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# THE NUCLEAR TABOO: A REAL EFFECT ON PUBLIC PERCEPTION?

by

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A thesis submitted in partial fulfillment of the requirements for the Honors in the Major Program in Political Science in the College of Sciences and in the Burnett Honors College at the University of Central Florida

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# **Abstract**

This research experiment investigated whether the nuclear taboo was more influential on participants when considering the use of nuclear weapons, or if the participants were influenced more by cost benefit analysis when deciding to use nuclear weapons. In this study, we presented a fake military scenario to respondents with a total of eight different versions that either did or did not include: genocide, high casualties, and nuclear weapons. Participants could then select whether they agreed, disagreed, or needed more information as there answer. Breaking respondents down into these three groups, the results show that for all three respondent groups the independent variable with the strongest effect was nuclear weapons. The weakest variable was high casualty rates, while genocide had the second strongest effect on the respondent's decision-making process. These findings indicate that respondents were affected by the nuclear taboo and were less likely to conduct cost-benefit analysis when giving their answer to the military proposal.

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## INTRODUCTION

One of the most powerful devices ever created by mankind are nuclear weapons. Used only once in combat, they have not been used since World War Two. Many have tried to explain the precedent of non-use, and one school of thought is the nuclear taboo. The purpose of this thesis is to determine if social norms shape public attitudes regarding the use of nuclear weapons based on Nuclear Taboo Theory. A norm is defined by Tannenwald (1999) as, "a shared expectation about behavior, a standard of right or wrong." (pg. 436). This mutual expectation exists between sovereign states who are also members of the international community.

According to Tannenwald, the nuclear taboo forbids the use of nuclear weapons, and focuses not on the behavior itself, but the belief about the behavior (1999, 436). Each state's influence over their populations helps establish such normative beliefs among each state's citizens creating a consensus internationally about the behavior.

However, Press, Sagan, and Valentino found that the nuclear taboo is weak among Americans, and that it does not take much for Americans to approve of the use of nuclear weapons (2013, 202). These findings seriously undercut the claims of Tannenwald and others that a nuclear taboo is effective in preventing the use of nuclear weapons. According to Press, Sagan, and Valentino, only a small group of subjects who rejected the use of nuclear weapons based their response about using nuclear weapons as immoral (2013, 202). These findings indicate the nuclear taboo is weak, and that there might be other explanations for why nuclear weapons have not been used during conflicts. However, there are problems with Press, Sagan, and Valentino's (2013) research design. This thesis will use a more appropriate experimental framework to test if the nuclear taboo shapes public opinion on the use of nuclear weapons.

## LITERATURE REVIEW

Previous literature regarding the nuclear taboo argues that the public sees the use of nuclear weapons as morally wrong. The nuclear taboo is a concept that is derived from an international relations theory known as constructivism. According to Checkel, constructivism has two assumptions, first the environment where states interact takes place is social and material, second this setting offers states an understanding of their interests by constituting to them (1998, 325). These two assumptions allow for the environment of the international system to dictate actions and assumptions that states make towards others, which provide states with an identity that tells others what their interests are. These interests provide the foundation for social norms to be created that cause states to behave a certain way or share similar beliefs, such as the nuclear taboo. Yu-tai Tsai (2009) states, "Constructivism emphasizes the sociological concepts of ideas, norms, identity and culture." (22). These social concepts help create and change the way states interact in the international system.

According to Tannenwald, the United States in from using nuclear weapons during the Korean War, because their allies viewed nuclear weapons as immoral (1999, 445). This response from other states in the international system gave a consensus that nuclear weapons were indeed not appropriate to use. Tannenwald (2007) stated, "A powerful taboo against the use of nuclear weapons has developed in the global system" (2). This indicates that this belief is a part of the international social order and is binding to all member. Also, Tannenwald says the taboo helps define weapons into categories such as acceptable or unacceptable and has become a set of practices among states defining what it means to be civilized (1999, 437). This allows for nuclear

weapons to be labeled by states with a clear rule as to what actions have limits to them and that these limits are established through normative beliefs about the use of nuclear weapons.

According to Tannenwald, a taboo is a normative prohibition that is focused on protecting individuals and societies from conducting behavior that could be harmful to others and themselves (2005, 8). The nuclear taboo represents an intervention among states in the international system that all states must avoid this type of behavior due to the risks associated with nuclear weapons, which could have apocalyptic ramifications. Quester says, a taboo is something that we simply reject, and are not willing even consider doing (2005, 79). It is this outcome that forces states to not only comply with the taboo but see it as a necessary action to prevent any state from breaking the taboo. Additionally, Tannenwald claims evidence of a nuclear taboo can be seen by the way people think and talk about nuclear weapons, and actions taken by leaders of states as well as international organizations (2005, 9). The nuclear taboo does exist because state actors associate a certain type of destruction with the use of nuclear weapons that is severe. This interpretation is proof that a taboo has developed when it comes to the use of nuclear weapons and how nuclear missiles differ from conventional types of weapons.

According to Paul proof of the existence of a nuclear taboo can be seen by the fact that there exists no legal ban on the use of nuclear weapons, and nuclear states have refrained from using them against nonnuclear states, even when it made sense to use them (1995, 699). This proves that states, who are sovereign members of the international system do see the use of nuclear weapons as wrong and will not consent to using nuclear weapons even if it increases their odds of winning a war. Also, this demonstrates that even though the use of nuclear weapons may be beneficial to a state in the short term, it would have long term effects that would cause

damage to the international system. This damage would destroy all the states in the system, including any state who used nuclear weapons. The outcome of non-use by nuclear states, is a result of the nuclear taboo, and the taboo's perception about nuclear weapons forces states to avoid being associated with nuclear usage.

Also, Paul stated that, the nuclear taboo developed due to the amount of destruction associated with nuclear weapons, giving them a unique distinction from other types of weapons (1995, 702). The destruction that is so closely related to the use nuclear weapons would provide another reason why states would not want to use nuclear weapons. It will allow for massive amounts of devastation in such a short period of time, which states would mostly likely never be able to recover if nuclear weapons were used regularly in combat. Due to the type of destruction caused by nuclear weapons, it would cost states a lot of money and time to rebuild parts of their country, especially if a large portion of their population was killed. These consequences would make many states want to avoid massive loss of their population or infrastructure because the effects would be immediate, rather than expanding gradually.

Gizewski claims that, the nuclear taboo is a significant obstacle causing restraint to the use of nuclear weapons (1996, 398). This shows that the taboo has law type of effect that forces states to view the use of nuclear weapons an illegal action. According to Paul (2010), "A taboo has an absoluteness to it whereby individual leaders would not consider the use of nuclear weapons as a rational option under any circumstances" (854). This establishes that the nuclear taboo has a significant effect on individual leaders, causing them to see the taboo as type of norm that should be preserved. Frey stated, norms are the rules about behavior, based upon an identity (2006, 5). Those who follow the taboo share a common identity that sees the use of nuclear

weapons as mutual destructive. It is this commonality that helps fuel the nuclear taboo and has provided the results of non-use for the past 70 years.

In Press, Sagan, and Valentino's experiment they discuss two distinct concepts that help describe the logic of actions, they are logic of consequence and logic of appropriateness.

According to Schulz, logic of consequence and logic of appropriateness are helpful in classifying the actions of imperfectly rational actors and can be beneficial in understanding their behavior.

(2014, 2). These two logics were used to examine survey respondents in Press, Sagan, and Valentino's research experiment to see if people would approve of the use of nuclear weapons. Schultz (2014) states that, "Actors driven by logic of consequence engage in some form of imperfect analysis to evaluate future consequences of their decisions" (2). The weighing of possible outcomes to situations helps actors assess what actions are the best or cost effective. Kopelman, Messick, and Weber finds that appropriateness is distinct because of its emphasis on rules as driving decision making processes. (2004, 283).

According to March and Olsen (2011), "The logic of appropriateness is a perspective on how human action is to be interpreted." (pg. 478). March and Olsen define the logic of appropriateness as human actions that are driven by rules about certain behavior, that actors seek to fulfill these obligations embedded through social collectivity (2011, 478). The nuclear taboo is seen as the responsible interpretation to prevent the use of nuclear weapons by all members in the international community because the taboo is directed by the interests of each state's institutions. Kopelman, Messick, and Weber (2004) state, "Rules simplify behavioral choices by narrowing options" (283). States with nuclear weapons know that if they use them, they will be violating their own institutions norms. These repercussions help keep states from not only using

nuclear weapons but limit the appeal to acquire them because they are unusable. Additionally, March and Olsen describe the process of rule following as, a cognitive process that involves reasoning; but is not connected to future consequences, rather acting appropriately according to collective practices, based on mutual understandings of what is true, reasonable, right, and good. (2011, 479.)

However, some recent research on the topic of the nuclear taboo puts the assumption that the public sees the use of nuclear weapons as morally wrong in doubt. According to Press, Sagan, and Valentino, public opinion surveys have been used to try and measure the public perception regarding nuclear weapons; however, these surveys are often yes or no questions, and do not look at the reasons behind their response (2013, 194). These surveys fail to capture why nuclear weapons are perceived to be right or wrong due to the lack of an explanation for the public's negative response towards the use of nuclear weapons. Press, Sagan, and Valentino also stated that public opinion polls about nuclear weapons are infrequently and inconsistently worded. (2013, 194). Thus, they question many studies that suggest a nuclear taboo is the reason why nuclear weapons have not been used.

According to Press, Sagan, and Valentino, scholars that studied nuclear norms focused on the beliefs and attitudes of political and military leaders who made statements during past military crisis involving the decision to use or not use nuclear weapons. (2013, 193). Focusing on these elite's statements helped give context to why leaders decided not to use nuclear weapons and established the existence of a taboo among elites. However, Press, Sagan, and Valentino argue that studying elite statements has limitations such as actions or views expressed could have more than one explanation, as well many statements made have been in the public, which could

have a self-serving bias, and limits the study of nuclear attitudes to historical cases only. (2013, 193). These critics put assumptions about the existence of a nuclear taboo in doubt and forces the need for more analysis and research to be conducted on the topic, to determine how strong the taboo is on the public's perception on the use of nuclear weapons.

The results of Press, Sagan, and Valentino's experiment show that social norms are not the reason why the public is against the use of nuclear weapons, rather that the costs outweigh the benefits of using them (2013, 202). This argument is derived from the logic of consequence, which Schultz defines as actions that are driven by an individual's assessment of all the possible outcomes and choosing the one that is seen as most beneficial (2014, 1). This argument challenges the nuclear taboo by arguing that the public would consider the use of nuclear weapons if the benefits outweighed the cost. Thus, the public perception about the use of nuclear weapons is not inherently based in the idea that nuclear weapons are unjustifiable, but the public can in fact justify their use depending upon desperation. As Press, Sagan, and Valentino (2013) stated, "People do not dabble in cannibalism when they are a little hungry; rather they resist until they are on the verge of starvation, and then only might they break the taboo." (202). This experiment has challenged the idea that cost benefit analysis trumps the nuclear taboo in determining the public's perception on nuclear weapons usage.

## THEORY AND HYPOTHESIS

In this experiment, there are three independent variables that are being measured to assess whether respondents are choosing their answer based off logic of consequence or logic of appropriateness. Respondents will be given three options to choose for their answer, they can choose to agree, disagree, or need more information. The first variable is the type of airstrike that is being carried out (nuclear or conventional), the second is the number of casualties caused by the airstrike (ranging from 5,000 to 50,000), and the third is presence of another social norm (genocide). Each independent variable will be given a hypothesis, and there will be an additional three hypotheses for respondents who selected need more information as their answer.

The independent variable high casualty rate will cause respondents to conduct cost benefit analysis because the respondents will want to minimize the amount of lives lost in the planned military operation. Additionally, if casualty rates are high, this will cause respondents to be less supportive because they view the amount lives lost as costly. Also, if the operation results in high casualty rates, respondents would view the military action as unnecessary, preferring to seek an alternative military operation that would result in fewer casualties and would be more likely to disagree with the planned military action. Respondents could also see high casualty rates as potentially risky, considering that the military operation may kill a lot of innocent people. Support for this hypothesis would falsify the nuclear taboo because respondents are making their decision based off the expected casualty outcomes of the planned military action, not the type of weapons being used.

**Hypothesis 1:** Scenarios with higher casualty rates, will make respondents more likely to disagree with the planned military action.

The independent variable low casualty rates will cause respondents to conduct cost benefit analysis because the respondents will prefer to conduct military operations that have low casualty outcomes. Seeing the outcomes of the military operation as more important, rather than adhering to certain rules about military tactics. If casualties are low, the military operation will appear more reasonable to the respondent because the number of casualties is low and do not carry a heavy cost. With lower casualty rates respondents would agree with the planned military action because there is a lesser possibility of innocent people dying because of the planned military action. Support for this hypothesis would falsify the nuclear taboo because respondents are making their decision based off the expected casualty outcomes of the planned military action, not the type of weapons being used.

**Hypothesis 2:** Scenarios with lower casualty rates, will make respondents more likely to agree with the planned military action.

The independent variable conventional airstrike will cause respondents to use logic of appropriateness to come up with their answer because conventional weapons are seen as an ethical military tactical response. Respondents will see the use of conventional weapons as a normal practice of military strategy and will view the action as ordinary or routine. This will cause the respondents to agree with the planned military action regardless of casualties because the military action being taken is considered a routine type of operation. Also, respondents may view casualties as a unpreventable outcome of military conflict. Additionally, respondents will

view the use of conventional weapons as a responsible reaction and does not violate any rules. Conventional airstrikes also could appear to be more effective because they minimize the amount of U.S involvement in foreign conflicts. Support for the hypothesis would confirm that a nuclear taboo is supported because the type of weapons being used is influencing the respondents answer.

**Hypothesis 3:** Scenarios with conventional airstrikes present, will make respondents more likely to agree with the planned military action.

The independent variable nuclear airstrike will cause respondents to use logic of appropriateness to reach their answer because nuclear weapons are an unethical military tactic. Respondents will view the use of nuclear weapons as an extreme type of evil in terms of military capabilities. Respondents will not support the use of nuclear weapons because they see them as morally wrong to use in military operations, because they cause massive amounts of casualties and damage in a matter of seconds. Additionally, respondents would see using nuclear weapons as a potential opportunity for U.S adversaries to retaliate or could signal to other states that nuclear weapons are okay to use. As well respondents would see the use of nuclear weapons as potentially damaging to U.S reputation. Also, respondents would consider the use of nuclear weapons as an uncivilized type of military action, that is goes against American values. Support for the hypothesis would confirm that a nuclear taboo is supported because the type of weapons being used is influencing the respondents answer.

**Hypothesis 4:** Scenarios with nuclear airstrikes present, will make respondents more likely to disagree with the planned military action.

The independent variable genocide will cause respondents to use logic of appropriateness to reach their answer because genocide is seen as repulsive action that is condemned by the international community. Respondent's will view the presence of genocide as an evil act that must be stopped, and that all tactics are on the table when considering the prevention genocide. Genocide will have the strongest effect on the respondents because of the historical implications that this type of behavior has had in the past. Causing many respondents to view the act of genocide as worse than the use of nuclear weapons or conducting a military operation that results in high casualties. Although respondents may not want to use nuclear weapons or accept high casualties, they will if that means preventing a genocide. Support for the hypothesis would falsify the nuclear taboo because genocide is seen as a greater evil and must be prevented by any means necessary.

**Hypothesis 5:** Scenarios with genocide present, will make respondents more likely to agree with the planned military action.

The independent variable without genocide will cause respondents to use logic of consequence to get their answer because without genocide in the scenario respondents will view the military action as unnecessary. Genocide tends to cause a certain type of response that is urgent and demands immediate action to prevent further atrocities. However, if this element is absent in the scenario, fewer respondents will care because they will not see the military action as in U.S interests. If there is no humanitarian need to step in, then fewer respondents will be willing to use military resources because they view military action as to costly. Support for this hypothesis does not confirm or falsify the nuclear taboo, because it does not measure whether the use of nuclear weapons is affecting the respondents decision-making process.

**Hypothesis 6:** Scenarios without genocide present, will make respondents more likely to disagree with the planned military action.

Respondents were given a third option that they could select for their answer and that was need more information. The reason respondents were given this option was to allow the respondent to not have to commit to a yes or no answer. Also, this allowed for respondents to be broken up into more than just two groups, providing a wider range of responses that could include both logics. As well this answer was used to assess whether respondents would want to look for more information or if they had enough to decide. Additionally, the need more information option provided another test group to look at to examine which effects were the strongest for each group of respondents.

The independent variable high casualty rate will cause respondents to conduct cost benefit analysis because the respondents will want to minimize the amount of lives lost in the planned military operation. Respondents will be less likely to select need more information if casualty rates are high because the outcome is too costly. Additionally, respondents could also see high casualty rates as potentially risky, considering the operation may kill a lot of innocent people. Also, if the operation results in high casualty rates respondents would view the military action as unnecessary, seeking an alternative military operation with fewer casualties. Support for this hypothesis would prove the nuclear taboo is supported because the respondents are more likely to give a definitive answer if high casualties are going to result from the military proposal.

**Hypothesis 7:** Scenarios with high casualties, will make respondents less likely to select need more information for the planned military action.

The independent variable nuclear airstrikes will cause respondents to use logic of appropriateness to select their answer because, nuclear weapons are an unusable weapon. Additionally, using nuclear weapons would increase the risk of damaging the U. S's reputation and would violate a lot of American values. This would cause more respondents to not select need more information because the stakes are so high that they would rather say yes or no to the planned military operation. Support for this hypothesis would confirm that the nuclear taboo is supported because respondents are more likely to give a definitive answer if nuclear weapons are being used in the military proposal.

**Hypothesis 8:** Scenarios with nuclear airstrikes, will make respondents less likely to select need more information for the planned military action.

The independent variable genocide will cause respondents to use logic of appropriateness to reach their answer because genocide is seen as repulsive action that is condemned by the international community. Genocide is seen as an international violation and is seen by all states as an immoral practice. Using genocide would cause respondents to not select need more information because they see the need to prevent genocide from occurring. Respondents would see the result of doing nothing as immoral, and too risky to ignore. Support for this hypothesis would falsify the nuclear taboo because the respondents are more likely to give a definitive answer if genocide is occurring and would be willing to support the military proposal to prevent it further by any means necessary.

**Hypothesis 9:** Scenarios with genocide, will make respondents less likely to select need more information for the planned military action.

# METHODOLOGY

There are several important defects in Press, Sagan, and Valentino's experimental study of attitudes about nuclear weapons. The first problem is the prospective target in the experiment is Al Qaeda. Most American's view Al Qaeda as evil; this bias makes it acceptable to use nuclear weapons against America's greatest threat. Al Qaeda is not just an enemy of the United States; this group carried out the largest terrorist attack in American history on U.S soil. This event would limit the perception of the taboo due to the magnitude of the event and would have a priming effect on the respondents. According to Schacter, Stevens, and Wig (2008), "Priming is typically defined as a nonconscious or implicit form of memory" (624). Many would think a justifiable response would be for the United States to use nuclear weapons against Al Qaeda to prevent another major attack from happening again. Press, Sagan, and Valentino admit respondents could have selected to use nuclear weapons because the target was planning to kill many American civilians and went with the more effective option. To them, it was the most moral alternative. (2013, 201).

Additionally, Press, Sagan, and Valentino describes policy choices that are determined by strategic interactions as results of logic of consequence, because states choose to avoid certain tactics that could set a precedent and harm their mutual long-term benefit. (2013, 189). However, by assuming that respondents who selected the option of setting a precedent for explaining why they did not favor using nuclear weapons, did so because of negative long-term costs. This assumption ignores the possibility that a respondent could have chosen not to use nuclear weapons because they did not want to break or change the rules about nuclear weapons use.

Causing the respondents to choose to set precedent as their response to why they did not approve

of using nuclear weapons. In this case, the respondents would be using logic of appropriateness not logic of consequence in answering the question about why they did not support using nuclear weapons.

Furthermore, Press, Sagan, and Valentino, define logic of appropriateness as preconceived ideas about types of behavior in terms of ethical and social prohibitions. (2013, 189). In their experiment logic of appropriateness is closely associated with moral and ethical responses. However, Schultz (2014) states that "logic of appropriateness does not primarily refer to moral or aesthetical appropriateness; rather, the key feature of logic of appropriateness is a matching of rules to situations." (3). This explains why most of the respondent who chose not to use nuclear weapons selected setting a precedent as their reason because using nuclear weapons would have gone against the rules of the situation. Focusing too closely on moral and ethical concerns, Press, Sagan, and Valentino, misinterpret what actions apply to logic of appropriateness.

Also, Press, Sagan Valentino stated that, the decision to use nuclear weapons could set a precedent causing other states to build or use them (2013, 191). This variable is labeled as "set precedent", on their list of reasons for preferring a conventional strike. Since Al Qaeda is not a recognized member of the international community, states would not view the use of nuclear weapons as a violation of norms. Norms can only be broken if it they are considered to be a part of a group's identity. Another reason why the nuclear taboo would be void, because Al Qaeda is not seen as civilized group, this perception would allow for the United States to be seen justified in using nuclear weapons without changing the precedent of non-use. Tannenwald stated that the non-use of nuclear weapons is an agreement among the civilized societies, considered to be state

actors (1999, 437). Al Qaeda does not fit into this group; therefore, using nuclear weapons against a non-state actor would not have the same effect as using nuclear weapons against another civilized state actor.

Another defect in the experiment is that all the information is provided to the participants inadvertently priming respondents to conduct cost benefit analysis, rather than them choosing the logic of consequence approach. Domke, Shah, and Wackman (1998) stated, "Priming effects-the process by which activated mental constructs can influence how individuals evaluate other concepts and ideas" (51). Information that participants are given include mission success rates, estimated casualty rates, and description of hypothetical terrorist attack if the mission fails. Providing all this information reduces the presence of logic of the appropriateness in the experiment, priming the respondents so that they will give a certain answer to a question.

According to Schacter and Tulving (1990), "priming is a type of implicit memory; it does not involve explicit or conscious recollection of any previous experiences." (pg. 301). By using certain words in their scenario such as casualty rates, success, and terrorist to describe what is going, respondents are giving answers that are based in logic of consequence. Dehaene et al. (1998) argued, priming causes cognition process to start without having access to consciousness (597). The respondents are not doing this knowingly and are not consciously coming to their own conclusion in Press, Sagan, and Valentino's research experiment.

Lastly, for respondents who choose to use nuclear weapons in their scenario, there is no way to measure if this response is a result of logic of appropriateness. Press, Sagan, and Valentino assume that if the respondents are choosing nuclear weapons, they are cost benefit

analyzing, even though respondents could be making this decision under the influence of another norm. If a respondent chooses to use nuclear weapons because Al Qaeda is a terrorist group and terrorism is seen by civilized societies as morally wrong, then the response to use nuclear weapons is based off the logic of appropriateness argument because terrorism is seen by civilized society as prohibited behavior. If the public does perceive terrorists' organizations as a danger to society, then nuclear weapons would become acceptable to use to defeat terrorism. The United States has declared war on terrorism in the past. This declaration in the eyes of the American public must be won. The negative feelings of Americans toward terrorists' organizations would come from the social norms established by the international community, and the decision to use nuclear weapons would stem from logic of appropriateness.

These defects can be overcome using an alternate experimental design. In this alternate scenario, participants will be presented with a military conflict and will have to decide whether they approve, disapprove, need more information, or neither approve nor disapprove of a potential United States military action. The three experimentally manipulated independent variables are, the type of airstrike that is carried out, the casualties caused by the airstrike, and a social norm. The scenario has eight different versions, to account for the three variables in the experiment. Each version will have a military action conducted by the United States, either a conventional airstrike or a nuclear airstrike. Each version will have casualties ranging either from 5,000 to 50,000. Additionally, the state the United States has launched a military strike against a state that have conducted genocide or have not. This gives us all the possible versions of the scenario in the experiment, to determine if there is in any difference in respondent's answers to the different versions. See scenarios below.

#### Version 1

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. To stop the attack before the allied government is overthrown, the United States government is going to launch a [conventional airstrike] against the attacking state's military forces. The conventional airstrike is [estimated to kill 50,000 people.]

#### Version 2

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. To stop the attack before the allied government is overthrown, the United States government is going to launch a [nuclear airstrike] against the attacking state's military forces. The nuclear strike is [estimated to kill 5,000 people.]

#### Version 3

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. The attacking state has also [engaged in genocidal attacks] against civilians in the allied state. To stop the attack before the allied government is overthrown [and to stop the attacking state from continuing genocide,] the United States is going to launch a [conventional airstrike] against the attacking state's military forces. The conventional airstrike is [estimated to kill 50,000 people.]

#### Version 4

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. The attacking state has also [engaged in genocidal attacks] against civilians in the allied state. To stop the attack before the allied government is overthrown [and to stop the attacking state from continuing genocide,] the United States is going to launch a [nuclear strike] against the state's military forces. The nuclear strike is [estimated to kill 5,000 people.]

#### Version 5

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. To stop the attack before the allied government is overthrown, the United States government is going to launch a [nuclear airstrike] against the attacking state's military forces. The nuclear strike is [estimated to kill 50,000 people.]

#### Version 6

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. To stop the attack before the allied government is overthrown, the United States government is going to launch a [conventional airstrike] against the attacking state's military forces. The conventional airstrike is [estimated to kill 5,000 people.]

#### Version 7

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. The attacking state has also [engaged in genocidal attacks] against civilians in the allied state. To stop the attack before the allied government is overthrown [and to stop the attacking state from continuing genocide,] the United States government is going to launch a [conventional airstrike] against the attacking state's military forces. The conventional airstrike is [estimated to kill 5,000 people.]

#### Version 8

Imagine that a state has attacked an American ally. The purpose of the attack is to overthrow the ally's government. The attacking state has also [engaged in genocidal attacks] against civilians in the allied state. To stop the attack before the allied government is overthrown [and to stop the attacking state from continuing genocide,] the United States government is going to launch a [nuclear strike] against the state's military forces. The nuclear strike is [estimated to kill 50,000 people.]

After participants have read the scenario they will be given two questions. The first question asks respondents, how much did the following considerations influence their answers? Reponses range from a great deal, a lot, a moderate amount, a little, not at all, and not relevant. By providing respondents with a range we can assess whether logic of consequence or logic of appropriateness is stronger or weaker in an individual's decision. Then respondents will be presented with a second question and given a list of ten considerations and asked which considerations made them more supportive or less supportive of the planned military action? This will provide a clear idea of what specific information influenced respondents to be more or less supportive of the planned military action. Certain considerations will be coded as logic of consequence and others will be coded as taboo responses for both questions. In doing so we can accurately determine if people are influenced more by logic of consequence or the nuclear taboo.

After answering the scenario, respondents will give a list of questions and will be asked whether they strongly agree, agree, somewhat agree, neither disagree nor agree, somewhat disagree, disagree, and strongly disagree. Certain questions will be asked to measure different moral values such as harm and care, purity and sanctity, and in-group loyalty, helping identify which values are more closely associated with the nuclear taboo. Also, the survey asks respondents questions regarding patriotism and nationalism to measure how strong these attitudes about one's identity affect the decision to break a norm. Showing just how strong the nuclear taboo is when compared to other important identity behaviors.

This alternate design addresses the main problems in Press, Sagan, and Valentino's experiment. The first major defect in Press, Sagan, and Valentino's experimental design is their choice to use Al Qaeda as the prospective target. In the alternate experiment design, Al Qaeda is

no longer the main target of U.S military action, instead it is a state's military forces. The reason the state is not given a specific name, is to remove the American public's bias about the intended target of the U.S military. In the alternate design genocide is put in place of Al Qaeda, this establishes the state actor in the scenario as evil, without providing the state's name and provides the actor with an identity that does not completely remove in-group bias. By not giving the perspective target a name, the experiment avoids acquiring responses that are based off historical events in the past. Forcing the respondents to not evaluate the situation based on who is involved, but rather the type of action that is being taken. By not providing the name of the specific target, we are limiting the amount of in-group bias in the experiment.

The second problem in their experiment, is that one of the categories that respondents could choose from for preferring a conventional strike over a nuclear strike was, that it would set a precedent that would make nuclear weapons usable. The problem with this category is that Al Qaeda is not a state, other states would not view the use of nuclear weapons as a violation of norms, due to its lack of recognition in the international community. In the alternate experiment, making the perspective target a state. Allows for the respondents to correctly apply the category of "setting a precedent". The international community would not view the use of nuclear weapons against Al Qaeda, as it would if the target was a state. Making the perspective target a state, gives this category a more accurate response, due to the target being a member of the international community. The nuclear taboo is seen as a rule about the use of nuclear weapons among civilized societies, if the target does not fit into that category, then the rules about nuclear weapons do not apply to it. Thus, setting a precedent would not count as a reason, why respondents would choose conventional strike, over nuclear strike.

Additionally, instead of asking respondents why they choose not to use nuclear weapons, the alternate experiment asks which considerations in the given scenario made them more supportive or less supportive of the U.S military plan. This gives the respondents multiple reasons for why they choose to support or not support U.S military action. Making it possible for respondents to conduct both logic of consequence and logic of appropriateness. Also, it limits the morality emphasis that Press, Sagan, and Valentino associated with the logic of appropriateness because we are not asking respondents why they choose their answer. Instead, we are asking respondents what information given influenced them the most in making their decision.

Another defect in their experiment that was listed was that they provided all the information to the respondents, inadvertently priming respondents to conduct cost benefit analysis, rather than them choosing the logic of consequence approach. In the alternate experiment, all the information is not provided to the respondents, instead they must look for the information. By requiring respondents to conduct cost benefit analysis on their own, the experiment is giving the respondents the opportunity to choose how they come up with their answer to the scenario. By avoiding unnecessary information in the scenario, minimizes the possibility for priming to occur. Instead of telling respondents what the consequences will be, respondents will have to decide what the consequences could be. Thus, avoiding information that would trigger a specific response, rather than the responses being genuine and coming directly from their own thought process.

Lastly, the experiment, does not considered the presence of another social norm. Press, Sagan, and Valentino assume that if respondents choose to use nuclear weapons, then the respondents are using logic of consequence. By using a terrorist group such as Al Qaeda as the

target, the respondents could be basing their decision to use nuclear weapons because of terrorism is being an immoral act. In the alternate experiment, the issue is addressed by accounting for another social norm as a reason why nuclear weapons would be appropriate to use. According to Dolan, deciding to violate a taboo to preserve other values will seem tragic rather than taboo (2013, 38). The alternate experiment uses genocide as the other social norm present in the experiment because genocide is condemned broadly among the international community as an immoral act. This should provide us with the same type of reasoning that was not accounted for in Press, Sagan, and Valentino's experiment, as to why its respondents would approve the use of nuclear weapons to defend other social norms that are more vital to the interest of civilized society than the nuclear taboo.

In this experiment the participants consisted of mostly college students, however, a small number of the respondents were quite older. The average age of the respondents was twenty-eight years old of the 104 respondents who participated in the survey. The survey was created using Qualtrics and was disseminated through email to students providing them with information about the survey and the survey link to take it. The number of respondents who participated that were male was forty-nine and the number of respondents who were female that participated was fifty-five. When it came to income most respondents made \$50,000 or less with a total of thirty-seven respondents falling in this category, and twenty-nine respondents made more than \$50,000, but less than \$100,000. With twenty-four respondents making more than \$100,000 a year. Here are the results from the survey data collected.

# **RESULTS**

Table 1: Respondents Who Selected Agreed or Disagreed

Indep. Variables	Model 1	Model 2	Model 3	Model 4
	Agree	Agree	Disagree	Disagree
Nuclear	-1.168**	-2.666***	2.271***	3.662***
	(.435)	(.735)	(.534)	(.946)
High Casualty	481	979†	1.088*	1.983*
	(.429)	(.586)	(.501)	(.819)
Genocide	1.141**	.937†	939†	422
	(.434)	(.560)	(.499)	(.636)
SizeHousehold		.459		784*
		(.305)		(.359)
Income		.059		.226
		(.188)		(.229)
Ideology		.951**		-1.208***
		(.276)		(.346)
Him		131		.353
		(.552)		(.639)
Age		014		019
		(.020)		(.029)
NukesLSupt		.649		518
		(.566)		(.668)
Constant		-2.830		1.565
		(1.279)		(1.417)
# of resp. 1	45		34	
# of resp. 2		88		88

Key: 
$$\dagger = p < .1$$
,  $* = p < .05$ ,  $** = p < .01$ ,  $*** = p < .001$ ,  $P = (sig)$ 

Casualties: Low or High

Analyzing the findings using logistic regression for binary dependent variables, I have found the results for Hypothesis 1 to be mixed. The number of respondents who agreed to the military operation was 45, and the number of respondents who selected disagree was 34. The

first hypothesis expects that high casualties will increase disagreement with the proposed military action and decrease agreement with the proposed military action. While the high casualties co-efficient for agree was negative (-.481) and in the expected direction, it did not meet thresholds of statistical significance (p= .263). In contrast, the high casualty co-efficient for disagree is in the expected direction (1.088), and it is significant at the p= .05 level (p = .03). Hypothesis 7 expects that high casualties will decrease the need for more information with the proposed military action. The number of respondents that selected need more information was 25. The evidence for hypothesis 7 is mixed. While the high casualty co-efficient for need more information was negative (-.453) going in the expected direction, it did not meet thresholds for statistical significance (p= .343).

Analyzing the findings using the logistic regression for binary dependent variable, I have found that Hypothesis 2 is mixed. The second hypothesis expects that low casualty rates will increase agreement with the proposed military action and decrease disagreement with the proposed military action. While the effect of high casualty co-efficient for agree was negative (-.481), this shows that for low casualties the result is in the expected direction and is not statistically significant (p=.263). This shows that the effect of low casualties is also not statistically significant and has minimal effect on the respondent's decision-making process. The co-efficient value being close to zero, tells that similar effects would result if lower casualties were present in the scenario. Additionally, the high casualty co-efficient for disagree is in the expected direction (1.088), and it is statistically significant at the p=.05 level (p =.03). This shows that low casualties would have a stronger effect on the respondents who disagreed to do the distance the co-efficient is from the score of zero.

Airstrike: Nuclear or Conventional

Analyzing the findings using the logistic regression for binary dependent variables, I have found the results for Hypothesis 3 to be correct. The third hypothesis expects that conventional airstrikes will increase agreement with the proposed military action and decrease disagreement with the proposed military action. While the nuclear co-efficient for agree was negative (-1.168) in the expected direction, this shows that conventional airstrike would have the opposite effect making the respondents more likely to agree with the proposed military action. The nuclear co-efficient for disagree was positive (2.271) and in the expected direction. This co-efficient value far enough away from zero that the use of conventional airstrikes would have the opposite effect on respondents.

Analyzing the findings using the logistic regression for binary dependent variable, I have found the results for Hypothesis 4 to be correct. The fourth hypothesis expects that nuclear airstrike will increase disagreement with the military proposal and decrease agreement with the military proposal. With the nuclear co-efficient for agree being negative (-1.168) in the expected direction, it also meet the thresholds for statistical significance (p= .007). Additionally, the nuclear co-efficient for disagree is (2.271) in the expected direction and it is statistically significant at the p= .05 level (p= .000). However, nuclear has a stronger impact on the respondents who disagree, compared to respondents who agreed with the planned military action. Hypothesis 8 expects that nuclear airstrike will decrease need for more information with the proposed military action. The results for this hypothesis are mixed. While the nuclear co-efficient for need more information was negative (-.901) going in the expected direction, it did not meet thresholds for statistical significance (p= .066).

### Genocide or Not

Analyzing the findings using the logistic regression for binary dependent variable, I have found the results for Hypothesis 5 to be mixed. The fifth hypothesis expects that genocide will decrease disagreement with the proposal and increase agreement with the proposal. With the genocide coefficient for agree being positive (1.141) in the expected direction and is also statistically significant at the p=.05 level (p=.008). In contrast, the genocide co-efficient for disagree is negative (-.939) and is in the expected direction, however, it did not meet the thresholds for statistical significance (p=.060). The ninth hypothesis expects that genocide will decrease need more information with the proposed military action. The evidence for this hypothesis is mixed. While the co-efficient for need more information was negative (-.556) in the expected direction it did not meet the thresholds for statistical significance (p=.244). The strongest effect for this hypothesis is the category of respondents who selected agree with the military proposal.

Analyzing the findings using the logistic regression for binary dependent variable, I have found the results for Hypothesis 6 to be mixed. The sixth hypothesis expects that when genocide is not in the scenario it will decrease agreement with the military proposal and will increase disagreement with the military proposal. With the genocide co-efficient for agree being positive (1.141), in the expected direction, when genocide is absent the effect will be negative for those who agree with the proposal. With the genocide co-efficient for disagree being negative (-.939) and in the expected direction, when genocide is absent it will increase disagreement for the proposed military operation. The charts below represent the number of times each variable was

present in the scenario for respondents who selected agree, disagree, and need more information as there answer.

Figure 1: Respondents Who Selected Agree with Variables Present

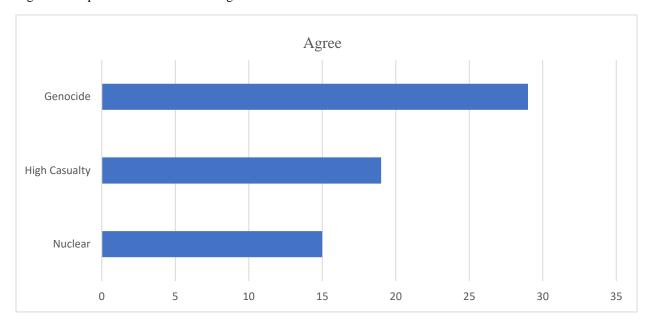
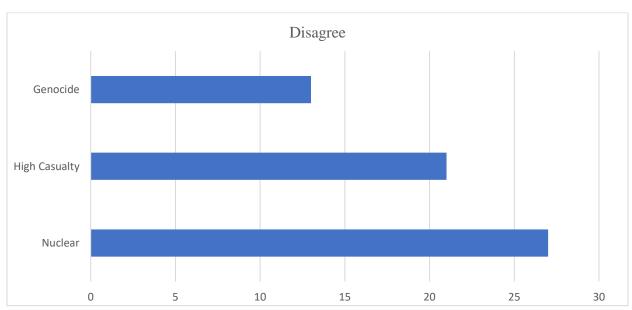


Figure 2: Respondents Who Selected Disagree with Variables Present



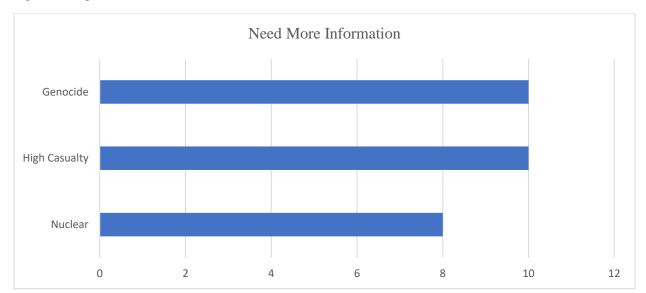


Figure 3: Respondents Who Selected Need More Information with Variables Present

## Control Variables

Additionally, the results include a few other independent variable effects such as age, gender, income, and political ideology. Analyzing the results shows that there is only one statistically significant variable the influences the respondents and this is political ideology. Looking at the variables in the equation table for respondents who agreed with the planned military action, shows that the relationship is positive. Conservatives were more likely to agree with the proposed military action. The co-efficient value for political ideology is .951 and shows that there is a political ideology effect on the respondent's decision to the planned military action. The p-value for political ideology is (.001), which is statistically significant. These findings show that when respondents agreed to the planned military action, there is a political ideological influence when making their decision.

The results for respondents who selected disagree, when it came to political ideology had a negative effect. Conservatives were less likely to disagree with the proposed military action.

Analyzing the coefficient value for political ideology (which is -1.208), indicates that when respondents select to disagree, their political ideology has a major effect on the outcome. The p-value for political ideology is (.000), which is statistically significant. These findings show that when respondents disagreed with the planned military action, there was political ideological difference that influenced the respondents. Looking at the respondents who disagreed with the planned military action, there responses are more effected by political ideology than the respondents who agreed to the planned military action. Showing that when respondents came to disagree with the planned military action, their political ideology had a stronger influence over their decision as compared to the respondents who agreed to the planned military action. This effect can be seen by comparing the two p-values of each respondent group. Furthermore, the b value shows that the negative effect for respondents who disagreed with the planned military action, is larger than the respondents who agreed to the planned military action.

## DISCUSSION

For respondents who selected agree as their answer to the planned military action, showed that the nuclear variable had the strongest effect and the most statistically significant effect. With a coefficient value of (-1.168) and a p-value of (.007) nuclear had the strongest effect on the respondents who chose to agree with the proposal. This indicates that nuclear weapons made respondents more likely to disagree with the military proposal, than any of the other two variables. The second strongest variable for respondents who selected agree as their answer was genocide, with a coefficient value of (1.141) and a p value of (.008). These results show that when genocide is present in the scenario it increases the respondent's tendencies to agree with the planned military action, however, it is not as strong as the nuclear variable. The weakest variable for respondents who agreed to the planned military action was high casualties, the coefficient value of (-.481) and a p-value of (.263). These findings reveal that for respondents who agreed with the planned military action were influenced mostly by the nuclear variable and prove that the nuclear taboo had the strongest effect on respondents.

Looking at respondents who selected disagree as their answer to the planned military action. Indicated that the nuclear variable had the strongest and was the most statistically significant effect on the respondents. With a coefficient value of (2.271) and a p-value of (.000), nuclear had the strongest effect on the respondents who chose to disagree as their answer. The nuclear variable has the strongest effect on respondents who select disagree with the military proposal than any other variable. This proves the hypotheses and supports the effect of a nuclear taboo for respondents who selected disagree.

The second strongest variable for respondents who selected disagree as their answer was high casualties, with a coefficient value of (1.088) and a p-value of (.030). This shows that respondents are also not likely to support military action if the scenario has high casualty outcomes and proves that the nuclear taboo is not the only reason respondents are disagreeing with the planned military action. The weakest variable for respondents who disagreed with the planned military action was genocide, with a coefficient value of (-.939) and p-value of (.060). These results show that respondents who disagreed with the planned military action were more likely to do so because of the presence of nuclear weapons, followed by high casualties, and then genocide. These findings are consistent with the hypotheses and show that the nuclear taboo has the strongest effect when it comes to why respondents disagreed with the proposed military action.

Examining the respondents who selected need more information as their answer to the planned military action, conveyed that the nuclear variable had the strongest effect on the respondents. With a coefficient value of (-.901) and a p-value of (.066), nuclear had the strongest effect on respondents who selected need more information. This conveys that when nuclear weapons are present it increases the possibility that respondents will select disagree or agree with the proposed military action. The presence of nuclear weapons puts more skin in the game and increases the risk that respondents would have to be willing to consider, when selecting need more information.

The second strongest variable for this respondent group was genocide, with a coefficient value of (-.556) and a p-value of (.244). The variable with the weakest effect was high casualties, with a coefficient value of (-.453) and p value of (.343). Although, respondents are less willing to

select need more information when genocide or high casualties are present the strength of that relationship is relatively weaker than the nuclear variable. Respondents don't associate the same amount or risk for genocide and high casualties that they do for nuclear weapons. These results support the presence of a nuclear taboo for respondents who select need more information, however, the effect is weaker for this respondent group than the other two groups.

This thesis used a more appropriate experimental framework to test whether the nuclear taboo shapes the perception of nuclear weapons among the public. Challenging Press, Sagan, and Valentino's (2013) research that people are more likely to use logic of consequence rather than logic of appropriateness when assessing the use of nuclear weapons. There is evidence in this experiment that proves that logic of consequence is present when respondents are considering the use of nuclear weapons. The results for respondents who selected disagree for the proposed military action, show that high casualty rates had a significant effect on the respondent's decision. However, the findings of this research indicate that the logic of appropriateness has a stronger influence on respondent's decision compared to logic of consequence.

Most of the findings indicate that nuclear weapons seem to be the deciding factor for many of the respondents in the survey. The nuclear variable has some statistically significant effect for most of the respondent groups. While high casualty has some effect on the respondents, higher casualties have lower statistically significance and smaller coefficient values compared to the nuclear variable. Additionally, the third effect of genocide is present and respondents who do agree with the planned military action do so because of the presence of genocide. However, genocide has the lowest p-value of the three independent variables introduced in the research. It also has the smaller coefficient values than the other two variables

in the research and shows that genocide has minimal effect on the respondents. Overall, the variable with the strongest effect in the experiment is nuclear followed by high casualties, and then genocide. This research helps show that when respondents are deciding to agree or disagree with the planned military action when nuclear weapons are being used, respondents will disagree with the planned military action, revealing the presence of a nuclear taboo.

## CONCLUSION

There have been many theories that have tried to explain the practice of non-use when it comes to nuclear weapons, such as the nuclear taboo. The purpose of this thesis is to determine if social norms shape public attitudes regarding the use of nuclear weapons based on Nuclear Taboo Theory. By assessing if the public uses logic of appropriateness to make their decision about the use of nuclear weapons, or if they use logic of consequence when making their decision. This thesis has found that logic of appropriateness is responsible for the decision making of many of the respondents. These findings indicate that the variable with the most statistically significant effect of the three independent variables introduced was the type of airstrike used.

The other two variables in the research high casualties and genocide had relatively minor effects on the respondent's decision to agree or disagree with the planned military action. When looking at genocide, the effect is minimal on the respondent's decision-making process, while high casualties has a stronger effect on the respondent's answer. These research findings conclude that the nuclear taboo is present and that in the public's view, the use of nuclear weapons is unconventional and that they are unlike other weapons. That when it comes to nuclear weapons, the public does not support their use even if using them could beneficial. These findings help establish that a nuclear taboo is present and that the type of weapons being used has a greater effect than high casualties and the use of genocide.

This project has several limitations. One limitation is that the sample of respondents is relatively small for the number of variables present in the experiment. With only 104 total

responses for eight different outcomes, there is a limited amount of data present for each scenario. Second, most of the respondents are college students, and around the same age. This may have caused the experiment to only capture what one generation thinks about nuclear weapons, rather than the overall public. The third limitation of the experiment is that most of the respondents were U.S citizens and does not provide a representation of what other country citizens may think about the use of nuclear weapons. Lastly, although respondents are affected more by the presence of nuclear weapons, this does not mean that the nuclear taboo is the only reason for why they choose not to support the planned military action. Their maybe other factors about nuclear weapons that could be affecting the results of respondents about nuclear weapons.

To develop this research further, one could increase the number of independent variables present in the experiment. Considering that two of the three variables in the scenario are taboo related and only one is a logic of consequence, there might be other cost benefit variables that have a stronger impact on respondents, such as operational expenses or cost of damages. This could weaken the effect of nuclear or genocide variables on the respondents showing that cost benefit analysis is more effective in the decision-making process. Additionally, more research is needed to understand what unconscious psychological elements are in affect when respondents are making their decision. A possible experiment that could test this would be using priming to assess whether respondents have strong responses to certain words, such as nuclear or genocide compared to other words like casualties. This would help measure which variables that trigger the unconscious response of respondents more and would provide evidence of which type of variable is stronger. Overall, the results of this experiment indicate that nuclear weapons have more influence over respondents, when they go about assessing the scenario.

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