in which retribution is a separate dimension. In other words, it is not reducible to the other moral foundations. In the analyses below, the individualizing and binding foundations and the retribution scale have been re-scaled to range between zero and one, so as to allow for a comparison of the size of the coefficients to one another and the experimental treatments, which we enter into our models as a set of dummy variables. In our multivariate analyses, we also include a number of

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3 PSV formatted their vignettes as mock newspaper articles. We did not adopt this style of presentation. Whatever gains in realism are negated, we believe, by the ethical need to inform respondents of the fictional character of the article. However, at the beginning of questions about the use of weapons, we reminded respondents of key elements of their vignettes (on effectiveness, estimated Syrian casualties, potential American casualties, terrorist group, and type of weapons lab) in a series of bullet points, so as to reinforce the main points of vignette. PSV did the same through the use of pull-out quotes.
standard control variables, including age, gender, race, education, party identification, ideology, church attendance, U.S. citizen, military ties, and political knowledge.

We collected an online convenience sample of 2,003 adult U.S. residents from Amazon Mechanical Turk (MTurk) in July 2015. MTurk is “an online Web-based platform for recruiting and paying subjects to perform tasks” (Beriinsky et al. 2010, 351). In recent years, MTurk has become a popular resource for conducting survey experiments on a diverse subject pool (Paolacci et al. 2010). Our study was conducted in July 2015. We paid respondents $1.50 for participating in our survey, which took an average of 21 minutes to complete.

One potential concern with recruiting subjects from MTurk is data quality. Because MTurk workers are paid when they complete a task, and often do many at a time, they have an incentive to finish as quickly as possible, which may produce low quality data. Another concern has to do with external validity. Although the subject pool available through MTurk is much more diverse than a typical student sample, is not representative of the general population. Even so, prior studies have generally found good results in replicating well-established findings with MTurk samples (Beriinsky et al. 2012). At the same time, MTurk is a very cost effective way to recruit large survey samples. Replicating PSV’s study while adding the dispositional questionnaires necessary for examining heterogeneous treatment effects would have been cost-prohibitive. By using MTurk, we were able to recruit 2,000 respondents (more than double the size of PSV’s original experiment).

To deal with the data quality issue, we followed the recommendations of Berinsky et al. (2014). Specifically, we included three attention check questions in our survey, along with a warning that these questions would be present and that we would “check responses carefully in order to make sure that people have read the instructions for the task and responded carefully.” Overall, 96.7% of our sample answered all three questions correctly, suggesting that the vast majority of our respondents were highly attentive even at the end of the survey. We also test the robustness of our main experimental results to the exclusion of less attentive respondents.

In regards to external validity, we are careful to interpret our results in light of the differences between our sample and the characteristics of the general population. Looking at basic demographics—age, sex and race—our sample is slightly younger and whiter than the general population (as compared to the 2010 U.S. census). The differences become more significant when we look at level of education and political attitudes. Our sample is more highly educated and has substantially more people who identify as Democrats and who consider themselves to be liberals compared to the most recent American National Election Study (ANES) survey. In their study, PSV find that that there is a significant relationship between partisanship and attitudes towards the use of nuclear weapons, with Republicans more likely to express support. Later on, we consider how these differences may affect the generalizability of our findings.

Results and Discussion

We begin by assessing how well our results replicate the findings of PSV’s original experiment. It is important to note that the situation in Syria has changed significantly in the years since PSV conducted their study, which was fielded in January 2011. Therefore, we would not expect our results to be exactly equivalent to theirs even if we used the same type of sample. Rather, we are looking to see if the general patterns remain the same and if they support the same conclusions.

Like PSV, we measured respondents’ support for the nuclear strike in two different ways. First, we measured respondents’ prospective preference by asking them whether they would prefer the nuclear strike
or the conventional strike if they were forced to choose between them. Second, we measured respondents’ retrospective approval by asking them whether they would approve or disapprove if the United States decided to conduct a nuclear strike to destroy the weapons lab. Figure 1 presents the main effects of our three treatments on prospective preference, and Figure 2 does the same for retrospective approval.

We begin by looking at the level of support for the nuclear option when nuclear and conventional weapons are equal in terms of military effectiveness. This allows us to gauge whether Americans have a baseline aversion to the use of nuclear weapons. Overall, this analysis largely replicates PSV’s findings. In terms of prospective preference, Figure 1 shows that very few respondents (15.2%) prefer the nuclear strike in the equal effectiveness condition (in PSV, that number is very similar at 18.9%). However, in Figure 2 we see that support for the nuclear option is significantly higher when asked retrospectively (31.7%), although conventional weapons are still preferred by a majority of respondents. Here, the overall level of approval is somewhat lower than in PSV’s results (47.9%). This may be due to the overrepresentation of Democrats and the college educated in our sample. PSV find that both of these groups are significantly less likely to express a preference for nuclear weapons. However, the general pattern of our results remains consistent with PSV and supports their conclusion that there is a general aversion to the use of nuclear weapons when

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1 The response options were: strongly prefer the nuclear strike, somewhat prefer the nuclear strike, somewhat prefer the conventional strike, and strongly prefer the conventional strike. There was no option to remain neutral or to oppose the strike. In Figure 1 and Figure 2, we code prospective preference as a dichotomous variable equal to one if the respondent indicated that he or she somewhat or strongly preferred the nuclear strike.

2 The response options were: strongly disapprove, disapprove, weakly disapprove, weakly approve, approve, strongly approve. In Figure 1 and Figure 2, we code retrospective approval as a dichotomous variable equal to one if the respondent indicated any degree of approval.
they offer no military advantage, albeit an aversion that softens considerably when respondents are presented with the nuclear strike as a *fait accompli*.

**Figure 2 - Main effects (retrospective approval)**

---

We now turn to the main effects of our three treatments: *group* (Al Qaeda vs. Hezbollah), *weapon type* (nuclear vs. incendiary), and *relative effectiveness* (90-45 vs. 90-90). Figure 1 clearly shows that only *relative effectiveness* had a significant effect on prospective preference for the nuclear strike. Among respondents who read that nuclear weapons would be twice as effective, 46.3% said that they would choose the nuclear strike, compared to just 15.2% in the equal effectiveness condition. This replicates the pattern of PSV’s findings, although the magnitude of the effect is somewhat smaller in our sample. They find that preference for the nuclear option increases from 18.9% in the equal effectiveness condition to 68% when nuclear weapons are said to be twice as effective.

It is notable that respondents did not distinguish between Al Qaeda and Hezbollah or between a nuclear weapons lab and an incendiary weapons lab when choosing between the nuclear and conventional strikes.\(^6\)

---

\(^6\) The difference between the al Qaeda and Hezbollah treatment groups is 0.2 percentage points ($p = 0.46$). The difference between the nuclear and incendiary weapons treatment groups is 3.1 percentage points ($p = 0.07$). To investigate whether this is due to the underrepresentation of Republicans and the less well educated in our sample, we replicated this analysis first among Republicans only and then among those with less than a college degree. We did not find any significant effect of either *group* or *weapon type* in these subgroups, and we therefore have no reason to believe that our findings would differ substantially in a more representative sample.
In terms of the former, it does not appear that respondents believed that Hezbollah was any less dangerous to the United States than Al Qaeda. We asked those respondents who said they preferred the nuclear option to indicate how important it was to their decision that the target had “shown itself capable of doing harm to the United States and Americans.” The answers are almost identical for the two potential targets (results not reported here). Proponents of the war on terror have long employed rhetoric that portrays “terrorists” or “terrorism” as a monolithic enemy. The political utility of this strategy is obvious, as it allows the war on terror to be expanded to a wide range of targets with little or no connection to the original 9/11 attacks. Our findings suggest that for many people, this strategy has been successful, causing them to see al Qaeda and Hezbollah as two heads of the same monster, rather than making a distinction between them based on their past record of attacks on the United States.

Our respondents also do not differentiate significantly based on the type of weapons that the targets are developing. In other words, we do not find evidence that people treat a nuclear strike on a nuclear target differently than they treat a nuclear strike on a conventional target. Across both treatment groups, we held constant the potential harm these different weapons could do to the United States and its citizens (50-70,000 civilian casualties in an attack on a major city). Thus, this finding suggests that in the public’s mind there is no “bright line” between the development of nuclear and other mass destruction weapons in which the former require a reciprocal response.

Figure 2 shows similar results for retrospective approval. Here, group and weapon type do have statistically significant effects, but they are substantively small and dwarfed by the impact of relative effectiveness. Comparing these results to PSV, we again find a somewhat lower overall level of retrospective approval for the nuclear option (50.6% in our survey compared to 77.2% in theirs). However, we still validate the basic pattern of their findings. Regardless of whether they are asked prospectively or retrospectively, the military utility of nuclear weapons is an important determinant of Americans’ attitudes towards their use.

We also investigated whether our three treatments have different effects among Republicans and the less well educated (i.e., those without a college degree). Because these groups are underrepresented in our sample, this subgroup analysis gives us some insight into whether our results would be substantially different in a sample that included more Republicans and more people without a college degree. First, we find that while relative effectiveness has a substantively similar effect among the less well educated as it does in the full sample, its impact is somewhat stronger among Republicans, at least for prospective preference. For group, we find no significant effect of al Qaeda in either subgroup when it comes to prospective preference. When it comes to retrospective approval, al Qaeda has a substantively small but statistically significant effect among the less well educated, but no significant effect among Republicans.

For weapon type, we find that

---

7 The difference between the al Qaeda and Hezbollah treatment groups is 3.8 percentage points (p = 0.043). The difference between the nuclear and incendiary weapons treatment groups is 4.2 percentage points (p = 0.027).

8 We also explored whether the impact of relative effectiveness was conditional on group or weapon type. Relative effectiveness seems to have a somewhat larger effect on retrospective approval when the group is al Qaeda (22.9 percentage points) compared Hezbollah (15.0 percentage points), but the difference does not attain conventional levels of statistical significance. Otherwise we found no notable interactions for either prospective preference or retrospective approval.

9 For the full sample, the difference in prospective preference between the equal effectiveness and the nukes more effective treatment group is 31.1 percentage points. Among those without a college degree (N = 993), it is 32.0 percentage points. Among Republicans (N = 485), it is 41.1 percentage points. For retrospective approval, the effect of relative effectiveness is 18.9 percentage points for the full sample, 21.7 percentage points for those without a college degree, and 19.6 percentage points for Republicans.

10 In the full sample, retrospective approval is 3.8 percentage points higher in the al Qaeda treatment group compared to the Hezbollah treatment group (p = 0.043). Among those without a college degree (N = 993), that difference is 7.6 percentage points (p = 0.008), and among Republicans (N = 485), it is 3.7 percentage points (p = 0.20).
among both Republicans and those without a college degree, there is no statistically significant effect of the nuclear lab either on either prospective preference or retrospective approval. On the basis of these analyses, we conclude that while we might find a moderately larger effect for relative effectiveness in a more representative sample, there is no evidence to suggest that the general pattern of our findings would change substantively. We also tested the robustness of our results to the exclusion of respondents who failed one or more of our attention check questions and found no significant differences (these results are available in the appendix).

The Effect of Civilian Casualties

Having replicated PSV’s finding that the military effectiveness of nuclear weapons has a substantial impact on the public’s willingness to use them, we now turn to our first two hypotheses concerning civilian casualties. In PSV’s original experiment, the estimated number of Syrian civilian casualties was held constant at 1,000 for both the nuclear and conventional options. The potential American casualties were held constant at 50,000. Thus, their results tell us about attitudes towards the use of nuclear weapons only when the collateral damage is relatively low. If the military utility school is correct and support for nuclear weapons is primarily based on their effectiveness in protecting American interests, then we should find that support for the nuclear option is relatively robust to increasing costs in terms of civilian casualties on the target side (H1). In contrast, we hypothesized that Americans will balance national security concerns against prosocial considerations for those harmed by a nuclear strike, and we therefore expect to find that support for the nuclear option declines as civilian casualties rise, even in situations in which nuclear weapons promise much greater effectiveness (H2).

Figure 3 – The Effect of Civilian Casualties on Preference for the Nuclear Strike

![Graph showing the effect of civilian casualties on preference for the nuclear strike.](image-url)
As described above, after replicating PSV’s original experiment, we presented respondents who initially said they preferred the nuclear option with a series of escalating casualty figures in order to see when or if their support would weaken. Figure 3 shows the percentage of respondents who indicated that they still preferred the nuclear strike at each level of civilian casualties, broken down by relative effectiveness to show how the response to escalating casualties varies as a function of the perceived military utility of nuclear weapons. In other words, the percentages reported in Figure 3 reflect the proportion of respondents in each treatment group who continued to express a preference for the nuclear option at a given level of civilian casualties.

It is clear from Figure 3 that civilian casualties have a dramatic effect on preference for the nuclear strike. As casualties rise, preference for the nuclear strike drops precipitously. This is the case regardless of the relative effectiveness of nuclear weapons. Indeed, at high levels of civilian casualties, there is little substantive difference in preference for the nuclear strike between the nukes more effective condition and the equally effective condition. For instance, at 100,000 civilian casualties (similar to a Hiroshima or Nagasaki), only 5.4% of people preferred the nuclear strike in the nukes more effective condition and 2.4% of people preferred the nuclear strike in the equally effective condition. This difference remains statistically significant, but our overall conclusion is the same: very few people are willing to support the use of nuclear weapons at the cost of large numbers of innocent lives.

**Figure 4 - Percent of Respondents Who Initially Preferred the Nuclear Strike Switching to the Conventional Strike at Each Level of Casualties**

Another way to think about the impact of civilian casualties is to take the group of respondents who initially preferred the nuclear option and calculate the percentage who switch to the conventional strike at each level of casualties. Figure 4 reports the percentage of switchers at each level of casualties for the full sample and for two key subgroups: Republicans and those with low education (less than a college degree). These
subgroups are underrepresented in our sample, and according to PSV’s results, they are also more likely to prefer nuclear weapons. If the impact of civilian casualties in these two subgroups is similar to the full sample, then we have less reason to be concerned that our MTurk sample is giving us markedly different results to what we would find in a nationally representative sample. For the sake of space and ease of presentation, Figure 4 depicts results only for the nukes more effective treatment group, and it collapses civilian casualties between 100,000 and 1,000,000 into a single category due to the very small numbers of respondents who switch at these levels.

Figure 4 shows that among all respondents who initially preferred the nuclear strike (and who were in the nukes more effective treatment group, N = 463), the vast majority switch to the conventional strike early on. Specifically, just over 64% switched to the conventional strike at 10,000 casualties, and a further 18.8% switched at 50,000 casualties. In other words, by the time civilian casualties reach 50,000, eight out of ten respondents who initially preferred the nuclear strike said they would choose the conventional strike instead, in spite of the fact that the nuclear strike offered double the probability of destroying the terrorist group’s weapons lab. Only 8% of this group said they would continue to prefer the nuclear option at the highest level of casualties (> 1,000,000). Thus, while there is clearly a small group of hardcore nuclear supporters who cannot be swayed even by staggering levels of civilian casualties, for most of those who initially chose the nuclear option, that preference is highly sensitive to effects of the nuclear strike on innocent civilian lives.

Looking at our two subgroups, the pattern is almost identical among low education respondents, with 83% switching to the conventional option at or below 50,000 casualties. Among Republicans, this figure drops slightly to 76%, and a larger percentage of respondents (11.2% vs. 8%) continue to favor the nuclear strike at more than 1,000,000 casualties. However, these marginal differences do not alter our general conclusion that large numbers of civilian casualties are sufficient to turn the vast majority of Americans against the use of nuclear weapons in spite of their military advantage to the United States. Thus, it is not the case that our findings at the aggregate level are simply a function of our MTurk sample. \textsuperscript{11} We would also note that our MTurk sample skews notably younger than the general population and that age has a negative effect on support for nuclear weapons in the models presented below. Therefore there are reasons to believe that we might be underestimating the effect of civilian casualties on public support.

In sum, these findings lend strong support to H2 over H1. Support for the use of nuclear weapons is not robust to increasing civilian casualties on the target side, as the military utility school would lead us to expect. Rather, that support is remarkably fragile in the face of a mounting death toll even when nuclear weapons promise a much greater chance of destroying a threat that could itself destroy the lives of thousands of innocent Americans. This calls into question the main takeaway of the PSV study: that the public demonstrates no real opposition to the use of nuclear weapons when they are necessary for protecting American interests. Instead, these results indicate that citizens’ attitudes towards nuclear weapons encompass more than just their military utility, defined as the likelihood of achieving the objective of the mission.

As we observe here, even when nuclear weapons are considered to be twice as effective in destroying a major threat to the United States, the prospect of a large number of civilian casualties can cause support for nuclear use to collapse. People seem to be weighing the costs and benefits of nuclear use in a broad and cosmopolitan way. The lives of Syrian civilians carry important weight in this equation, so much so that Americans are willing to forgo a significant military advantage and accept an increased likelihood of another

\textsuperscript{11} We also tested whether the effect of rising civilian casualties changes when we exclude inattentive respondents from the analysis. There were no significant differences. See appendix for details.
major terrorist attack on U.S. soil in order to avoid killing large numbers of them. Respondents are indeed making decisions according to the logic of consequences; however this logic is not limited to considerations of egoistic “military utility,” as PSV interpret it. Instead, respondents are weighing the harm to others against the gain to themselves. They are trying to identify the greater good.

The Individual-level Determinants of Support for Nuclear Use

We have demonstrated that aggregate public opinion towards the use of nuclear weapons behaves according to the logic of consequences, but in a broad way that encompasses both egoistic and prosocial considerations. Like PSV, however, we observe that substantial numbers of respondents support the use of nuclear weapons even when their collateral costs are high and they do not add effectiveness. If nuclear weapons offer no military advantage, what explains support for the nuclear option in this group? Unlike PSV, who presume that moral considerations are limited to constraints on support for the use of nuclear weapons, we argued above that such support might have moral motivations, ethical considerations other than that of concern for others. Specifically, we hypothesized that both the binding foundations and retribution will be positively associated with support for nuclear use, regardless of the military effectiveness of those weapons (H3 and H4). On the other hand, the individualizing foundations should negatively associated with support for nuclear use, independent of military effectiveness (H5). Individual-level analysis is best suited for testing these hypotheses.

To test these hypotheses, we estimated a series of ordered logistic regression models with prospective preference (Model 1, Model 2) and retrospective approval (Model 3, Model 4) as the dependent variables. Prospective preference has four levels (ranging from “strongly prefer conventional” to “strongly prefer nuclear”), and retrospective approval has six levels (ranging from “strongly disapprove” to “strongly approve”). Our main independent variables are our measures of the binding foundations, the individualizing foundations, and retribution, all of which have been scaled to range between zero and one. We also include dummy variables for each of our three treatments and controls for age, gender, race, education, party identification, ideology, church attendance, U.S. citizen, military ties, and political knowledge. Including these variables, which are known to be correlated with either our dependent variable, our main independent variables, or both, helps to insure that any effects we may find for the moral foundations or retribution are not spurious. To economize on space, the estimated cut points for each model are not reported, nor are the coefficients on the control variables.

The results of this analysis are reported in Table 1. The coefficients on the experimental treatment variables show again the importance of relative effectiveness as compared to group and weapon type, although of course that effect is quite superficial, as indicated in the section above. Our measure of “liberal” morality (the individualizing foundations), which captures general concern for the fate of others, has a negative and significant effect on both prospective preference and retrospective approval. These results indicate a general bias against the use of nuclear weapons on the part of those with liberal moral foundations that prioritize harm/care and fairness/reciprocity. What is more striking is the effect of the non-liberal moral factors. The binding foundations strongly predict a support for the use of nuclear weapons across the board, as does retribution, which appears to have an even more powerful effect.

Recognizing the possibility that preference for certain types of strikes might be conceptualized as a categorical choice, we also analyzed the data using a multinomial dependent variable. The results are the same (see appendix).
Table 1 – Individual-level Determinants of Support for Nuclear Use

<table>
<thead>
<tr>
<th></th>
<th>Prospective preference</th>
<th>Retrospective approval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Group = Al Qaeda</td>
<td>0.070</td>
<td>0.086</td>
</tr>
<tr>
<td></td>
<td>(0.084)</td>
<td>(0.085)</td>
</tr>
<tr>
<td>Target = Nuclear lab</td>
<td>0.175*</td>
<td>0.221**</td>
</tr>
<tr>
<td></td>
<td>(0.084)</td>
<td>-0.085</td>
</tr>
<tr>
<td>Nukes more effective</td>
<td>1.433***</td>
<td>1.440***</td>
</tr>
<tr>
<td></td>
<td>(0.088)</td>
<td>(0.089)</td>
</tr>
<tr>
<td>Binding</td>
<td>1.098***</td>
<td>0.868***</td>
</tr>
<tr>
<td></td>
<td>(0.222)</td>
<td>(0.248)</td>
</tr>
<tr>
<td>Individualizing</td>
<td>-0.833**</td>
<td>-0.716*</td>
</tr>
<tr>
<td></td>
<td>(0.294)</td>
<td>(0.306)</td>
</tr>
<tr>
<td>Retribution scale</td>
<td>1.969***</td>
<td>1.982***</td>
</tr>
<tr>
<td></td>
<td>(0.222)</td>
<td>(0.233)</td>
</tr>
<tr>
<td>Controls included?</td>
<td>NO</td>
<td>YES</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.078</td>
<td>0.0981</td>
</tr>
</tbody>
</table>

Note: Ordered logistic regression models (cut points not reported). Standard errors in parentheses. Significance: * p<0.05, ** p<0.01, *** p<0.001

To illustrate the magnitude of these effects, it is useful to depict them graphically. To do so, we dichotomized the prospective preference variable (such that it is equal to 1 for respondents who somewhat or strongly preferred the nuclear strike) and the retrospective approval variable (such that it is equal to 1 for respondents who approved of the nuclear strike to some degree). We then replicated Model 2 and Model 4 from Table 1 using logistic regression models. This allows us to calculate the marginal effects of our main independent variables in terms of the predicted probability of choosing the nuclear strike (for the prospective preference variable) or the predicted probability of approving of the nuclear strike (for the retrospective approval variable). Figure 5 shows the effect of our three moral factors on both prospective preference (top row) and retrospective approval (bottom row).
As we can see, each of our moral factors has a substantial effect on the probability of choosing the nuclear option. Looking first at the top row, it is evident that retribution has by far the most significant impact on prospective preference. Moving from the minimum to the maximum of the retribution scale increases the probability of preferring the nuclear strike from 15.9% to 54.0%. Indeed, the magnitude of this effect is slightly larger than what we observed in Figure 1 for relative effectiveness. There the change from equal effectiveness to nukes more effective increased prospective preference for the nuclear strike from 15.2% to 46.3%. In contrast, the individualizing foundations have a substantial negative effect: moving from the lowest score on the individualizing foundations to the highest score reduces the predicted probability of preferring the nuclear strike from 46.2% to 26.7%. Of our three moral factors, the binding foundations have the weakest effect. Across the full range of the binding foundations, the predicted probability of preferring the nuclear strike increases from 46.2% to 34.7%. Looking at the bottom row of Figure 5, we see a very similar pattern for retrospective approval. The effect of the binding foundations is stronger here than for prospective preference; this might be because of the tendency of those who embrace this system of ethics to defer to authority and support the state’s decisions in times of crisis.

In Figure 6, we break down these effects by relative effectiveness. This allows us to see whether the impact of our moral factors varies depending on whether nuclear weapons offer a military advantage over conventional weapons. Neither the moral foundations nor the retribution scale exhibit any meaningful interaction with relative effectiveness. For both prospective preference and retrospective approval, the marginal effect of all three variables is substantively similar and statistically indistinguishable regardless of
the relative effectiveness of nuclear weapons. It is not the case, therefore, that the impact of these factors is
overwhelmed and minimized by the greater utility of nuclear weapons. Nor is it true that those high on the
binding moral foundations and retribution are particularly concerned with military utility, impacted more by
the effectiveness treatment than those low on these variables. The effects of the moral foundations and
retribution are completely independent of these effectiveness considerations. This is consistent with the
thinking of many moral psychologists that ethical judgments are largely intuitional rather than reflective and
deliberate and therefore unlikely to take into account elements of the specific situation (Haidt 2007).

Figure 6 – Predicted Probabilities by Relative Effectiveness

Overall, we see that moral factors other than simple humanitarian concerns captured by the individualizing
foundations are extremely important for explaining the willingness to support nuclear use. Morality does not
just proscribe; it prescribes. This lends strong support to H3, H4 and H5. While individualizing, “liberal”
moral foundations lead individuals to oppose the use of nuclear weapons, binding foundations and
retribution lead in the other direction, and do so regardless of their effectiveness.

These results raise an important question. What are those high who score high on binding foundations and
retribution hoping to accomplish by using nuclear weapons? Is it consistent with their particular ethical
mindset? Following PSV, we included in our survey a set of questions asking respondents to rate the
importance of different factors in determining their prospective preferences, adding some other likely
reasons. Individuals who indicated that they preferred the nuclear strike were asked to rate the importance

Interestingly, while there is a significant gap between the *relative effectiveness* treatment groups at the low end of the
retribution scale, at the high end the predicted probability of retrospective approval in both groups has converged,
indicating that for the most retributive individuals relative effectiveness no longer has a significant effect. Those feel
most strongly that wrongs deserve to be repaid are not influenced by nuclear weapons’ military utility.
of the following factors on a 5-point scale ranging from “not at all important” to “extremely important”: “Because the terrorist group deserved it”; “Because using nuclear weapons increased the chances of successfully destroying an important threat to our national security”; “Because using nuclear weapons sent a strong message to other potential enemies of the United States that we will not permit them to build weapons of mass destruction”; “Because the United States cannot hold back when fighting enemies who seek to destroy us”; and “Because this terrorist group has shown itself capable of doing harm to the United States and Americans.” We are mindful though of the “moral intuitionist” insight that these might be post hoc justifications of a more impulsive judgment (Haidt, Bjorklund and Murphy 2000; Dwyer 2009).

Table 2 – Reasons for Preferring the Nuclear Strike

<table>
<thead>
<tr>
<th></th>
<th>&quot;They deserved it&quot;</th>
<th>&quot;Destroyed important threat&quot;</th>
<th>&quot;Sent a message&quot;</th>
<th>&quot;U.S. can't hold back&quot;</th>
<th>&quot;Group is capable of harm&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group = al Qaeda</strong></td>
<td>-0.002</td>
<td>0.207</td>
<td>-0.062</td>
<td>0.081</td>
<td>0.259</td>
</tr>
<tr>
<td></td>
<td>(0.155)</td>
<td>(0.209)</td>
<td>(0.149)</td>
<td>(0.150)</td>
<td>(0.154)</td>
</tr>
<tr>
<td><strong>Weapon type = nuclear lab</strong></td>
<td>-0.390*</td>
<td>-0.127</td>
<td>-0.279</td>
<td>-0.145</td>
<td>-0.126</td>
</tr>
<tr>
<td></td>
<td>(0.155)</td>
<td>(0.210)</td>
<td>(0.148)</td>
<td>(0.149)</td>
<td>(0.152)</td>
</tr>
<tr>
<td><strong>Relative effectiveness</strong></td>
<td>-0.394*</td>
<td>---</td>
<td>-0.594***</td>
<td>-0.329</td>
<td>-0.051</td>
</tr>
<tr>
<td></td>
<td>(0.177)</td>
<td>---</td>
<td>(0.175)</td>
<td>(0.177)</td>
<td>(0.176)</td>
</tr>
<tr>
<td><strong>Binding</strong></td>
<td>3.266***</td>
<td>0.248</td>
<td>2.189***</td>
<td>3.006***</td>
<td>1.659***</td>
</tr>
<tr>
<td></td>
<td>(0.483)</td>
<td>(0.610)</td>
<td>(0.449)</td>
<td>(0.462)</td>
<td>(0.456)</td>
</tr>
<tr>
<td><strong>Individualizing</strong></td>
<td>-1.917***</td>
<td>-3.036***</td>
<td>-1.736**</td>
<td>-2.204***</td>
<td>-1.709**</td>
</tr>
<tr>
<td></td>
<td>(0.557)</td>
<td>(0.807)</td>
<td>(0.542)</td>
<td>(0.558)</td>
<td>(0.567)</td>
</tr>
<tr>
<td><strong>Retribution scale</strong></td>
<td>3.144***</td>
<td>0.582</td>
<td>2.816***</td>
<td>2.864***</td>
<td>2.022**</td>
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<tr>
<td></td>
<td>(0.443)</td>
<td>(0.580)</td>
<td>(0.422)</td>
<td>(0.427)</td>
<td>(0.425)</td>
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<tr>
<td>Controls included?</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>N</td>
<td>616</td>
<td>463</td>
<td>616</td>
<td>616</td>
<td>616</td>
</tr>
<tr>
<td>Pseudo R-sq</td>
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<td>0.071</td>
<td>0.099</td>
<td>0.114</td>
<td>0.067</td>
</tr>
</tbody>
</table>

**Note:** Ordered logistic regression models (cut points not reported). Standard errors in parentheses. Significance: * p<0.05, ** p<0.01, *** p<0.001

Table 2 shows how both the experimental treatments and our moral variables influenced responses to these items using a series of ordered logistic regression models. Those in the nukes more effective treatment group identified the greater chance of destroying a threat as much more important than those in the equally effective treatment group. Interestingly, sending a message and “deserving it” are negatively associated with the former treatment. When respondents received the equally effective treatment, they were more likely to
identify these two reasons as justification for their decision. Those who support the use of nuclear weapons are doing so for different reasons in the two treatment groups.

Turning to the moral factors, a number of results stand out. First, neither retribution nor binding foundations have any effect on the likelihood of identifying a greater likelihood of destroying a threat. For this particular variable, we restricted the analysis to those for whom this would be a possible response, the 90/45 treatment category. Retributivists and binders are not utilitarian in this way. Consistent with this, the second weakest effect of the two variables, although still strongly positive and significant, is that the group has demonstrated itself capable of doing harm to Americans.

Second, we see significant overlap between the justifications associated with binding moral foundations and retribution. Both variables positively predict every justification other than increasing the strike’s effectiveness. Consistent with an eye-for-an-eye moral logic, retribution is most associated with the justification of “they deserved it” that any of the other variables. However, binders also strongly endorse this motivation. Both those high on retribution and binding foundations seem to share a common good vs. evil view of international relations in which the United States must be ruthless and punishing in its dealing with terrorist threats. Both are also more predictive of generalized reasons about dealing with international dangers in general rather than the specific scenario mentioned. Both types want to send a message to other enemies and agree that the U.S. cannot as a matter of general policy hold back in its dealing with adversaries.

Third, the individualizing foundations are highly but negatively predictive of all of these justifications, including the utility of the strike. However, the results show that we must also expand our conception of morality to adequately capture the variety of ethical considerations that the mass public uses to form opinions on international issues. The results are that much more striking given that these questions were only asked of those who initially preferred using nuclear weapons, which was itself predicted by these moral variables. This means that those asked these justification questions constitute a subsample with much less variation in terms of the independent variable, which should reduce the substantive and statistical significance of binding, individualizing and retribution.

Conclusion: New Frontiers in Research on Morality in International Relations

Our results have called into question aspects of both sides of the nuclear “taboo” debate. On the one hand, the argument that American respondents make judgments in the aggregate purely based on the effectiveness of different types of strikes seems to be based on a particular framing of the decision-making problem, one that offers a very easy and implausible scenario in which civilian casualties are very low. Support for a nuclear strike, even when it offers double the effectiveness, simply collapses as casualties rise. On the other hand, this is not indicative of a “taboo” per se. To the extent that nuclear weapons are taboo to the American public, it appears only because of their destructiveness. Taboo is therefore the wrong word as this implies that Americans in general will not countenance any nuclear use under any circumstances. This is clearly not the case. Readers might have qualms given the non-representative nature of our sample. However, we have demonstrated that we find the same superficiality of support for nuclear strikes among those groups that are generally more pro-nuclear and are underrepresented in our sample.

More broadly, the debate about the nuclear “taboo” is ultimately much more than a debate about a particular type of weapon. It raises questions about how individuals make judgments in international affairs. Are they weighing the pros and cons of different types of action? If so, what aspects of the situation matter to them? How do they understand and rationalize their attitudes?
In this paper we have shown that in the aggregate, the American public opinion seems to follow the logic of consequences. However, it weighs a set of considerations that go well beyond that of mere military utility to the United States. People also take into account the harm done to those on the other side of American strikes - innocent civilians - and they are unwilling to use methods that kill many and destroy much. International relations theorists are right to believe that consequentialism captures some of the dynamics in public opinion. It just has a much more wide-ranging set of inputs than are generally taken into account. Scholars need to break the conceptual link between national egoism on the one hand and utilitarian judgment on the other. One does not presuppose the other.

We have also shown that morality does not move respondents only in an anti-nuclear direction. Indeed those who are most supportive of the use of nuclear weapons have a distinct set of ethical beliefs; they just are not those that have generally formed the liberal bookend to the international relations debate between amoral realists and moral idealists. Retribution in particular is a powerful moral force that must be considered in any analysis of attitudes towards the use of force. Not all ethics are good ethics if we think of ethics as fostering a sense of the inherent value of the individual regardless of whether he is in one’s own state or an adversarial one. This is likely true when one considers attitudes on issues other than the nuclear taboo.

Moral considerations also seem to be associated with judgments about the use of force - in this case, nuclear weapons - that do not vary across the situation. Those who strongly identify with the binding moral foundations and retribution were generally strongly in favor of using nuclear weapons, those with individualizing foundations against, regardless of the utility of those weapons. This suggests that those who are morally-minded, regardless of how, make decisions in an intuitive and emotional manner that does not take into account the specific circumstances. This does not seem to be true of everyone, as the aggregate results suggest. Likely we have significant individual-level variation in styles of moral reasoning, something that should be explored in future research. We believe this to be in the greater good of understanding the ethics of international relations practice.
Works Cited


