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Master Thesis

**Explaining US nuclear non-use between 1991 and 2022**

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## Abstract

Nuclear weapons have not been used for eight decades. This continued abstinence is puzzling researchers and fosters several explanation of the phenomenon. The most prominent and best researched explanations are nuclear deterrence and the nuclear taboo. Another explanatory approach, lying in between the constructivist, normative explanation of the taboo and the realist deterrence explanation, is the tradition of non-use. This Master-thesis investigates in how far the nuclear taboo, well researched until 1991, still holds to explain US nuclear non-use between 1991 and 2022. Therefore, the thesis tests the deterrence explanation and the tradition of non-use explanation against the taboo. To do so, the process of the development of the USA's public- and scholarly opinion as well as the stance of the political elite on nuclear issues is traced back through official US documents regarding nuclear strategy, congressional hearings as well as public opinion research and think tank pieces. The results suggest that the nuclear taboo is still present across the different levels analyzed, however it is not the sole explanatory factor of non-use. All data analyzed entails a strong deterrence discourse, and hints towards a tradition of non-use can be found as well. The study further indicates that the US government's approach to nuclear questions is mostly bipartisan. A similar trend is found in public opinion. On the contrary external events appear to have influence on US nuclear discourse. Consequently, rather than the upcoming US elections, US threat perception in respect to world events determines US nuclear discourse and ultimately nuclear abstinence.

## 1. Introduction

The dedication of this thesis is to increase the understanding of nuclear non-use since “[t]he continued non-use of nuclear weapons is one of the most important puzzles in international relations.” (Press, Sagan & Valentino, 2013). Therefore, this research contributes to the field of International Relations (IR). It further contributes to the research field of European Studies in the sense that US nuclear weapons assume a great role in European security. Europe’s growing deterrence gap between conventional and nuclear forces, is particularly vulnerable at this point since nuclear weapons can be combined with new systems and platforms. The fusion of affordable tech with nuclear technologies promises new opportunities for smaller states, influencing European security (Allen et.al, 2021). By constituting a major contribution to NATO’s nuclear strategy and assuring extended deterrence to European allies, the US nuclear arsenal becomes crucial to European defense (NATO, 2020; Vergun, 2019). This is especially important at a time in which war under Russia’s nuclear shadow returns to Europe. Hence, it is essential for European security to understand the USA’s nuclear non-use considering the credibility of extended deterrence. Non-use due to a taboo, calls the effectiveness of extended deterrence into question, making nuclear retaliation unthinkable (Press, Sagan & Valentino, 2013).

The relevance of understanding nuclear absence becomes particularly pressing, with the USA facing two nuclear opponents, China, and Russia, challenging the US led world order (Wilson Center n-d-m.). Both, as well as North Korea, invest in their nuclear capabilities, indicating a new strategic arms race (Allen et.al., 2021). Especially China’s ambitious towards Taiwan as well as Russia’s invasion of Ukraine imply potential for conflict. At this point, the Russian aggression against Ukraine and Putin’s expressions of nuclear threats towards NATO allies can be considered most pressing. Consequently, concerns if this conflict remains sub-nuclear dominate public discourse and determine the Western response to the invasion (Dreuzy & Gilli, 2022; Tannenwald, 2023).

Nina Tannenwald (1999) first addresses the phenomenon of the USA’s nuclear non-use after 1945 in her article *The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use*. She found that between the first use of nuclear weapons in 1945 and the gulf war in 1991, a strong norm constituting a nuclear taboo is internalized within US public opinion and therefore also in US policies (Tannenwald, 1999). But a lot has happened since 1991. On the one hand a legal prohibition on nuclear weapons, the so-called *nuclear ban treaty*, was adopted in 2017 by the United Nations (UN), although without any support of nuclear powers

(Tannenwald, 2018). Additionally, former US president Barack Obama emphasizes nuclear disarmament on the world's agenda (Tannenwald, 2018). In his 2009 speech in Prague, he states "*America's commitment to seek the peace and security of a world without nuclear weapons.*" (Obama 2009). On the other hand, Donald Trump does not seem to care about the nuclear taboo. In contrast to all previous US presidents since the 1970s, he does not declare to pursue disarmament in his Nuclear Posture Review (NPR) and lets the New Strategic Arms Reduction Treaty (NEW START) hang in balance (Tannenwald, 2018). Further, he participates in nuclear saber rattling with the North Korean leader Kim Jong Un on Twitter (Tannenwald, 2018). Even before Trump's presidency, researchers find that the American public is less averse to nuclear weapons than expected by taboo scholars. Accordingly, most of the US public would "*approve of the first use of U.S. nuclear weapons if they are told that such options are militarily advantageous, even at the costs of killing many innocent foreign civilians.*" (Press, Sagan & Valentino 2013). In 2017 Sagan and Valentino find that 60 percent of the American public is willing to support a nuclear attack on Iran, killing two million civilians, to save the lives of 20,000 American soldiers (Sagan & Valention, 2017).

Those developments raise important questions, in respect to the role of nuclear weapons in future conflicts. Therefore, the thesis is guided by the following research question: *In how far can the nuclear taboo explain USA's nuclear non-use between 1991 and 2022?*

The thesis proceeds with a literature review on the current state of research on nuclear abstinence. This is followed by a theoretical chapter, presenting the conceptual foundation and a chapter on the methodological framework. Subsequently, the data is analyzed, and the findings presented. This is followed by a discussion of the results and a conclusion, drawing on the implications of these findings.

## 2. Literature review

Within the academic literature the eight-decade long abstinence of nuclear attacks is discussed under various explanations. While some researchers find a normative explanation as a tradition of non-use (most notable: Paul, 2009) or even a taboo (most notable: Tannenwald 1999/2007), other researchers, most famously Waltz, argue in favor of credible nuclear deterrence. Those three explanations are the most frequent found throughout academic literature (see among others: Kütt & Steffek, 2015; Sauer, 2016; Press, Sagan & Valentino, 2013). Further research analyzes if nuclear strategies are guided by a *logic of appropriateness*, which supports a taboo explanation, or rather by a *logic of consequence* displaying an indicator for a tradition or the deterrence explanation. The following paragraph briefly reviews the academic discussion on nuclear non-use.

Press, Sagan, and Valentino's (2013) research focuses on US public perceptions of nuclear weapons. The authors consider the perspectives of the *logic of appropriateness* from the constructivist school of thought, highlighting that the decisions of actors are driven by their perception of whether an action is appropriate, rather than conducting a cost/ benefit analysis. The nuclear taboo is placed within this logic. Besides the *logic of appropriateness*, the *logic of consequence* can be considered to explain nuclear non-use. This logic is displayed by the military utility school, and the strategic interaction explanation. The first scholar suggests that decision-makers mainly focus on the efficiency of weapons or tactics. The second version considers strategic interaction as a main factor of decision-making. In this second perspective nuclear non-use is based on the fear that other states might consider the use of nuclear weapons once a state employs them. These views feature into the tradition of non-use as well as the deterrence explanation. Press, Sagan, and Valentino (2013) find that when discussing nuclear weapons and their potential use, the *logic of consequence* is reflected stronger within the American public than the *logic of appropriateness*. Almost the majority of the American population approves of a US nuclear launch, if it proves to be militarily beneficial, even considering civilians casualties (Press, Sagan & Valentino, 2013).

Sauer (2016) dedicates his book *Atomic Anxiety. Deterrence, Taboo and the Non-use of U.S. Nuclear Weapons* to understanding nuclear abstinence after 1945. He analyses specific events of non-use, for instance the Cuban missile crisis, and attempts to explain the events under consideration of the taboo, deterrence, and the tradition of non-use. Sauer (2016) suggests that those explanations cannot fully disclose nuclear abstinence after 1945. Therefore, he develops a new approach, atomic anxiety. This explanation amplifies that nuclear weapons are not used

due to the fear of death their launch implies (Sauer, 2016). While Sauer's work provides an interesting new approach to IR and the discussion of nuclear abstinence, this thesis does not take atomic anxiety into account, since it focusses on the emotions of decision maker in events of non-use. This approach is not suitable to address the development of the nuclear taboo subsequently to the Cold War. Nevertheless, Sauer's conceptualization and methodology in terms of coding provide a useful design, this thesis orientates upon.

Tannenwald (2018) returns to the research of the taboo, in her article *How Strong Is the Nuclear Taboo Today*. In this article she mainly outlines developments like the so-called nuclear ban treaty and challenges to the taboo, as for instance during the Trump era, outlined in the introduction (Tannenwald, 2018). The developments and challenges described once more raise the question what happened to the taboo after 1991 and if it is still applicable in 2022.



### 3. Theory

#### 3.1 The nuclear taboo

Tannenwald (1999/ 2007) explores the internalization of a norm leading up to a taboo in the USA between the first use of nuclear weapons in Hiroshima and Nagasaki in 1945 and the Gulf war in 1991. She finds that at the point of first use (1945), nuclear weapons were weapons just as any others. Over time, starting with the Korean war (1950), a norm stigmatizing nuclear weapons is embedded and internalized in the US public. During the Korean war first moral doubts about the use of nuclear weapons are articulated. Those concerns develop further, and during the Vietnam war it is apparent that the USA will not use nuclear weapons. During the Gulf war, nuclear weapons are not even discussed as an option. The norm is internalized, and the permissive effect leads to the use of alternative weapons. Due to the taboo, the use of nuclear weapons is connected to moral infamy and high political cost, therefore the taboo constrains the use of nuclear weapons (Tannenwald, 1999 & Tannenwald, 2007). In the post-Cold War era, the taboo starts to play an important role in legitimizing the political order created by the non-proliferation treaty (NPT), mainly that some states are allowed to possess nuclear weapons, but other states are not. The taboo is also found in civilization discourse, underlining that states, which are not using nuclear weapons, are *civilized*. This reinforces the discourse, that already existing nuclear states can remain nuclear armed, because they are *civilized* and can be trusted to not use the weapons irresponsibly. Other states might be less responsible which is why the NPT prohibits nuclear proliferation (Allen et al., 2021; Tannenwald, 2007). This leads to the following hypothesis:

*H1: The norm of the nuclear taboo is internalized within the USA, this norm prohibits the USA from using nuclear weapons up to 2022.*

As alternatives to the nuclear taboo, the thesis presents two diverging views on nuclear issues. One stems from the structural neorealist paradigm. This paradigm is considered, since it is highly influential in IR (Krieger & Roth, 2007) and brings the first and most widely known explanation for nuclear non-use, nuclear deterrence, to the table (Sauer, 2016). Furthermore, the paradigm, in contradiction to the constructivist taboo, does not consider norms as an explanation for state behavior. It rather sees the behavior of states driven by the need to survive in an anarchic world. Consequently, states must establish power relations and develop military capacities (Donnelly, 2018). The goal of deterrence is to raise the cost of war to the extent that they outweigh the benefits and therefore prevent war. Nuclear deterrence is based on the belief, that the destructiveness of a nuclear war is so high that it becomes irrational to go to

war in the first place (Mearsheimer, 1984/85). This leads to the first alternative explanation, the US reliance on its credible deterrence.

### 3.2 Nuclear deterrence

On the end of nuclear deterrence, Kenneth Waltz, one of the most influential thinkers within the neorealist paradigm and an important advocate for nuclear deterrence (Krieger & Roth, 2007), argues that nuclear weapons have such a high capacity for destruction that no state would risk a conflict with a nuclear power, fearing a nuclear war of total destruction. Therefore, nuclear weapons deter any kind of conflict, including conventional once. He argues that states do not benefit from the use of nuclear weapons, in a situation of mutual assured destruction. Meaning, a situation in which the opposing states both possess a secured second-strike capability. If one state chooses to use nuclear weapons, the other state might respond nuclear as well and both sides suffer massive damages. Therefore, using nuclear weapons is irrational. Following the argument, a credible nuclear deterrence, entailing second-strike capabilities, guarantees absolute security and a world full of nuclear weapons is more stable. This is the case, as long as no state's nuclear arsenal clearly dominates in terms of destructiveness. Ergo, nuclear peace holds if no state gains decisive advantage over the others (Waltz in Krieger & Roth, 2007).

However, this view is contested within the paradigm. Mearsheimer, an established neorealist scholar, does not believe that a world in which every nation possesses nuclear weapons is more stable. He further disagrees that nuclear weapons deter any kind of attack. Following his argument, nuclear weapons do not guarantee absolute security. Supposing nuclear weapons deter a nuclear attack due to their great destructiveness, the urge of states to expand and gain regional hegemony is still strong and therefore wars are fought on a sub-nuclear level (Mearsheimer in Krieger & Roth, 2007). From these views the following hypothesis can be drawn:

*H2: The US relies on a (nuclear) creditable deterrence, preventing conflict, therefore the actual use of nuclear weapons becomes obsolete.*

A second hypothesis can be drawn in respect to the logic of deterrence, when US conventional capabilities are considered as well. Due to the high conventional capabilities of the US forces one can assume that conventional forces already deter attacks against the USA and its NATO allies, making nuclear deterrence and use obsolete.

*H3: The US relies on its conventional capabilities to creditably deter adversaries, making nuclear use obsolete.*

The third explanation for nuclear non-use, a tradition of non-use, offers a middle way between the other two explanation and entails common aspects with both, the taboo, and the deterrence explanation.

### 3.3 The tradition of non-use

The most influential thinker of this explanation is T.V. Paul. He laid out his research on nuclear non-use in his book *The Tradition of Non-use of Nuclear Weapons* in 2009, arguing that a tradition of nuclear non-use arose during the Truman (1945-1953) and Eisenhower (1953-1961) presidencies, due to their aversion to use nuclear weapons against non-nuclear states in times of crisis. The continued non-use can merely be explained by the fear of reputation loss. Over time, due to the continued non-use, the tradition gained strength (Paul, 2009). Scholars explaining non-use with the tradition argue that there is indeed a norm of non-use, as taboo scholars suggest, but this norm is much less stringent in comparison to a taboo. This makes the norm more fragile and open to change. The discussion between tradition and taboo scholars is not whether a norm exists but rather how strictly the norm prohibits nuclear non-use (Kütt & Steffek, 2015 & Sauer, 2016). While breaking the nuclear taboo is unthinkable, breaking a tradition is possible. Breaking the tradition though could set new standards and therefore increase the likelihood that other states break the norm as well. Consequently, following the *logic of consequence*, nuclear weapons might not be used because their use could cause an erosion of the norm and therefore pose an unbeneficial shadow of the future (Press, Sagan & Valentino, 2013). The hypothesis that can be drawn from this explanation is the following:

*H4: The norm of the tradition of nuclear non-use detains the USA from using nuclear weapons, however the norm and therefore the restraint is fragile and open to change.*

To test the robustness of a norm Simmons and Jo (2019) argue, for a combination of different approaches. These approaches should entail the analysis of rules related to the norm, as for instance treaties, the observation of state behavior as well as social responses to norm violation. Robustness depends on institutional developments across different governance levels as well as multi-institutional framework support. Therefore, consequences of norm violation play a crucial role. Additionally, the authors argue that norms are more robust and retain higher legitimacy when they enjoy diverse support from actors with different normative traditions, cultural perspectives, power resources and material interests. (Simmons & Jo, 2019). Thus, this thesis considers a variety of observation points, displaying public opinion as well as the views

of the political elite and think tank scholars. A strong nuclear taboo should be displayed broadly among the public and the political elite. It should also be found in official governmental documents, showing an institutional as well as rules-based support for the taboo. Support for the taboo among all these areas, presents evidence of a strong, robust norm. If support for the norm can only be found in one sector, for instance only among public opinion but not in official US documents or the other way around, the taboo is weakened since support is less diverse. A lack of support for the taboo in official US documents, the House, or the Senate, would also display a weakened norm due to a lack in institutional support. Weaker support for a norm, could hint at a tradition rather than a taboo.

One further hypothesis assumes that external events drive perceptions on nuclear weapons. These events could either strengthen or weaken a non-use norm. It is thinkable that in times of crisis the public and political elites are more prone to use nuclear weapons to ensure security or that the public and political elites begin to place more emphasis on a non-use norm, strongly condemning any kind of nuclear use to enhance the stigma of nuclear weapons and prevent nuclear use.

*H5: External world events carrying implications for security drive the thinking about nuclear weapons in the USA.*

## 4. Methodology

To examine the development of the nuclear taboo between 1991 and 2022, the thesis traces back the development of the taboo among US political elites, through US official documents and congressional hearings, in American public opinion and across scholars.

The US is chosen as the country of investigation for several reasons: Firstly, the US has one of the biggest nuclear weapon arsenals (see: Federation of American Scientists, 2022). Secondly, the US plays a crucial role in international security, being the main security provider for many States. Thirdly, the US is an important NATO ally, and its nuclear arsenal provides the main contribution to NATO's identity as a nuclear alliance. Especially, considering Russia's nuclear threats, which increase in intensity and number over the course of the Russian invasion of Ukraine (Barel, 2022; Tannenwald, 2022 & 2023), it is crucial for the future of the nuclear order as well as for European security to understand the US position on nuclear weapons and why they have not been used over the past eight decades.

The timeframe is chosen, since 1991, with the dissolution of the Soviet Union and the end of the Cold War, marks a crucial year for the global security environment. It can be expected that with the end of the Cold War, -bipolarity and the -fear of nuclear escalation, the perception of nuclear weapons changed. After 1991 there was direct threat to the US that needed to be deterred by nuclear weapons. Therefore, this thesis also indicates whether the end of this confrontation changed the perceptions of nuclear weapons in the US and if the taboo, which developed over the course of the Cold War, still holds up until the time of writing this thesis. Although Tannenwald (2007) adds a chapter on the development of the taboo after the Cold War, the chapter rather focuses on the development of the taboo in the international community than in the US. Consequently, this research includes the period between 1991 and 2007 as well.

To better observe changes within the timeframe, the period between 1991 and 2022 is divided into smaller periods. Presidential terms serve as a suitable divide since official US documents relevant to the research question, further elaborated on below, are usually adapted once per presidential term. Additionally, public discourse on nuclear issues is likely to change in intensity depending on the stance of the President in respect to nuclear weapons as well as the other way around. Consequently, the timeframe is divided into the following sub-periods: Bush H.W (1989 - 1993), Clinton (1993 - 2001), Bush. W. (2001 - 2009), Obama (2009 – 2017), Trump (2017 - 2021), Biden (2021 & 2022).

Process tracing is considered as the most appropriate method for this research because it allows to trace back effects, in this case nuclear non-use, to their potential causes and identify

different casual explanations (George & Bennett, 2005). Tannenwald's (1999) research is based on process tracing as well.

All documents under analysis are coded to indicate the reflection of the three explanations in the data. The coding process is strongly orientated upon Sauer's (2016) research (see: 2. Literature review). *Nuclear use* and *nuclear non-use* are used as head codes. Although, nuclear weapons have not been used over the past eight decades, it is thinkable that the documents discuss the potential use of nuclear weapons. *Nuclear non-use* is further divided in the codes *taboo*, *tradition*, and *deterrence*. The coding sheet itself is developed through hybrid coding, some codes are deducted beforehand based on Sauer's (2016) coding sheet as well as the theoretical foundation, while other codes are developed inductively (see: Appendix II). During the inductive coding process the codes are further divided into subcodes. An inductive subcode under the *deterrence* code is for instance *nuclear deterrent capabilities*. For the *taboo* code, the subcode *world without nuclear weapons* or *aim to adapt a sole purpose policy* constitute examples. For the *tradition* code, the subcode *record of nuclear non-use* presents a good illustration. However, some of these subcodes are less straight forward and fit more than one code. The subcode *counterproliferation* for instance is applied to all three codes since it implies efforts to strengthen a potential taboo, a tradition as well as deterrence. The sub code *conventional weapons to deter conventional threats* constitutes another example. Due to the permissive effect described in the theory section and the notion that nuclear weapons are different from conventional weapons the subcode is applied to the *taboo*, but it also fits the overall *deterrence* code. Based on the coding sheet, the frequency of discussions on nuclear issues as well as the reflection of the different explanations is displayed and conclusions about the strength of the three explanations can be drawn.

Once the documents are coded, the findings serve as evidence for the different explanations. This evidence is tested through straw-in-the-wind-, hoop-, smoking-gun and doubly decisive tests. Based on those tests' the hypothesized explanations can be weakened, strengthened (straw-in-the-wind-, hoop-, smoking-gun test), confirmed (smoking-gun & doubly decisive test) or eliminated (doubly decisive test). Hereby the hoop- and the doubly decisive test present necessary criteria to confirm a causality. The smoking-gun as well as the doubly decisive test present sufficient criteria to confirm a causality (Collier, 2011). Running those tests should establish credibility of the evidence found during the coding process. To further establish trustworthiness the process tracing procedure is oriented on the *ten criteria for process tracing best practices* identified by Bennet and Checkel (2014; see: Appendix IV).

## 4.1 Data selection

To trace back the development of the thinking about nuclear weapons in the US political elite, official US documents referring to the nuclear strategy of the USA are analyzed. The Nuclear Posture Reviews (NPR), the National Defense Strategies (NDS) as well as the National Security Strategies (NSS) are considered. Those documents can be found throughout scientific literature researching the USA's nuclear arsenal, strategy, and policy (see among others: Overhaus, 2019; Kristensen & Norris, 2012; Kristensen & Norris, 2014). All NPRs, NDSs and NSSs available over the timeframe of investigation are selected. NPRs were released in 1994, 2002, 2010, 2018 and 2022. NDSs were released in 2005, 2008, 2018 as well as 2022. NSSs were released in 2002, 2006, 2010, 2015, 2017, 2021 and 2022.

Additionally, congressional hearings are identified as points of observation in which the public opinion and the thinking of political elites come together. The assumption is that around the time of the release of the above mentioned strategies, the discussion on issues relevant to answer the research question is high because the administration informs Congress on the strategies. Consequently, the data selection is based on an advanced search in which the date range is set to the first day of the month prior to the release of an analyzed strategy and the last date of the month in which the strategy is published. Then the box, *search in full text*, is ticked and the name of the strategy is added to the search. The search is further refined by ticking the box *congressional hearings* and then selecting the *Committee on foreign relations*, the *Committee on Armed Services*, the *Committee on international relations*, the *Committee on Homeland Security and Governmental Affairs*, the *Committee on Homeland Security*, and the *Select Committee on Intelligence*, if available in the year the strategy was published, as organizations. These organizations are chosen since information contributing to the research question are assumed to be discussed in committees, dealing with international relations and security. Every contribution relevant to the research question is considered. This refinement results in 16 relevant hearings in the Senate. Seven of them fall under the Bush W., five under the Obama and four under the Trump administration. In the House 16 further hearings are identified as relevant. Three of them are held under the Bush W., six under the Obama, five under the Trump and two under the Biden administration.

On the end of public opinion, research by the Pew Research Center as well as the American National Election Studies (ANES) is analyzed. The documents from Pew Research Center are selected via a categorial search of their research topics, using the subcategory *Nuclear Weapons* in the category *Defense & National Security*. This search provides research

dated between 1993 and 2020. All documents applicable to the research question are examined. All reports displaying US opinions, attitudes, and actions in respect to nuclear weapons are considered relevant to the research question. Through this refinement seven contributions are identified. Three of them fall under the Obama administration and the other four under the Trump administration.

ANES offers a continuity guide of all questions surveyed over the years. Category *IIID* entails questions on *foreign relations issue*. In this category questions related to nuclear weapons can be found. Surveys in the timeframe of analysis are conducted in 1992, 1994, 1996, 1998, 2000, 2002, 2004, 2008, 2012, 2016 and 2020. Not every year's survey entails questions on that issue. Whether questions regarding nuclear weapons are posed indicates how much the issue was at the heart of public discussion in different years. Questions on nuclear weapons can be found at the time of the Bush H.W., the Clinton, the Bush W., and the Obama administration. During the Trump administration no questions on nuclear weapons were asked and for the Biden administration no data is available at the time of research.

Think tanks play a crucial role as well when it comes to influencing public opinion as well as elites (among others: Del Rosso, 2021). To observe the political spectrum, the contributions of thinktanks from the liberal as well as the (neo)conservative wing are considered based on a *most different* approach. The thesis examines contributions by the Center for New American Security (CNAS) on the liberal side, and the American Enterprise Institute (AEI) on the (neo)conservative site. To observe the full political spectrum contributions from a middle wing think tank, such as Brookings, would add nicely to this research. However, the number of relevant contributions extends the scope of this research. Researching contributions from the middle wing to examine the full spectrum of perceptions on nuclear weapons remains to future research. Nevertheless, by portraying the perceptions on both the (neo)conservative as well as the liberal side a broad spectrum of perceptions is already covered. CNAS and AEI are chosen because, according to the 2023 ranking by Academic Influence they are among the most influential think tanks within their political biases (see: Barham, 2023).

The data collection for CNAS is based on their research in the area *Defense*. Then their reports are chosen and narrowed by the term *nuclear*. For AEI, the term *nuclear weapons* is searched, then the search is narrowed by category *Foreign and Defense Policy* and the tag *Defense and national security* as well as the date *01/01/1991 to 31/12/2022*. All contributions relevant to the research question are selected. This results in ten contributions for CNAS, published between 2008 and 2022 and 14 for AEI, published between 2016 and 2022.



## 5. Main Findings

The following chapter lays out the main findings gained through the process of coding all documents under analysis. This section elaborates on every administration, starting with Bush H.W. and ending with Biden. Each administration is further divided into a subsection on US official documents, congressional hearings, public opinion and think tank contributions. Overall, 73 documents and eight ANES surveys are analyzed. The distribution of the analyzed documents and among the administration is unequal due to the accessibility of the data. This has implications on the certainty with which results on the explanations of US nuclear non-use can be determined across the different administrations.

### 5.1 Bush, H.W. Administration (1989-1993)

At the time of the Bush H.W. administration no official US documents, nor congressional hearings were released or are accessible via the website of the US Congress at the time of writing. Consequently, the analysis lacks institutional data. Additionally, data on the potential influence of think tanks is missing since no think tank contributions are included in the sample.

However, ANES offers some insights into public opinion during this time. The 1992 ANES survey poses two questions on nuclear weapons. On the first question *How worried is R about U.S. getting into a nuclear war at this time?*, 14.31% of respondents indicated that they are *very worried*, while 30.78% claimed to be *somewhat worried*. Most respondents (50.35%) indicated to *not be worried at all* (ANES, 1992). This might have looked differently during the time of the Cold War, where there was an opposing nuclear power that needed to be deterred. However, this assumption cannot be proven since ANES data on the same question asked during Cold War years is not available. The second question reads, *“How important a foreign policy goal should be: preventing the spread of nuclear weapons”*. 40.01% of respondents indicated the goal to be *very important*, 7.18% view the issue as *somewhat important* and only 1.41% consider this as *not important at all* (ANES, 1992). If counterproliferation efforts are interpreted as an NPT obligation, they can be read as a hint towards a normative explanation, as illustrated in the theory section.

## 5.2 Clinton Administration (1993-2001)

### 5.2.1 Official US Documents

The analysis of the Clinton administration also lacks important institutional data since no congressional hearings are accessible and no NSS or NDS is published. In 1994 an NPR is ordered, however only an extract taken from the 1995 Annual Defense Report is freely accessible. The analysis further lacks scholarly data.

In the 1994 NPR, the end of the Cold War is highlighted and an equivalent threat at that point in time is denied. The review therefore argues that nuclear weapons are inappropriate to address most of the existing threats. Therefore, deterrence must adapt to the new security environment. Nevertheless, the NPR emphasizes that the US will keep a nuclear posture to “*deter any future hostile foreign leadership with access to strategic nuclear forces from acting against our vital interests and to convince it that seeking a nuclear advantage would be futile.*” (NPR, 1994). The NPR also states that the US continues to threaten retaliation, also nuclear retaliation to deter attacks. In that vein it is noted that US nuclear posture does not only deter threats to the US but also to its allies. The code *deterrence* constitutes the dominant code. Additionally, it is issued that nuclear weapons might not only be used for deterrence purposes but also to respond to aggression in case deterrence fails. This reflects the notion that while the security environment changes “*there is still great uncertainty about the future, particularly in the New Independent States where the process of denuclearization and reduction is underway but by no means completed.*” (NPR, 1994). Consequently, “*nuclear weapons remain an essential part of American military power*” to “*deter war, or should deterrence fail, to defeat aggression.*” (NPR, 1994). In reflection of this, the intend to invest in nuclear infrastructure is voiced (NPR, 1994). These notions feature into the head code *nuclear use*.

Despite the role of US nuclear weapons, the NPR emphasizes the US commitment to nuclear arms control with Russia, such as Comprehensive Test Ban Treaty and START. It also notes US counterproliferation efforts. Especially, efforts denying actors the opportunity to get hand on fissile or theft material is highlighted (NPR, 1994). On that end the document states that the “*United States will continue to set the highest international standards of stewardship for nuclear safety and security, command and control, use control, and civilian control.*” (NPR, 1994). This features into the *taboo* and the *tradition* code and signals institutional support for rules underpinning the norm of non-use and thereby enhance norm robustness. The notion that nuclear weapons are an inappropriate tool for existing threats, features the *logic of appropriateness*, accounting for a normative explanation. On the contrary the notion of nuclear

retaliation, hints at the *logic of consequence* and rather accounts for the deterrence explanation (see Appendix III for frequency tables).

### 5.2.2 Public Opinion

During the Clinton administration no question on nuclear weapons were posed in the ANES surveys of 1996 and 1998. However, in 1994 and 2000 one question on nuclear weapons is asked. In 1994, 69.16% of respondents considered counterproliferation as a *very important*, US foreign policy goal, while 23.17% perceived the issue as *somewhat important* and 5.16% view the issue as *not important at all* (ANES, 1994). This can be read as hint towards a normative explanation. The question on worry about a nuclear war is not asked in 1994, but it was raised in 2000: Only 4.55% respondents indicate to be *very worried*, 20.99% are *somewhat worried*, while 30.42% respondents claim to be *not worried at all* (ANES, 2000), indicating a low threat perception in respect to nuclear weapons. In 2000, the question on counterproliferation as a foreign policy goal is not issued.

### 5.3 Bush, W. Administration (2001-2009)

#### 5.3.1 Official US Documents

During the Bush W. administration two NSS (2002, 2006), two NDS (2005, 2008) and one NPR (2002) are issued. The NPR is classified and only an excerpt is published and accessible for the purposes of this research.

The security environment portrayed in the NSS of 2002 and 2006 as well as the NDS of 2005 and 2008 prioritize the threat of potential proliferation of Weapons of Mass Destruction (WMD) by *rogue states* and terrorists. Especially, the 2005 NSS emphasizes the threats steaming from weak states or ungoverned areas proliferating WMD, rather than from powerful states as it used to be the case in the previous century (NSS, 2005). The NPR from 2002 states that the end of the Cold War inherits a switch from a threat-based towards a capability-based approach (NPR, 2002).

The role assigned to nuclear weapons in US strategy is multilayered. For once they serve a power projection purpose by signaling adversaries that they should not mistake US strength (NPR, 2002). The NPR also notes that “*nuclear capabilities possess unique properties that give the United States options to hold at risk classes of targets [that are] important to achieve strategic and political objectives.*” and “[*n*]uclear attack options that vary in scale, scope, and purpose will complement other military capabilities.” (NPR, 2002). Consequently, the NSS (2006) issues the intention to invest in a new triad, containing nuclear as well as conventional capabilities. Likewise, deterrence itself is ascribed an important role. However, in most cases the type of deterrence is not specified further. Overall, the code *deterrence* constitutes the dominating code. The NDS of 2008 notes that “[*d*]eterrence is key to preventing conflict and enhancing security” (NDS, 2008). While the documents entail notions regarding nuclear deterrence, the objective to enhance conventional capabilities to reduce the dependency on nuclear weapons as a deterrent and provide the president with a greater set of credible response options is also stated (NDS, 2008 & NPR, 2002). Impressions like these featured into the *taboo* code.

As mentioned above a great emphasis is placed on threats steaming from proliferation and corresponding counterproliferation efforts. In that vein, the criminalization of WMD proliferation and the goal to bolster the norm against WMD use are highlighted (NDS, 2008; NSS, 2006). Additionally, an emphasize on (international) norms is found (NDS, 2008; NSS, 2008). These notions feature into the *taboo* code and signal institutional support for rules underpinning the norm of nuclear non-use (see Appendix III for frequency tables).

### 5.3.2 Congressional Hearings

For the Bush W. administration ten congressional hearings are included in the sample. Seven of them are held in the Senate and three in the House.

The first hearing is held in the Senate in December 2001, discussing the security of US nuclear weapons and nuclear facilities, in the wake of the 9/11. The witnesses, from US military as well civilians working in the area, highlighted that they and everyone under their command is well aware of the importance of securing nuclear weapons: *“Because of their destructive power and their political as well as their military importance, nuclear weapons require special protection, indeed the highest level of protection that we can provide [...] This has never been more important than now, in light of the events of the September 11 terrorist attacks against the United States.”* (Wells’s testimony in Security of U.S Nuclear Weapons and Nuclear Weapons Facilities, 2001). The systems securing nuclear weapons are also meant to deter and deny unauthorized individuals to access these weapons. In that vein it is underlined that while deterrence is the first line of defense, it needs to rely on effective security systems (Blaisdell’s testimony in Security of U.S Nuclear Weapons and Nuclear Weapons Facilities, 2001) *“to protect against suicidal attempts to detonate those weapons within the United States and elsewhere.”* (Senator Nelsen’s testimony in Security of U.S Nuclear Weapons and Nuclear Weapons Facilities, 2001). Emergency response to a nuclear incident with US weapons is also discussed. Additional threats are posed by unsecured nuclear material steaming from the former Soviet Union (Senator Jeff’s testimony in Security of U.S Nuclear Weapons and Nuclear Weapons Facilities, 2001). Nuclear proliferation, especially by terrorists and emergency response play a dominant role in this hearing. The subcodes *denying others to acquire nuclear weapons* and *counterproliferation* are applied frequently. Also, the notion that nuclear weapons are essential to US security is displayed. Deterrence also plays a role, but most *deterrence* codes refer to deterring individuals from trying to access US nuclear facilities.

The next hearings are held in February and March of 2005 in the Senate as well as in February of 2006 in the House. The hearings address current and projected threats (February) and current and future worldwide threats to US national security (March). In all these hearings the proliferation of nuclear weapons by North Korea, Iran and terrorists is highlighted, but Chinese and Russian modernization of their nuclear forces also plays a role. Consequently, in all hearings the potential use of nuclear weapons, especially in respect to terrorists is mentioned frequently, corresponding with US counterproliferation efforts. Regarding Russian modernization, Moscow’s strategic emphasis on these weapons as a great power symbol is

highlighted. The North Korean notion of seeing nuclear weapons as essential for regime survival cuts in that same vein (Current and projected national security threats to the United States, 2005 & Current and future worldwide threats to the national security of the United States, 2005). The hearings place little emphasis on deterring these threats by military and nuclear force. Notions hinting at deterrence, not specified which type, only slightly increase, in 2006 (Current and future threats to the National Security of the United States, 2006 & Current and Projected national security threats to the United States, 2006). These appliances, however, entail the sentiment, that the logic of deterrence and arms control might fail to deter the threats ahead: *“Use [of WMD] by nation-states can still be constrained by the logic of deterrence and international control regimes, but these constraints may be of little utility in preventing the use of mass effect weapons by rogue regimes or terrorist groups.”* (Negropote’s testimony in Current and future threats to the National Security of the United States, 2006 & Current and Projected national security threats to the United States, 2006). No exclusive *taboo* or *tradition* codes are applied in any of these hearings.

In 2006, hearings on the Quadrennial Defense Review are held in the Senate and the House. While the threats outlined in the hearings as well as in the QDR are in line with the threats described above, the emphasis on deterrence increases (The Department of Defense Quadrennial Defense Review, 2006 & Department of Defense Quadrennial Defense Review, 2006). Also, nuclear deterrent capabilities, and in general US nuclear capabilities, also discussing massive retaliation, are highlighted. In that vein, the enhancement of conventional and non-kinetic capabilities is pointed out as well (Henry in The Department of Defense Quadrennial Defense Review, 2006). Again, no exclusive *taboo* or *tradition* codes are employed.

The last three hearings, held in 2008, focus on already described proliferation threats and how to counter them. The notion that arms control and particular the NPT is eroding is carried through the first hearing, consequently, the need to enhance qualified arms control and strengthen the NPT is displayed (National Security Bureaucracy for Arms Control, Counterproliferation, and Nonproliferation: The role of the Department of State-Parts I and II, 2008). In the very same proliferation threat perception, a hearing on Iran and Russia is held, stating that *“Russia is actively engaged in missile, nuclear, and advanced conventional defense cooperation with Iran.”* (Sokolski in Russia, Iran, and Nuclear Weapons: Implications of the proposed U.S.- Russia Agreement). Approaches discussed to counter these challenges are economic as well as diplomatic coercion towards Iran as well as the nuclear cooperation agreement with Russia.

Given the proliferation threats, a potential WMD attack on the US homeland and US reactions are discussed in the last hearing of 2008. In addition to enhancing resilience to WMD attacks, Mr Dicks argues “*that maybe prevention and deterrence [...] is just as important as resilience.*” (Dicks in *The resilient Homeland: Broadening the Homeland Security Strategy*, 2008). However, this is the only deterrence code applied in this hearing. None of the hearings on threats to US security entail exclusive *taboo* or *tradition* codes (see Appendix III for frequency tables).

### 5.3.3 Public Opinion

During the time of the Bush W. administration, every ANES survey conducted (2002, 2004, 2008) poses a question on nuclear weapons. In 2002 the question about the worry of a nuclear war is asked. However, the answer is not available. In 2004 and 2008 the question on counterproliferation is issued. In 2004, 85.99% view the issue as *very important*, 11.22% respond with *somewhat important* and only 2.15% claim the response option *not important at all* (ANES, 2004). Four years later, 82.71% indicate the counterproliferation goal to be *very important*, 14.21% respond to view the goal as *somewhat important* and 3.03% say the goal is *not important at all* (ANES, 2008). Notably, the importance of counterproliferation efforts increase. This could be correlated with the growing discourse on the proliferation threat also indicated in US official documents and Congress.

### 5.3.4 Think Tank Contributions

In 2008 a policy brief on US South Korea relations is published by CNAS. The brief addresses US policy towards North Korea as well as US-South Korean cooperation on that issue. The change in South Korea’s government leads to a more hardline approach toward North Korea. In line with the US approach, it entails verifiable denuclearization of North Korea, including uranium enrichment as well as proliferation activities towards Syria. It is argued that despite any effort of the Bush administration, the following US administration must most certainly address a nuclear North Korea (Singh & Patel, 2008). The subcode *counterproliferation, denying others to acquire WMD* and *denuclearization* are the dominating subcodes. Additionally, codes hinting at North Korean proliferation are applied. The brief does not mention concrete suggestions for US reaction, hinting at either deterrence, taboo, or the tradition of non-use.

Together with the increasing importance of counterproliferation efforts in public opinion, the findings indicate a whole of society change in US threat perception in respect to nuclear proliferation (see Appendix III for frequency tables).

## 5.4 Obama Administration (2009-2017)

### 5.4.1 Official US Documents

Under the Obama administration two NSSs (2010 and 2015) and one NPR (2010) are disclosed. All documents are freely accessible and used for the purpose of this research. Just as under the previous administration, threats posed by the proliferation of WMD remain a major concern (NSS 2010; NSS, 2015). In this line of argument, the NPR claims that while the threat of a global nuclear war has reduced, the risk of a nuclear attack increased (NPR, 2010).

The role of nuclear weapons in US strategy is limited. The administration pursues the ultimate goal of a *world without nuclear weapons* and aims to adapt a *sole purpose policy*, meaning that the sole purpose of nuclear weapons is to deter nuclear attacks. Concrete steps to work toward these goals, arms control and counterproliferation efforts playing a crucial role in this respect, are outlined in the strategies (NPR, 2010; NSS, 2010; NSS, 2015). However, all strategies note that the goal of a *world without nuclear weapons* is not achievable for some time to come and that a *sole purpose* policy cannot be adopted in the current security environment either. Consequently, “[a]s long as any nuclear weapons exist, the United States will sustain a safe, secure, and effective nuclear arsenal, both to deter potential adversaries and to assure U.S. allies and other security partners that they can count on America’s security commitments.” (NSS, 2010, p.23). Many aspects mentioned feature into the *taboo* code. However, as illustrated by the quote above, deterrence, also nuclear, continues to assume a role.

In the light of change, Obama also clarifies US declaratory policy and negative security assurance: The NPR outlines that “[t]he United States would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners.” (NPR, 2010) and that “[t]he United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT and in compliance with their nuclear nonproliferation obligations.” (NPR, 2010). The notion of international norms can be found across all documents issued during the administration (see Appendix III for frequency tables).

### 5.4.2 Congressional Hearings

For the time of the Obama administration ten hearings are included in the sample. Five of them are held in the Senate and five more in the House.

In March of 2010, a hearing on the status of strategic forces is held in the House. In April, a hearing on the NPR is held in the Senate and another one on nuclear weapon policy in



the House. All three hearings discuss the changes in US nuclear policy and posture declared in the NPR.

Throughout the hearing on the NPR, skepticism in respect to the changes is articulated. The republican Senator Chambliss issues the unique features of nuclear weapons in ensuring US and allied security (Chambliss in Nuclear Posture Review, 2010; see Appendix I.I for Statement). Similarly, considering Russian, Chinese and North Korean nuclear capabilities, and modernization the republican Michael Turner issues that Obamas changes are “*deeply concerning*” (Turner in The Status of United States Strategic Forces, 2010; see Appendix I.II for statement).

In respect to the negative security assurance and a *sole purpose* policy the republican Senator Mc Cain states:

*“That is really remarkable. So, we are telling the American people, now, that if there’s a chemical or biological attack on the United States of America, and it is of devastating consequences, we will rule out the option of using a nuclear weapon, even though that may be the most effective course of action, if that country is in compliance or noncompliance with the NPT.”* (MC Cain in Nuclear Posture Review, 2010).

Further statements by Mc Cain, express that he perceives the negative security assurance to weaken deterrence, and raise the risks of attacks on the US, while dispiriting allies. Turner expresses analogous concerns. The republican Mc Keon issues that deterrence should entail the maximum of capabilities possible, including nuclear (Mc Keon, The United States Nuclear Weapon and Force Structure, 2010; see Appendix I.III for statement). Several notions that while conventional capabilities can complement deterrence, they cannot replace nuclear capabilities are found.

The harshest critique on Obamas changes, is articulated by the republican Senator Sessions:

*“It seems to me that the President has stated an improvident policy. That is that we would eliminate nuclear weapons entirely. I say it’s improvident because it’s not going to happen. Sometimes bad goals can get you in trouble. Second, the administration seems to be committed to the view that if America leads in reducing our weapons significantly, that this will cause others to want to follow. What evidence do you have, and what facts can you cite, that this so-called moral leadership argument will actually impact countries that present the greatest immediate threat, it seems, to us, Iran and*

*North Korea, from pursuing nuclear weapon systems?”* (Session in Nuclear Posture Review, 2010).

In opposition, statements supporting Obama’s Road towards a *world without nuclear weapons* are issued as well. For instance, Dr. Miller notes the legacy of the goal as well as the US’s disarmament obligations under the NPT (Miller in *The Status of United States Strategic Forces*, 2010; see Appendix I.IV for statement). In the same vein, Obama’s disarmament leadership is complimented by the democratic Senator Levin, stating that “*with 90 percent of the world’s nuclear weapons, the United States and Russia must lead the world in the direction of zero. This NPR is the roadmap for the United States to move in that direction, which is not only sound policy, but one required by the NPT, to which we’re a party.*” (Levin’s opening statement in Nuclear Posture Review, 2010). The democratic Ike Skelton also assesses the NPR as an opportunity to address urgent issues (Skelton’s Opening Statement in *The United States Nuclear Weapon and Force Structure*, 2010; see Appendix I.V for statement). Additionally, the notion that nuclear weapons are hopefully never going to be used and that the reduction of nuclear weapons is desirable is posed. This includes US nuclear use and hints towards a taboo or at least a tradition. Several sentiments of the record of non-use are found throughout the hearings. Additionally, the intention to deter conventional attacks with conventional forces is highlighted.

All three hearings entail strong notions in respect to the role of nuclear weapons in US security and deterrence, mostly posed by Republicans, but also strong notions of a taboo or a tradition, mostly issued by Democrats.

In April and May of 2010, two hearings on the spread of nuclear weapons as well as on the future of nuclear cooperation are held in the House. Both hearing have a strong focus on nuclear proliferation threats and efforts to counter them. Similar discussions are held again in the Senate and the House in 2015. Especially Iranian and North Korean proliferation is highlighted but concerns in respect to Pakistan’s potential cooperation with terrorists and nuclear terrorism more broadly is mentioned as well. Additionally, Russia’s nuclear cooperation with Iran, already discussed under the Bush W. administration is outlined. Both hearings of 2010 entail little emphasis on deterrence, however no exclusive *taboo* or *tradition* codes are applied either. Neither the Senate, nor the House hearing on worldwide threats (2015) contain any codes exclusive to either of the three explanations of non-use (Worldwide Threats [Senate & House], 2015).

The 2015 Senate hearing on the NSS and challenges entails more notions towards deterrence, also nuclear deterrence. Ambassador Edelman highlights the advantage of nuclear extended deterrence, and the republican Senator Inhofe raises the concern that the US nuclear umbrella has “holes” (Ambassador Edelman & Senator Inhofe in Global Challenges and U.S. National Security Strategy, 2010). These statements indicate the importance of nuclear weapons for US and allied security. Consequently, the need for investments in the nuclear stockpile is raised. No exclusive *taboo* or *tradition* code is applied (Global Challenges and U.S. National Security Strategy, 2010).

One more hearing is held in the Senate in February of 2015. The hearing discusses regional nuclear dynamics. Just as in the other three hearing of that February, threats in respect to proliferation and nuclear modernization by the familiar actors are outlined. This hearing, however, highlights the importance of nuclear weapons for security. For instance, the political scientist Kroening, who appears as a witness, issues that nuclear weapons are the ultimate instrument of military force and a tool of great power competition, he also highlights their role in preserving peace (Kroening’s testimony in Regional Nuclear Dynamics, 2015; see Appendix I.VI for statement). The policy analyst, Krepinevich, argues, that by not developing more low-yield nuclear capabilities, as Russia does, the president is denied flexible nuclear response options (Krepinevich’s testimony in Regional Nuclear Dynamics, 2015). Additionally, the hearing includes a strong emphasis on deterrence, particularly nuclear deterrence and extended nuclear deterrence to Asia and the Indo-Pacific. However, the notion that conventional forces should be the first line of defense is also highlighted, but nuclear forces continue to provide a backstop. Notably, this hearing is the only document of all documents analyzed that explicitly mentions the nuclear taboo: “*Recall, the issue here would be first-use of nuclear weapons: if China, despite its commitment and force posture of no-first-use, took steps signaling that it would break the nuclear taboo, U.S. recourse to retaliatory nuclear weapons reasonably would be on the table.*” (Perkovich in Regional Nuclear dynamic, 2015). This constitutes a strong, but also the only exclusive *taboo* code in this hearing. No exclusive *tradition* code is applied (see Appendix III for frequency tables).

#### 5.4.3 Public Opinion

In 2012 several new questions appear in the ANEs survey, which are up until the time of writing, only asked in 2012. These questions all relate to Iran: The first question reads: “*Does R think Iran is or is not trying to develop nuclear weapons*”. 79.85% believe that Iran tries to develop nuclear weapons, only 7.91% do not believe so (ANES, 2012). The next questions hint

at US reactions to the issue: “*To try to prevent Iran from developing nuclear weapons, would R favor or oppose direct diplomatic talks between the United States and Iran to try to resolve the situation?*”. 65.44% of the respondents say that they would *favor direct diplomatic talks*. 18.63% indicate that they *neither favor nor oppose* them and 7.58% *oppose direct diplomatic talks* (ANES, 2012). On the next question “*To try to prevent Iran from developing nuclear weapons, would R favor or oppose increasing international economic sanctions against Iran?*” 60.77% respondents respond in *favor*, 7.92% *oppose* and 21.4% *neither favor nor oppose* the increase of international economic sanctions (ANES, 2012). Afterwards respondents are asked the following: “*To try to prevent Iran from developing nuclear weapons, would R favor or oppose the U.S. bombing Iran's nuclear development sites?*”, on this question the number of respondents in *favor* drops down to 25.73%, while the number of opponents rises up to 36.13%. 27.14% indicate that they *neither favor nor oppose*. On the last question on Iran, “*To try to prevent Iran from developing nuclear weapons, would R favor or oppose invading with U.S. forces to remove the Iranian government from power?*”, only 17.25% indicate to be in *favor*, 46.97% say they *oppose* an invasion and 26.89% *neither favor nor oppose* an invasion (ANES, 2012).

The question on worry about a nuclear war or proliferation as a foreign policy goal is not asked in 2012. In 2016 no questions on nuclear weapons are posed in the ANES survey.

The Pew Research Center also conducts analyses related to Iran. A study from 2009, finds that 61% of respondents agree that it is “*[m]ore important to prevent Iran from developing nuclear weapons, even if means taking military action*”. The study additionally notes that 71% of Republicans and 51% of Democrats agree with the statement. On the contrary, 24% of respondents agree that it is “*[m]ore important to avoid military conflict, even if Iran may develop nuclear weapons*”. Only 16% of Republicans and 31% of Democrats agree with that statement. Pew, just as ANES, also ask on support for direct negotiations. 63% approve of direct negotiations, however only 22% believe that negotiations will work, while 64% believe negotiations will not work. When looking at partisanship, the study notes that 63% of Republicans and 64% of Democrats approve of direct talks. 11% of Republicans and 34% of Democrats believe in the success of negotiations, while 81% of Republicans and 47% of Democrats are sceptic that negotiations will succeed. Alternatively, the study asks about the approval rate and the chance of success of tougher sanctions. Overall, 78% of respondents approve of tougher sanctions and only 12% disapprove, however only 32% believe that sanctions could succeed, while the majority (56%) does not think that so. Turning to partisanship, 81% of Republicans and 72% of Democrats approve of tougher sanctions, 9% of

Republicans and 13% of Democrats disapprove. Nevertheless, most Republicans (57%) and Democrats (52%) do not believe that tougher sanctions would succeed (PEW Research Center, 2009).

Another Pew study researches threat perceptions in the US public. In 2010, 45% of Americans perceive the spread of nuclear weapons as the greatest danger in the world. 52% of the American public perceives the threat of a WMD attack as greater than it was ten years earlier, 35% estimated the danger as about the same and 10% assess the danger to be less (PEW Research Center, 2010).

In 2013, PEW researches the public perception in respect to nuclear threats coming from North Korea. The study asks: “*How seriously should the U.S. government take North Korea’s threats to use nuclear missiles against the U.S.?*”. 56% of respondents say the threat should be taken *very seriously*, 27% answer *somewhat seriously*, 9% respond *not too seriously* and 5% say *not at all seriously*. Furthermore 47% believe that the North Korean leadership is willing to follow through on its nuclear threats. 41% disagree with that. Additionally, 47% view North Korea as capable of launching a nuclear missile that reaches the US, 43% disagree. When it comes to partisanship the study notes that 64% of Republicans and 52% of Democrats view the issue to be *very seriously*. 58% of Republicans and 37% of Democrats also believe that North Korea is willing to follow through with its nuclear threats and 52% of Republicans as well as 47% of Democrats view North Korea to be capable of launching a nuclear missile that could reach the US (PEW Research Center, 2013).

The rising threat perception visible, leads to an increased emphasis on counterproliferation efforts. While some of that can be interpreted as a normative stance, it arguably also entails deterrence notions.

#### 5.4.4 Think Tank Contributions

Between January 2009 and 2017, five think tank contributions are included in the sample. One contribution is published by AIE in 2016 and four by CNAS in 2009, 2013 and 2015.

Both reports from 2009 highlight the cleavage between the US long stated goal of North Korean denuclearization and the countries unwillingness to give up its nuclear program, which leads to a gridlock in the 20-year long effort to negotiate an agreement. The contributions however argue that negotiations are the only viable way to achieve US objectives. One article outlines the lessons learned from past negotiations stating “*If policymakers learn from past negotiations, they can launch a new round of talks with the DPRK on a more positive trajectory.*”

*Success, however hard won, will not only increase America's security but also restore stability to the Northeast Asian region.*" (Denmark et al., 2009b).

The second article suggest ways to mitigate the cleavage, identifying four short-to medium term objectives: *"Reinforce U.S. alliances in the region; Mitigate the threat of proliferation; Prevent the outbreak of regional conflict; Compel the DPRK's return to the negotiating table"* as well as ways to achieve these objectives: *"Strengthen allied defenses and reassure Tokyo and Seoul of America's extended deterrent commitments; Increase regional security cooperation through the creation of a Five-Party Dialogue; Implement more robust sanctions and interdiction initiatives; Provide positive incentives and diplomatic "on-ramps" that will facilitate Pyongyang's return to negotiations."* (Denmark et al., 2009a). In both contributions the subcodes *counterproliferation*, *denying other to acquire WMD* and *denuclearization* are applied most. Additionally, the subcode *use of diplomacy* is applied several times. This code indicates that the use of diplomacy is preferred over the use of military force, also constituting an alternative to the employment of nuclear weapons. This subcode features into the *taboo* as well as the *tradition* code. However, deterrence also assumes its role. In that vein, the report argues that *"U.S. conventional and nuclear deterrent will play a significant role in dissuading Pyongyang from instigating a large-scale conflict."* (Denmark et al., 2009a). In that respect especially US extended deterrence to its Asian partners is highlighted, also noting that Obama's objective to achieve a *world without nuclear weapons* is raising anxiety in the region (Denmark et al, 2009a; see Appendix I.VII for statement).

The 2013 contribution addresses issues posed by the Iranian Action Network and how to combat these. The report outlines proliferation threats steaming from the network, implementing Iranian foreign policy objectives. To counter these challenges the contribution suggests a mix of limited military action in combination with counter-threat finance actions, sanctions, law enforcement campaigns, information, and influence operation as well as coercive diplomacy in cooperation with like-minded states. Deterrence, not specified by type, plays a crucial role in countering the network. Apart from the *deterrence* code, the subcodes *counterproliferation* and *denying other to acquire WMD* are applied in this piece.

The CNAS report from 2015 highlights that the world is changing and so must US nuclear policy and posture. In terms of the changing security environment the *"renewal of competition among the major states, the shifts of power in the international system away from traditional U.S. allies and toward some potential U.S. adversaries, and the narrowing of U.S. nonnuclear military advantages"* (Colby, 2015) is pointed out. Here, deterrence determines a

major role for US nuclear weapons and so does the modernization of nuclear capabilities. In that vein the need for flexible and limited US nuclear capabilities and the corresponding potential to employ nuclear weapons become crucial (see Appendix I.VIII for a description of the ideal nuclear posture). Even the idea to apply a certain code of conduct for nuclear war is presented (see Appendix I.IX). The deterrent effect of nuclear weapons is perceived as unique and effective deterrence as essential to security by preventing conflict (Colby, 2015). The document is dominated by the head code *nuclear use*, followed by the subcode *nuclear deterrent capabilities*. No code explicit to the *taboo* or the *tradition* is applied, however counterproliferation efforts and arms control also play a role in Colby's (2015) vision of US nuclear strategy and posture, which can be read as scholarly support for rules underpinning the norm of non-use.

The 2016 AEI post discusses proliferation challenges and nuclear capabilities of potential US adversaries. First it highlights the threats steaming from North Korea and its missile test and how the US does little to deter them, also raising the question how the US would react to a missile hitting one of its Asian partners. Next, Chinese investments in nuclear capabilities is issued as well as the question how US presidential candidates would deter or fight back China or Russia. A potential nuclear escalation in the conflict between Pakistan and India is highlighted, as well as nuclear threats steaming from a fragile, radical, and anti-American Pakistan. Iranian proliferation and the danger of nuclear terrorism are displayed as well. As illustrated, the question on how to deter nuclear threats is raised several times in this article, indicating a strong notion of the importance of deterrence to address nuclear threats. The code *deterrence* is the code most applied in this document. *Taboo* or *tradition* codes only steam from not explicit notions in respect to *counterproliferation* (see Appendix III for frequency tables).

## 5.5 Trump Administration (2017-2021)

### 5.5.1 Official US Documents

During the Trump administration, one NSS (2017), one NDS (2018) and an NPR (2018) are developed. The NDS is classified, therefore only a summary is published and accessible to this research.

During the Trump administration, a change in US threat perception is visible. Now the primary US security concern shifts from terrorism to inter-state strategic competition (NDS, 2018). Additionally, threats posed by the spread of accurate inexpensive weapons and cyber capabilities are mentioned (NSS, 2017). On that end Russia's nuclear weapons begin to play a more dominant role. It is claimed that "*Russia[‘s] [...] nuclear systems [...] remain the most significant existential threat to the United States*" (NSS, 2017). Russia's continuing nuclear intimidation towards its neighbors is highlighted as well (NSS, 2017). The NPR also notes potential threats steaming from other nations: "*China [...] is pursuing entirely new nuclear capabilities [...] while also modernizing its conventional military, challenging traditional U.S. military superiority in the Western Pacific. [...] North Korea's nuclear provocations threaten regional and global peace [...]. Iran's nuclear ambitions remain an unresolved concern. Globally, nuclear terrorism remains a real danger.*" (NPR, 2018). Accordingly, the report calls for nuclear modernization "*to preserve a credible nuclear deterrent—ensuring that our diplomats continue to speak from a position of strength on matters of war and peace.*" (NPR, 2018).

Nuclear weapons are assigned several purposes in enhancing US security. The NSS (2017), underlines that nuclear weapons preserve peace and stability (NSS, 2017). Consequently, nuclear forces must be equipped to counter the challenges ahead, also considering wartime missions (NDS, 2018; NPR, 2018). Nevertheless, the US declaratory policy adapted under the previous administration remains, extreme circumstances however "*could include significant non-nuclear strategic attacks. Significant non-nuclear strategic attacks include, but are not limited to, attacks on the U.S., allied, or partner civilian population or infrastructure, and attacks on U.S. or allied nuclear forces, their command and control, or warning and attack assessment capabilities.*" (NPR, 2018). Such a concrete definition is not laid out in the previous NPR. Likewise, the negative security assurance remains. The NPR also notes the "*long-term goal of eliminating nuclear weapons*" (NPR, 2018). However, this only assumes a minimal role. Most applied codes are not exclusive to the *taboo* or the *tradition*.



The notion that nuclear weapons are essential for security, preserve stability and prevent war is indicated through several subcodes featuring under the code *deterrence* and the head code *nuclear use*. Additionally, the NPR highlights that nuclear weapons as well as US conventional capabilities are mainly directed at deterring aggression and preserving peace, nevertheless the document underlines that deterrence is not the sole purpose of these weapons. “*They contribute to the: Deterrence of nuclear and non-nuclear attack; Assurance of allies and partners; Achievement of U.S. objectives if deterrence fails; and Capacity to hedge against an uncertain future.*” (NPR, 2018). In the NPR (2018), the unique deterrent effect of nuclear weapons is highlighted several times. It is noted that to “*help preserve deterrence and the assurance of allies and partners, the United States has never adopted a “no first use” policy and, given the contemporary threat environment, such a policy is not justified today.*” (NPR, 2018). The code *deterrence* is dominating the analysis.

The strategies further entail arms control and counterproliferation aims. Nevertheless, the NPR notes that “*we must recognize that the current environment makes further progress toward nuclear arms reductions in the near term extremely challenging. Ensuring our nuclear deterrent remains strong will provide the best opportunity for convincing other nuclear powers to engage in meaningful arms control initiatives.*” (NPR, 2018) (see Appendix III for frequency tables).

### 5.5.2 Congressional Hearings

For the time of the Trump administration, nine congressional hearings are included in the sample. Four of them are held in the Senate and five in the House.

In November of 2017, a hearing on the authority to launch a nuclear attack, considering the nuclear saber rattling between Trump and Kim Jong-Un, is held. The hearing is fueled by concerns in respect to nuclear escalation between the US and North Korea as well as the anxiety of the public, reflected through senatorial statements, that Trump might launch a nuclear attack. Over the course of the hearing, it becomes evident that the president has the sole authority to order nuclear attacks and is not obligated to discuss the order in Congress (Authority to Order the Use of Nuclear Weapons, 2017). However, military commanders can resist the order if they consider it to be unlawful (Kehler’s testimony in Authority to Order the Use of Nuclear Weapons, 2017; see statement in Appendix I.X).

In that vein, it is highlighted that “*the decision to use nuclear weapons is the most consequential of all*” (Corker’s [republican] opening statement in Authority to Order the Use of Nuclear Weapons, 2017). This hints towards a logic of consequence, which can be read as a

hint towards the tradition. Similar notions can be found throughout this hearing (see Appendix I.XI as an example). The democratic Senator Markey highlights that

*“[n]uclear weapons are for deterrence, not warfighting. Launching nuclear weapons first would be an unprecedented act of aggression and war. Whether limited or massive, any first-use nuclear strike would devolve into retaliatory strikes and war, causing unimaginable deaths, suffering, and destruction. Absent a nuclear attack upon the United States or our allies, no one human being should have the power to unilaterally unleash the most destructive forces ever devised by humankind. Yet, under existing laws, the President of the United States can start a nuclear war without provocation, without consultation, and without warning. It boggles the rational mind. I fear that in the age of Trump [...]”* (Markey in Authority to Order the Use of Nuclear Weapons, 2017).

This quote indicates hints towards the taboo. In contrast however, it is highlighted that changes in the nuclear command and control infrastructure could impact deterrence (Authority to Order the Use of Nuclear Weapons). In respect to deterrence, all the features of nuclear weapons enhancing US security, already discussed under previous administrations, are highlighted (see General Kehler’s statement in Appendix I.XII as an example) Also, the need to have the ability to deter Russia is emphasized. Next to codes related to *nuclear use*, *deterrence* codes dominant the hearing. The *nuclear use* codes mostly related to the debate in respect to the authority to use nuclear weapons. The legality to use nuclear weapons is discussed as well. General Kehler notes that *“[t]here has been a longstanding debate about nuclear weapons and morality and legality, and where nuclear weapons fit in all of that, given that things changed in August 1945. And there has been, I think, a longstanding policy view from the United States that nuclear weapons are not inherently illegal. They can be used illegally. The question is under what circumstances and situation.”* (Kehler in Authority to Order the Use of Nuclear Weapons, 2017).

The hearing entails strong deterrence sentiments but also hints towards the taboo or at least a tradition.

In November of 2017, the Senate holds a hearing on the NDS and in February of 2018 the House holds a hearing on the NDS and the NPR. Both hearings entail a strong focus on deterrence, in the second hearing also nuclear deterrence plays a dominant role, corresponding codes dominate the hearings. No exclusive *taboo* or *tradition* codes are applied in either of the hearings. The need for a stable conventional and strategic deterrent in Asia, Europe and the Middle East is highlighted (Testimony from Outside Experts on Recommendations for A Future

National Defense Strategy, 2017). On that end, required investments in nuclear capabilities are displayed. Especially in respect to Chinese and Russian modernization (see Appendix I.XIII & I.XIV).

Hearings on Countering WMD are held in December of 2017 in the House and in February of 2018 in the Senate. The proliferating actors remain consistent with the once already emphasized under the Obama and Bush W. administration. Consequently, *proliferation* and *counterproliferation* codes dominate the hearings. In the Senate hearing further emphasis is placed on deterring and preventing WMD attacks. This cannot be found in the House hearing. In neither of these hearings exclusive *taboo* or *tradition* codes are applied (Defending the Homeland: Department of Defense's Role in Countering Weapons of Mass Destruction, 2018; Examining the Department of Homeland Security's Efforts to Counter Weapons of Mass Destruction, 2017).

The proliferation threats are coherent through the 2018 Senate hearing on the NSS and challenges to US security as well as with the 2017 House hearing on worldwide threats. In respect to Russian strategy, it is noted that "*there is an interest in being able to escalate in order to deescalate and the use of lowyield nuclear weapons in some cases*" (Rounds in Global Challenges and U.S. National Security Strategy, 2018). In that vein Dr. Kissinger emphasizes "*we are moving into an area in which apparently relatively smaller tactical weapons are being considered by opponents. [...]. So while I would like to maintain a dividing line between nuclear and non-nuclear weapons [...] we should think carefully before we put ourselves in a position where our only response is an all-out nuclear strike.*" (Kissinger in Global Challenges and U.S. National Security Strategy, 2018).

Dr. Schultz issues that the nuclear taboo is vanishing (see Appendix I.XV for statement). Schultz also raises the concern that such dynamics increase the risk of nuclear war and the believe that nuclear escalation would be devastating to the planet and nuclear weapons should be eliminated (Schultz's testimony in Global Challenges and the U.S. National Security Strategy, 2018). These are strong *taboo* codes. Deterrence codes are employed in both hearings, but less frequent in the House hearing. However, exclusive *taboo* and *tradition* coder are only applied in the Senate hearing.

As already outlined in the hearings above, North Korea is identified as a threat to US security. To account for this threat, a separate hearing is held in the House in January of 2018. Firstly, it is highlighted that North Korea poses further WMD threats apart from nuclear ones and concerning missile capabilities. The democratic Mr Connelly, also raises the concern of

potential nuclear escalation between the US and North Korea (Conelly in *More than a Nuclear Threat: North Korea's Chemical, Biological, and Conventional Weapons*, 2018; see Appendix I.XVI for statement). To counter the threats “[a] combination of deterrence and coercion should be used against North Korea [...] Deterrence is essential to an effective North Korea policy [...]. The premise of the Trump administration's maximum pressure policy is that coercion must complement deterrence to limit provocations and create leverage.” (Ruggiero's testimony in *More than a Nuclear Threat: North Korea's Chemical, Biological, and Conventional Weapons*).

Interestingly, the taboo against the use of chemical and biological weapons, but not against nuclear weapons, is mentioned in the hearing. Nevertheless, the hearing contains strong hints towards the taboo, such as: “*The idea that you can't reduce casualties from a nuclear strike because a nuclear strike is beyond our imagination, in its horror, is to say that there is no difference between 100,000 casualties, 1 million casualties, and 5 million casualties.*” (Sherman [Democrat] in *More than a Nuclear Threat: North Korea's Chemical, Biological, and Conventional Weapons*) (see Appendix III for frequency tables).

### 5.5.3 Public Opinion

The ANES survey of 2020 does not pose questions on nuclear weapons. PEW however conducted several studies during this time. Two studies, one conducted in 2017 and another one in 2018, relate to North Korea. The study posed several statements. 71% of respondents agree with the first statement “*U.S. govt should take North Korea's threats to use nuclear missiles against the U.S. very seriously*”. 64% agree with the second statement: “*North Korea is capable of launching a nuclear missile that could reach the U.S.*”. Among all respondents 65% agree with the third statement: “*North Korea's leadership is really willing to follow through on threat to use nuclear weapons against U.S.*”. The final statement hints at the US response to the North Korean nuclear threat: “*Donald Trump is really willing to use military force against North Korea*”, 84% agree with that statement. Looking at partisanship, 74% of Republicans and republican-leaning as well as 68% of Democrats and Democrat-leaning agree with the first statement. Additionally, 64% of Republicans and republican-leaning as well as 63% of Democrats and Democrat-leaning respondents agree with the second statement. The third statement finds agreement upon 65% of the republican and republic-leaning as well as 66% of the Democrat and Democrat-leaning respondents (PEW Research Center, 2017).

A 2018 PEW study researches the public perception on the North Korean threat and US reaction. The study again checks for the public approval ratings of direct talks, which is at 71%.

However only 38% of Americans believe that North Korea is serious about addressing US concern regarding their nuclear program. On the end of possible US reactions to the North Korean threat, 61% issue that *increasing economic sanctions* is the better option compared to *deepening ties with North Korea*. Additionally, 64% agree that the US should use military force to defend its treaty allies in case of a North Korean attack.

Turing to partisanship, 85% of Republicans and 63% of Democrats *approve* of direct talks with North Korea. 70% of Republicans and 61% of Democrats *favor* the option to *increase economic sanctions* over the alternative of *deepening ties with North Korea* (PEW Research Center, 2018).

Two years later, in 2020, PEW researches public threat perceptions. On the end of nuclear weapons, 73% of Americans consider the spread of nuclear weapons as a *major threat*, 23% view it as *minor* and only 3% claim that this is *not a threat*. Most Americans (80%) perceive cooperation with third countries to counter the spread of nuclear weapons as *very important*, while 14% say it is *somewhat important*. Among Republicans as well as among Democrats, 72% are concerned about the spread of nuclear weapons. However, while 78% of Republicans view cooperation with other countries as *very important*, the number is almost 10% higher among Democrats (85%) (PEW Research Center, 2020).

A rising threat perception, including a nuclear escalation between North Korea and the US, becomes evident. Counterproliferation efforts and the preference of non-military tools to combat the North Korean challenge remain strong

#### 5.5.4 Think Tank Contributions

During the time of the Trump administration, three think tank contributions are published by AEI in 2020. Two of the contributions address great power competition. The first contribution is titled *One war is not enough: Strategy and Force Planning for great Power Competition*. Deterrence as well as a military capable of defeating adversaries such as China or Russia are assigned a key role. The article highlights the potential that if deterrence fails, “America will find itself confronting simultaneous conflicts, the Defense Department will need other methods of deterring or, if necessary, fighting multiple wars at once, unless it is ready to walk away from longstanding U.S. commitments.” (Brads & Montgomery, 2020). For such a scenario the article offers three options, the first one is outsourcing deterrence and warfighting to allies, tasking them to preserve the status quo in their regions. The second option is escalation. Here, nuclear weapons are assigned a major role and so is their potential use. However, the Brads and Montgomery (2020) highlight that “escalating is even more

*problematic than outsourcing. A credible escalation strategy requires pronounced nuclear advantages over potential enemies. Unfortunately, Washington does not have the same advantages it did as recently as the early 2000s. China and Russia — as well as other countries — have been developing and fielding new nuclear systems and, in some cases, expanding their nuclear arsenals.*” (Brads & Montgomery, 2020). They also call US credibility in threatening nuclear retaliation when allied territory is attacked into question. (see Appendix I.XVII for statement) The last option is mobilizing forces. On that end the US’s will and ability is debated. Nevertheless, it is noted that the US should improve its mobilization capacity and modernize its nuclear forces. Finally, the article recommends “*pushing allies to strengthen their defense capabilities, modernizing America's nuclear arsenal and developing more limited nuclear options, improving the country's mobilization base, and others.*” (Brads & Montgomery, 2020). As the quotes suggest, the code *deterrence* is applied most frequently, most *deterrence* codes are unspecific regarding the type of deterrence, however the subcodes *nuclear deterrent capabilities* as well as *investment in nuclear capabilities* illustrate a role for nuclear weapons. The potential of nuclear use is featured as well. While the escalatory strategy is a non-preferred option, which itself is a positive sign in respect to preventing potential nuclear escalation and therefore use, no exclusive *taboo* and *tradition* are applied.

The second contribution published in 2020 is an Op-Ed titled *Can a Broke America Fight a Cold War with China?*. The Op-Ed argues that to address great power competition with China the “*Pentagon [...] could seek to hold China in check by reducing commitments elsewhere. It could embrace higher-risk strategies like nuclear escalation to defend exposed allies and partners. Or it could simply try to bluff its way through austerity by hoping that adversaries won't test America's decreased capabilities.*” (Brads, 2020b). The contribution highlights that enhancing military capabilities to face this competition are central to compliment economic, political, and diplomatic tools, since these tools might not be sufficient once tensions increase (Brads, 2020b). By also mentioning the vitality of economic political, and diplomatic tools, the *taboo* and *tradition* code is applied. However, the *deterrence* code is also applied due to the emphasis on a sufficient military shield. The potential of an escalatory policy described in the previous contribution is mentioned as well, featuring into potential *nuclear use*.

The last AEI contribution is an Op-Ed addressing the upcoming Biden administration. On the end of nuclear policy, it is noted that due to years of delay the cost of modernizing the nuclear arsenal continuously increase, most likely leading to tradeoffs between investments in nuclear and conventional forces. Additionally, potential changes Biden might implement in respect to less emphasis on nuclear weapons is discussed. The upcoming end of NEW START

complicates Biden's entry into office further. This indicates that under Biden US policy could move closer to a taboo or policy could go in the opposite direction increasing the role for nuclear weapons for the sake of conventional capabilities (Brads, 2020a) (see Appendix III for frequency tables).

## 5.6 Biden Administration (2021 & 2022)

### 5.6.1 Official US Documents

Under the Biden administration two NSSs (2021, 2022), one NDS (2022) and one NPR (2022) are published, all documents are fully accessible to this research.

Regarding the described threat environment, a change between the 2021 NSS and the NSS of the following year can be observed. In 2021, pandemics, climate change, nuclear proliferation as well as the fourth industrial revolution are characterized to determine the security environment (NSS, 2021). The NSS from 2022 in turn highlights an increasingly confrontational world as a decisive aspect (NSS, 2022). The NDS states that the decade incorporates dramatic changes in geopolitics, technology, the economy as well as the environment (NDS, 2022). The NPR notes *“the growing risk of military confrontation with or among nuclear powers and the urgent need to sustain and strengthen deterrence. [...] The People’s Republic of China (PRC) is the overall pacing challenge for U.S. defense planning and a growing factor in evaluating our nuclear deterrent. The PRC has embarked on an ambitious expansion, modernization, and diversification of its nuclear forces and established a nascent nuclear triad.”* (NPR, 2022). Iran, North Korea, and nuclear terrorism are mentioned as challenges as well (NPR, 2022).

As already discussed in the strategies by the previous administration, Russia’s nuclear arsenal plays an important role which becomes even more crucial *“[t]he Russian Federation’s unprovoked and unlawful invasion of Ukraine in 2022 is a stark reminder of nuclear risk in contemporary conflict. Russia has conducted its aggression against Ukraine under a nuclear shadow characterized by irresponsible saber-rattling.”* (NPR, 2022).

The way in which nuclear weapons are discussed also changes between the NSS of 2021 and the NSS of 2022. While in 2021 nuclear weapons are mostly mentioned in connection to nuclear proliferation of other states, as for instance Iran or North Korea, and US counterproliferation efforts, the goal to maintain a safe nuclear deterrent, while further reducing the role of nuclear weapons in strategy and enhancing arms control is only mentioned once. In 2022 the strategies address the role of nuclear weapons in US strategy as well as US nuclear capabilities and the need to invest in them. Consequently, it could be hypothesized that the Russian invasion of Ukraine changes US threat perception and with that, their attitude towards nuclear weapons modifies as well, which matches Hypothesis 5 (see: 3.3 The Tradition of non-use).



After the invasion of Ukraine, nuclear deterrence gets assigned *top priority* of US integrated deterrence, highlighting that “[a] safe, secure, and effective nuclear force undergirds our defense priorities by deterring strategic attacks, assuring allies and partners, and allowing us to achieve our objectives if deterrence fails” (NSS, 2022). The NPR (2022) entails a similar notion. In the document nuclear weapons are assigned the role to “*deter aggression, assure allies and partners, and allow [the US] to achieve Presidential objectives if deterrence fails.*” (NPR, 20122). The NDS (2022) cuts in that same vein. Consequently, the modernization of nuclear capabilities is highlighted (NPR, 2022). The appliance of the *deterrence* code increased tremendously between the NSS from 2021 and the strategies published in 2022. This code distribution indicates that with the Russian invasion of Ukraine, US institutional discourse on deterrence increases drastically. In that same vein, the emphasis on nuclear deterrent capabilities rises. Nevertheless, the NPR establishes the goal to “[a]dopt a strategy and declaratory policy that maintain a very high bar for nuclear employment while assuring Allies and partners, and complicating adversary decision calculus.” (NPR, 2022).

Despite the growing threat perception in respect to nuclear dangers and the growing emphasis on nuclear weapons, evidence for the taboo is found as well. The NSS of 2022 as well as the NPR continue to uphold the goal of reducing the role of nuclear weapons in US strategy. Both documents refer to the record of non-use of nuclear weapons and express the wish to extend that record (NSS, 2022; NPR, 2022). The NPR further refers to a *world without nuclear weapons*. Likewise, the negative security assurance is extended (NPR, 2022). Arms control continues to play an important role as well. In that vein it is highlighted that “[d]eterrence alone will not reduce nuclear dangers. The United States will pursue a comprehensive and balanced approach that places a renewed emphasis on arms control, non-proliferation, and risk reduction to strengthen stability, head off costly arms races, and signal our desire to reduce the salience of nuclear weapons globally” (NPR, 2022) (see Appendix III for frequency tables).

### 5.6.2 Congressional Hearings

For the time of the Biden administration two hearings are included in the sample. Both are held in the House in 2021. The first one (February), addresses near-peer advancements in nuclear weapons and the second one (March), focusses on national security challenges and US military activities in the Indo-Pacific.

The February hearing underlines the need to invest in US nuclear capabilities, especially with the notion of strategic competition: General Kehler highlights that “*there are a lot more scenarios today that we have to consider for the use of nuclear weapons*” (Kehler in Near-Peer

Advancements in Space and Nuclear Weapons, 2021). The republican Michael Turner displays the tremendous implications of a failing deterrent (Turner's testimony in Near-Peer Advancements in Space and Nuclear Weapons, 2021; see Appendix I.XVIII for statement). This is crucial especially regarding Russia's and potentially also China's different perception of nuclear weapons as a warfighting tool (Morrison in Near-Peer Advancements in Space and Nuclear Weapons, 2021). The need to be able to deter both, China, and Russia, is outlined. In doing so, nuclear weapons play a crucial role. Nuclear modernization is also important in the light of assuring allies and counterproliferation efforts (see Appendix I.XIX for exemplary statement).

The second hearing, held in March of 2021, on national security challenges and military activities in the Indo-Pacific, highlights challenges in respect to Chinese and North Korean nuclear capabilities and the threats they pose to US allies and partners in the region. In combating these challenges deterrence plays an important role, corresponding codes dominate the hearing. In respect to threats steaming from China the republican Mike Rogers states the necessity of military strength, also including nuclear (Rogers's testimony in National Security Challenges and the U.S. Military Activities in the Indo-Pacific, 2021; see Appendix I.XX for statement). On the topic of deterring North Korea a similar need is amplified (National Security Challenges and the U.S. Military Activities in the Indo-Pacific, 2021). As indicated, nuclear weapons play a role in deterrence, mostly, the type of deterrence is not further specified though. Neither of the hearings entail exclusive *taboo* or *tradition* codes (see Appendix III for frequency tables).

### 5.6.3 Public Opinion

At the time of writing no ANES survey is conducted. There is also no PEW publication relevant to the research question. Consequently, the analysis lacks important data on the public perception.

### 5.6.4 Think Tank Contributions

Until December 2022 ten think tank contributions that fit the sample are published. AEI publishes five of them in 2021 and four more in 2022. One report is published by CNAS in 2022.

The first contribution is an Op-Ed titled *To meet Nonproliferation Goals, Biden must Commit to Nuclear modernization*. As the title indicates, the Op-Ed advocates for the modernization of US nuclear forces, consequently the corresponding subcode *investment in nuclear capabilities* is applied frequently. The argument here is that US nuclear modernization

is important to maintain deterrence, revitalize arms control and counter nuclear proliferation. Additionally, modernized nuclear forces are central to counter the strategic challenges posed by China and Russia, who both invest in their nuclear arsenals. The argument continues that to negotiate new arms control agreements, the US needs to set incentives for China and Russia to come to the table, since “*Chinese and Russian leaders will not take American proposals to limit their nuclear forces seriously if they can simply wait for the United States to disarm unilaterally.*” (Maurer, 2021). Lastly, it is argued that the US needs to modernize its forces to maintain credible extended nuclear deterrence and thereby prevent allied attempts to acquire nuclear weapons of their own. This contribution highlights the central role of nuclear weapons in US security policy and how these weapons are entangled with long-standing US foreign policy goals. (Maurer, 2021). Consequently, the *deterrence* code is widely applied in this Op-Ed.

The next contribution is an AEI post in which AEI scholars discuss deterrence. It is argued that forward deployed troops are crucial in that respect as well as signaling the will to actually use force. This argument also holds true for nuclear deterrence. By signaling willingness to escalate a conflict and having forces in place, adversaries are deterred, and allies assured (Cooper, Keegan, Maurer & Schake in Cooper et al, 2021). Since potential US adversaries possess nuclear weapons, the importance of a credible threat of nuclear escalation, is highlighted (Keegan in Cooper et al., 2021). Maurer argues that “*the lack of non-escalatory options is a strong argument in favor of retaining as much nuclear counterforce capability against China as possible.*” (Maurer in Cooper et al, 2021). In this respect, the need for flexible, limited nuclear options is raised (Maurer in Cooper et al., 2021). This Post entail strong notions towards military- and nuclear *deterrence*, hence corresponding codes dominate this contribution. No exclusive *taboo* or *tradition* codes are employed.

The third contribution of that year outlines *All the Ways to Cut the US Defense Budget that China and Russia would Love*. Such cuts include a reduction of the naval component of the nuclear triad. This means “*the United States would be undertaking a unilateral arms reduction beyond the terms of New START treaty with Russia, with wide-ranging implications for partners and allies, sending an undeniable signal to adversaries, and potentially undermining future arms control negotiations.*” (Eaglen, 2021). Further cuts concern air force programs affecting the ground-based leg of the triad. The notion of deterrence in the sense of a weakened nuclear deterrent is strong in this Op-Ed.

The next Op-Ed focusses on the past administration, Trump's nuclear saber rattling and how General Mark A. Milley positions himself to prevent a nuclear war should Trump order an attack (Schake, 2021). Here the potential of nuclear use is featured but also the unwillingness of the head of strategic command to execute this nuclear launch. The latter can be viewed as an indication of the taboo or the tradition.

The last AEI contribution of 2021 addresses attacks on US homeland in the next war. In that respect it is highlighted that the number of US adversaries able to threaten the country with nuclear weapons increases. In that vein, China and North Korea are mentioned. This entails the notion that nuclear attack on the US increase in likelihood. Brands (2021) notes that “[t]he best the U.S. can do is mitigate homeland security weaknesses through a mix of defense, offense and resilience.” (Brads, 2021). The idea that adversaries might be disincentivized to launch an attack due to the fear of retaliation features into the *deterrence* code. No *taboo* or *tradition* code is applied.

The first two contribution of 2022 titled *Is the U.S. Military Destined for a 'Dusty Death'?* and *Pentagon too slow to recognize risk and too fast to give away needed capability permanently*, address the US defense budget. The Op-Eds criticizes the three-decade long delay of nuclear modernization and how it affects US military supremacy. However, now the first budget window focusses on the modernizing the triad. (Eaglen, 2022 b&c).

The following Op-Ed also highlights budget cuts to US military. Further the contribution suggests that “*by prioritizing capability over capacity in its spending, Washington risks inviting the aggression it seeks to deter.*” (Eaglen, 2022a). This entails strong notions of a weakened deterrent, therefore corresponding codes are employed most.

The last AEI contribution of that year focusses on budget again. It argues that while Congress discussed the challenges ahead, including great power competition and its deterrence, the discussion is useless without an adequate assigned budget. (McCusker, 2022). Without this budget the notion of a weakened deterrent dominates the Op-Ed.

The 2022 CNAS report is titled *Long Shadows. Deterrence in a Multipolar Age*. The report characterizes the security environment as the beginning of a new multipolar nuclear area, it adds on the deteriorating relation between the US and Russia due to its endeavors in Ukraine and the corresponding nuclear threats. Chinese and North Korean nuclear capabilities are highlighted as well. In consequence the US must not only deter attacks from two-nuclear great powers and regional powers on its own homeland, but also on its allies. The reports suggest that

through increasing complexity the risk of misperception and calculation rises. To mitigate these threats five policy recommendations are provided:

*“First, President Joe Biden’s administration should maintain current U.S. declaratory policy and implement existing modernization plans for the U.S. triad and nuclear infrastructure. [...]; Second, the Department of Defense (DoD) should renew its focus on nuclear deterrence as a part of its strategy of integrated deterrence. [...] The Pentagon needs to truly integrate its planning across all levels of conflict and recognize that nuclear considerations shape actions across the entire spectrum; Third, the United States should take steps to strengthen deterrence and crisis stability against North Korea.; Fourth, the DoD must study escalation risks across a range of conventional and conflict scenarios with China, Russia, and North Korea to understand likely flashpoints and red lines.; Fifth, the United States should pursue strategic dialogues with China and Russia and establish communication links and crisis mechanisms to avoid misperception and inadvertent escalation.”* (Pettyjohn & Matuschak, 2022).

Deterrence and in particular nuclear deterrence play a central role in this piece, entailing the notion to strengthen deterrence. In that vein the need for the capability to *“launch a retaliatory nuclear attack while under attack”* (Pettyjohn & Matuschak, 2022) is outlined. The notion to enhance US posture through flexible and limited nuclear options is also represented. This features into the *deterrence* code as well as into the head code *nuclear use*. The contribution further suggests that while Obamas attempt to incentivize a road towards a *world without nuclear weapons* by reducing the role of nuclear weapons in US strategy, nations such as Russia or China did not follow suit. Consequently, adapting either a *sole purpose* or a *no first use* policy is disincentivized at that point in time. This supports the argument of an increasing threat perception and a corresponding emphasis on deterrence and nuclear capabilities. The report further assumes a central role for arms control but also highlights that *“in a very dynamic and increasingly dangerous nuclear environment [...] is not the time to reduce American strategic forces or introduce uncertainty about its nuclear deterrent threats.”* (Pettyjohn & Matuschak, 2022). Under the *taboo* and *tradition* code the emphasis on entering talks with other nuclear powers to decrease risks related to misperceptions and calculations is noted (Pettyjohn & Matuschak, 2022) (see Appendix III for frequency tables).

## 6. Discussion & Conclusion

In the following, the development of the taboo is portrait in comparison to the tradition and the US discourse on deterrence. In that vein, the hypotheses drawn from the theoretical framework are checked against the findings drawn from the data analysis. Subsequently, conclusions in respect to the robustness of the taboo or tradition norm as well as implications for partisanship on nuclear issues and European security are drawn.

Before describing the development of the taboo between 1991 and 2022, it should be noted that finding evidence for the deterrence explanations is easier than evidence supporting the two normative explanations. Deterrence evidence is more straight forward and discussed directly, while evidence for the normative explanations is more latent and ambiguous. Consequently, deterrence passes the smoking gun test several times, while the analysis of the taboo and the tradition is more interpretive, thus evidence can often only be affirmed through a straw in the wind test. Additionally, it should be remarked that a normative explanation can correspond with conventional deterrence. Therefore, a strong deterrence discourse does not necessarily eliminate a normative explanation. Further, it needs to be highlighted, that official US documents and congressional hearings constitute part of the analysis and a complete rule out of nuclear use would probably have devastating consequences on deterrence. Lastly, on the end of public opinion, one needs to note, that non off the conducted researches, directly focusses on deterrence or US nuclear use, but rather on threat perceptions steaming from nuclear use by others. Thereby the data does not entail concrete evidence in that respect.

That said, during the Bush, H.W. administration hints towards the taboo, in the form of counterproliferation efforts, is found in public opinion. Since Bush H.W. administration still falls in Tannenwald (1999) analysis, the strong norm found by her up until 1991 would most likely not vanish in the two years of the administration analyzed here.

Under Clinton, hints towards a normative explanation can be found as well, however they are complemented by a deterrence discourse, also including strong nuclear notions. The evidence found in public opinion is a continuation of the previous administration.

On the institutional side, normative explanations find strong support in respect to bolstering a norm of non-use of WMD, under the Bush, W. administration. However, deterrence discourse, including nuclear, is omnipresent. On the public- and the scholarly side, the evidence is consistent with previous administrations.

The most significant and straight forward taboo evidence on the institutional side is found under the Obama administration. In official documents, the taboo enjoys strong support and nuclear deterrence discourse is minimized. However, this is not consistent when looking at Congress, where nuclear deterrence assumes a great role. Nuclear weapons are even discussed in a Waltzian sense of preserving peace. Evidence found in think tank contributions provides further support for the deterrence explanation. Public opinion again remains constant in fostering counterproliferation efforts.

Notably, the strong taboo evidence found in Obama's official documents, takes a hit under Trump. While some notions hint at normative explanations, the gist of the documents feature a strong nuclear discourse, also in the sense of Waltz. This is found in Congress as well, nonetheless, the congressional analysis also holds support for normative explanations, even entailing the concrete mention of the taboo, although related to its vanishment. While think tanks again supply support for the deterrence explanation, public opinion remains consistent on the end of supporting counterproliferation.

Albeit deterrence seems to decrease in importance on the institutional side in 2021, the discourse drastically increases in 2022. Nuclear weapons and deterrence assume a central role again. At the same time hints towards normative explanations persist. In think tanks the focus on deterrence remains dominant.

This aligns with Sauer's (2016) findings, who notes that the taboo and nuclear deterrence are at interplay. While a nuclear deterrence strategy is conducted, the prohibitions steaming from the taboo are recognized, thereby also interfering with deterrence (Sauer, 2016).

Consequently, Hypothesis two can be confirmed with certainty. This explanation passes process tracing tests, establishing sufficient evidence. The US relies on its credible deterrent. This certainly includes both, conventional and nuclear deterrence. The evidence suggests, that up until the Trump administration and then again under Biden, all administrations aim to reduce the reliance on nuclear weapons in strategy and foster conventional deterrence capabilities to reduce the emphasis on the nuclear deterrent. However, across the entire timeframe of analysis the notion that nuclear weapons preserve a unique deterrent value and the ability to prevent war is present. Consequently, Hypothesis three can be denied. While conventional capabilities play a crucial, and after the Cold War also increasing role, the notion that conventional capabilities cannot replace nuclear capabilities is expressed throughout the entire timeframe.

Hypothesis one and four cannot be confirmed with the same certainty, but they can neither be denied. Both explanations pass straw in the wind tests and do not fail the hoop tests.

The taboo explanation even passes the smoking gun test in one scenario, however accumulated this is not crucial to confirm the explanation. Normative explanations most certainly also play a role in explaining US nuclear non-use, however the evidence is not strong enough to adequate the sole reason of eight decades of nuclear abstinence to them. While evidence suggests that the taboo is still present across all analyzed levels throughout the entire timeframe, it does not appear to dominate US thinking on nuclear weapons. Most of the taboo evidence also supports a tradition unless the elimination of nuclear weapons or their stigmatization is stated explicitly. This is only the case for extremely strong taboo codes, as for instance found in US official documents under Obama. Since the tradition offers a middle way, presenting a norm which is weaker and therefore more open to transformation than the taboo, the tradition constitutes a good explanatory approach. While it does not necessarily demand the total elimination of nuclear weapons or nuclear deterrence, but rather focusses on consequences of use, a lot of the evidence presented above could be allocated to the tradition. However, the concept is rather latent and concrete evidence solely applying to the tradition could not be found.

Hypothesis five can be confirmed. The adaption of military posture in connection with a changing security environment is mentioned frequently, constituting smoking guns. As elaborated on above the end of the Cold War, the terrorist 9/11 attacks, the rise of North Korean and Iranian nuclear capabilities, the US-North Korean nuclear saber rattling under the Trump administration, the manifestation of strategic competition and the Russian invasion of Ukraine all influence the discussion on US posture, deterrence, safety of nuclear weapons, and authority to order nuclear strikes throughout all levels. In case of the 9/11 attacks, changes are reflected in enhancing the security of nuclear material and counterproliferation efforts. In case, of the manifestation of strategic competition and the invasion of Ukraine the role of nuclear weapons and deterrence increases in discourse. Notably, during the Obama administration no major event is dated. While North Korean and Iranian proliferation presents a challenge at the time, it is not a newly emerging as the 9/11 attacks, or the Russian invasion of Ukraine, abruptly deteriorating the security environment.

The following section draws concluding remarks on partisanship, but before doing so the consistency between the two think tanks analyzed is considered. Although, the sample went for the *most different* approach, analyzing a liberal and a (neo)conservative think tank, views on nuclear weapons seem to align. Both think tanks provide little support for the normative explanations but strongly feature the deterrence discourse and highlight the central role of nuclear weapons for US security policy.



In respect to partisanship, analyzed research by the PEW Research Center suggests that threat perceptions in respect to nuclear weapons are mostly aligned between the two parties. In terms of strategy, it is notable that most objectives remain consistent across the administrations. Despite the Trump administration, the notion to reduce the role of nuclear weapons in strategy is omnipresent. So are arms control efforts and, as soon as introduced under Obama, the changes in US declaratory policy as well as the negative security assurance. All administrations display some evidence supporting normative explanations, notably least under Trump and most under Obama, as well as on deterrence, notably least under Obama. The evidence suggests that Trump's nuclear saber rattling cannot be accounted for by his republicanism but rather him as an individual. Arguably, partisanship does not assume a prominent role in thinking about nuclear weapons in US strategy. In Congress things look differently. Most strong statements in respect to nuclear deterrence or the important role of nuclear weapons for US security analyzed, steam from Republicans, while the strongest taboo statements are mostly articulate by Democrats. However, this is only an assumption drawn from anecdotal statements presented in the finding section. No explicit analysis of this is run since it does not constitute the main element of this research.

Arguably, the president's personal stance on the use of nuclear weapons is the most crucial, considering their sole authority to launch a nuclear strike, directly resulting in abstinence or use. However, from a logic of consequence perspective, Congress and public perception is decisive as well, due to their power to impeach and (re)elect the president. In that vein, military leaders' opinion further determines whether a launch takes place considering their power to resist the presidential order.

The evidence presented suggests that the reason for US nuclear abstinence is multifaceted: Normative beliefs, some of them being strong and rooted in a taboo, some being weaker and rooted in a tradition, as well as on a strong discourse around credible deterrence, nuclear and conventional, seem to assume their roles. Findings also suggest that rather than by partisanship, the US discourse on nuclear weapons is driven by external events and individuals. Consequently, in the upcoming US election not so much the winning party determines US nuclear policy but rather the candidates themselves and external developments. Further developments in Ukraine and Putin's nuclear behavior as well as the continuation of strategic competition with China are most likely to determine the future of US nuclear posture, the taboo and ultimately the eight-decade long record of non-use as well as the global nuclear order.

The good news for European security is that especially in recent years, US extended deterrence commitments are emphasized in official documents as well as in Congress. However, assurance is not necessarily nuclear. Additionally, as discussed in many think tank contributions, the modernization of US nuclear forces has been delayed for decades and prices are likely to spike. Especially in respect to low-yield weapons, Russia might use in conflict, an appropriate US response is to be determined. Besides capabilities the political will to trade US territory for allied territory remains to be seen. Finally, US extended deterrence commitments in Asia might further influence US capacity to assure Europe if there are multiple theaters of conflict at once. Consequently, as policy makers slowly begin to realize following the Russian invasion of Ukraine, Europe can not solely rely on the US to provide for its security but needs to enhance its military capabilities and security policy.

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## Appendix

### I. Quotes illustrating the US nuclear discourse

The following section includes quotes shedding a deeper insight into the evidence discussed in the Main Finding chapter, which however would have extended the scope of the chapter.

I. *“I am pleased to hear you [General Chilton] say that [the nuclear enterprise remains, today and for the foreseeable future, the foundation of U.S. deterrence strategy and defense posture] because, with all the talk about nuclear weapons over the last several months, the overwhelming emphasis has been on reducing their number, and perhaps rightfully so. However, the fact remains that our nuclear weapons have served an extremely valuable purpose for decades, and that purpose is to guarantee the security of the United States and our allies, and no other weapon in our arsenal provides that security the way nuclear weapons do”* (Chambliss in Nuclear Posture Review, 2010).

II. *“It is, [...], deeply concerning when Administration officials and press reports suggest that our nuclear policy will center on zero as the policy goal; that the NPR will reduce the role and number of nuclear weapons, starting with U.S. declaratory policy; and that another round of arms control talks will commence after START to further reduce our nuclear forces”* (Turner in The Status of United States Strategic Forces, 2010).

III. *“It seems to me that deterrence should be the maximum that you can provide; that no matter what they attack us with, we will hit with our maximum use. A devastating chemical or biological attack that we say ‘we will just respond with non-nuclear weapons,’ it just seems that we are taking a lot off the table but I, you know, I understand that we have a difference here.”* (Mc Keon, The United States Nuclear Weapon and Force Structure).

IV. *“[T]he goal of zero nuclear weapons, it is a goal that almost every president in the past has embraced [...] I think, generally understood to be something that is not on the near-term horizon but something that can help guide us as we go forward. The United States has an obligation under the Nuclear Non-Proliferation Treaty to pursue nuclear disarmament. [...] [T]o reduce the role and numbers of nuclear weapons over time, as consistent with not just maintaining but strengthening our deterrence posture is, in my view, a very reasonable policy goal and one that this Nation can and should pursue.”* (Miller in The Status of United States Strategic Forces, 2010).

V. *“The Administration’s Nuclear Posture Review seeks to establish a bipartisan approach to nuclear policy and, in my view, properly balances the role of our nuclear deterrent forces with*

*the goals of preventing nuclear terrorism and weapons proliferation. [...] The Administration's Nuclear Posture Review offers us the opportunity to act on the urgent issues, both internationally and domestically, that the commission defined.”* (Skelton's Opening Statement in The United States Nuclear Weapon and Force Structure, 2010).

VI. *“Nuclear weapons are tools of great power, political competition, and they remain the ultimate instrument of military force. With long-dormant tensions among the great powers resurfacing, nuclear weapons will again feature prominently in these confrontations, and the United States must be prepared to protect itself and its allies in these conditions. [...] American nuclear forces [...] undergirded international peace and security for nearly 70 years.”* (Kroenig's testimony in Regional Nuclear Dynamics, 2015).

VII. *“Obama's objective to achieve a nuclear weapons free world has increased regional anxiety that this approach will weaken the nuclear umbrella, which is the foundation of American security guarantees in East Asia. The challenge for American policymakers is managing these perceptions and assuring allies that the U.S. extended deterrent is credible, thereby undercutting conservative voices demanding an independent nuclear deterrent. Continued high-level engagement from the White House and the Departments of State and Defense on the role of America's extended deterrent will be vital to prevent the further escalation of tensions in Northeast Asia.”* (Denmark et.al, 2009a).

VIII. *“The ideal U.S. nuclear force, therefore, is one that is not only highly survivable and able to issue a devastating blow against any adversary under any scenario but that is also capable of conducting effective limited nuclear operations in a controlled fashion while maintaining the ability to escalate to full-scale war if necessary. It is a force that can achieve reasonably precise effects for U.S. national decisionmakers across a wide spectrum of possible scenarios, enabling a more effective limited nuclear war capability and thus providing greater leverage and advantage for the United States.”* (Colby, 2015).

IX. *“[T]he United States should seek to promote the principle that NCCS systems should be exempted from attack among the three major nuclear weapons powers. Accordingly, the United States should also make clear that it would seek to exercise restraint with respect to Russian and Chinese NCCS in the event of crisis or conflict. The United States should also therefore push in its own procurement and posture to delineate NCCS from nonnuclear capabilities – and press Russia and China to do the same. At the same time, in order to avoid moral hazard and ensure the U.S. ability to strike important and relevant targets in the event of war below*



*the strategic nuclear level, the United States should make clear that dual-use systems employed in a conventional conflict would not be exempted from attack” (Colby, 2015).*

X. *“[T]he United States military does not blindly follow orders. A presidential order to employ U.S. nuclear weapons must be legal. The basic legal principles of military necessity, distinction, and proportionality apply to nuclear weapons just as they do to every other weapon” (Kehler’s testimony in Authority to Order the Use of Nuclear Weapons, 2017).*

XI. *“[E]ven a single nuclear detonation would be so consequential and might trigger an escalatory spiral that would lead to civilization-threatening outcomes, we must also have a high assurance that there will never be an accidental or unauthorized of nuclear weapons.” (Feaver’s testimony in Authority to Order the Use of Nuclear Weapons, 2017).*

XII. *“[N]uclear weapons continue to prevent both the coercive and actual use of these weapons against the U.S. and its allies (their primary purpose), constrain the scope and scale of conflict, compel adversary leaders to consider the implications of their actions before they act, and (via extended deterrence) obviate the need for additional allies and partners to acquire their own. Nuclear weapons are only one of many important instruments that must be orchestrated for maximum deterrent credibility and effect in the 21st Century; however, today no other weapon can replace their deterrent value” (Kehler’s testimony in Authority to Order the Use of Nuclear Weapons, 2017).*

XIII. *“To remain effective, however, we must recapitalize our Cold War legacy nuclear deterrent forces, continuing a modernization program initiated during the previous administration. To quote my predecessor, Secretary Carter, quote, “We have been in a nuclear arms race for two decades now, but the U.S. has not been running the race,” unquote.” (Mattis’s testimony in The National Defense Strategy and The Nuclear Posture Review, 2018).*

XIV. *“For the last quarter-century, the United States has sought to de-emphasize the role of nuclear weapons in national security while Russia and China have modernized and placed increased emphasis on their own nuclear forces [...]. The prioritization of great power competition in U.S. strategy means that nuclear forces should once again come to the forefront of planning efforts. Wargames and other planning exercises must consider scenarios involving their use [...].” (Thomas’s testimony in Readyng the U.S. Military for Future Warfare, 2018).*

XV. *“[T]he concern we must have about nuclear proliferation. As you remember in the Reagan period, we worked hard. President Reagan thought nuclear weapons were immoral, and we worked hard to get them reduced. And we had quite a lot of success. In those days, people seemed to have an appreciation of what would be the result of a nuclear weapon if it were ever*

*used. I fear people have lost that sense of dread. And now we see everything going in the other direction, nuclear proliferation.”* (Schultz’s testimony in *Global Challenges and the U.S. National Security Strategy*, 2018).

XVI. *“[W]e need to be careful when we saber rattle, when we tweet, when we throw out threats, because it unsettles that part of the world. We have to be careful about how that is interpreted by the North Korean regime and how it can sometimes inadvertently strengthen that regime and its resolve to develop nuclear weapons. But most importantly, that there are 25 million people who live in Seoul who will be the first victims of a violent outbreak. The second victims will be in Japan.”* (Connelly in *More than a Nuclear Threat: North Korea’s Chemical, Biological, and Conventional Weapons*, 2018).

XVII. *“It is presumably harder for allies or adversaries to believe that the United States would start a potentially cataclysmic nuclear war to defend far less significant territories such as Estonia or Taiwan today. Using nuclear weapons first in a conflict against China or Russia would require a fundamentally different approach to deterrence and warfighting — one for which American leaders have not sought to prepare the American public or world opinion. Even the credibility of first use against non-nuclear armed states would be suspect in many scenarios.”* (Brads & Montgomery, 2020).

XVIII. *“This year, failing to ensure that we have a credible nuclear deterrent as well as a space and counterspace capabilities will have a profound and incalculable impact on our national security. This makes it even more critical that we execute the modernization of all legs of the nuclear triad. This is necessary for us to keep [...] world peace, to deter Russia and China from even considering escalation of a conflict with the United States”* (Turner’s testimony in *Near-Peer Advancements in Space and Nuclear Weapons*, 2021).

XIX. *“They [US allies] watch these debates. They hear the nation’s senior military and civilian leaders come up here year after year and talk about programs needing to be accomplished, programs needing to be accomplished by certain dates or capabilities will be lost. And they see us miss those dates and they begin to ask how confident can we be in the continuation of the extended deterrent umbrella that we have extended over them for years and decades. And, for some of these countries, they have a choice. They have a capability to go nuclear if they choose. We have to keep them assured that that is not a decision that they ultimately have to make.”* (Morrison in *Near-Peer Advancements in Space and Nuclear Weapons*, 2021).

XX. *“Effective American military strength in the Indo-Pacific is essential to the security of our allies, global trade, and democracy. That means we need to build a modern, credible,*

*conventional deterrent to ongoing Chinese territorial expansion, and it means that we need a modernized nuclear triad to deter a broader conflict. This is not about domination; it is about deterrence. We must make any attack on Americans or our allies too costly for the Chinese Communist Party to consider.”* (Rogers’s testimony in National Security Challenges and the U.S. Military Activities in the Indo-Pacific, 2021).

## II. Extract from the Coding Sheet

This extract entails the most deductive and inductive expressive codes of the final coding sheet

<b>Nuclear non-use</b>	<b>Nuclear use</b>
<b>Deterrence</b>	
(Conventional) deterrence	First use
Nuclear deterrent capability	Flexible and limited US nuclear response options and potential to escalate to the nuclear level
Nuclear deterrence prevents conflict	Nuclear capabilities to respond to aggression/ achieve objectives
Unique deterrent effect of nuclear weapons	Offensive (nuclear) capabilities/ Second strike capability
Conventional capabilities cannot replace nuclear weapons	Nuclear weapons as the better alternative
Nuclear superiority	Nuclear superiority
Investment in nuclear capabilities	Investment in nuclear capabilities
Mutual assured destruction	Nuclear retaliation
Vital role of nuclear weapons in strategy	Vital role of nuclear weapons in strategy
<b>Taboo</b>	
Nuclear taboo	
Aim to adapt a sole purpose policy	
Use of nuclear weapons as most consequential decision	
Nuclear weapons as inappropriate response	
Norms against the use of WMD	
Conventional capabilities to replace/ reduce nuclear weapons	
Negative security assurance	
Reduction of strategic role of nuclear weapons	
Reduction of nuclear arsenal/ arms control	
Moral leadership in disarmament	
World without nuclear weapons	
<b>Tradition of non-use</b>	
Conventional response to aggression	
Record of nuclear non-use	
Reduction of nuclear arsenal/ arms control	

### III. Frequency tables (Extract from the coded data)

#### III.I Extract Deterrence

By administration

	<b>Clinton 1993 - 2001</b>	<b>Bush W. 2001 - 2009</b>	<b>Obama 2009 - 2017</b>	<b>Trump 2017 - 2021</b>	<b>Biden 2021</b>
<b>(Conventional) deterrence</b>	9	75	229	230	192
<b>Investment in nuclear capabilities</b>	1	11	74	75	48
<b>Mutual assured destruction</b>	0	1	0	0	0
<b>Nuclear deterrent capabilities</b>	9	16	180	132	89
<b>Nuclear weapons as essential for security</b>	2	4	12	14	1
<b>Strengthen deterrence</b>	0	1	19	13	32
<b>Unique deterrent effect of nuclear weapons</b>	0	1	4	5	4
<b>Vital role of nuclear weapons in strategy</b>	0	2	2	3	1

By document type

	<b>Congressional Hearings</b>	<b>Official Documents</b>	<b>Think Tanks</b>
<b>(Conventional) deterrence</b>	335	275	83
<b>Investment in nuclear capabilities</b>	104	70	34
<b>Mutual assured destruction</b>	0	1	0
<b>Nuclear deterrent capabilities</b>	191	147	54
<b>Nuclear weapons as essential for security</b>	16	14	3
<b>Strengthen deterrence</b>	17	36	6
<b>Unique deterrent effect of nuclear weapons</b>	5	8	1
<b>Vital role of nuclear weapons in strategy</b>	2	4	2

III.II Extract Taboo

By administration

	<b>Clinton 1993 - 2001</b>	<b>Bush W. 2001 - 2009</b>	<b>Obama 2009 - 2017</b>	<b>Trump 2017 - 2021</b>	<b>Biden 2021</b>
<b>Aim to adapt a sole purpose policy</b>	0	0	13	1	4
<b>Conventional capabilities to replace/ reduce nuclear weapons</b>	0	5	18	1	3
<b>Negative security assurance</b>	0	0	30	6	1
<b>Norms against the use of WMD</b>	0	1	0	6	0
<b>Nuclear taboo</b>	0	0	1	0	0
<b>Reduction of nuclear arsenal/ arms control</b>	16	32	172	40	53
<b>Reduction of strategic role of nuclear weapons</b>	9	4	40	4	16
<b>Moral leadership disarmament</b>	0	0	6	0	0
<b>World without nuclear weapons</b>	0	1	45	7	5

By document type

	<b>Congressional Hearings</b>	<b>Official Documents</b>	<b>Think Tanks</b>
<b>Aim to adapt a sole purpose policy</b>	7	1	3
<b>Conventional capabilities to replace/ reduce nuclear weapons</b>	10	7	0
<b>Negative security assurance</b>	29	3	0
<b>Norms against the use of WMD</b>	6	1	0
<b>Nuclear taboo</b>	1	0	0
<b>Reduction of nuclear arsenal/ arms control</b>	166	75	23
<b>Reduction of strategic role of nuclear weapons</b>	19	28	6
<b>Moral leadership disarmament</b>	6	0	0
<b>World without nuclear weapons</b>	25	12	2

III.III Extract Tradition of non-use

By administration

	<b>Clinton 1993 - 2001</b>	<b>Bush W. 2001 - 2009</b>	<b>Obama 2009 - 2017</b>	<b>Trump 2017 - 2021</b>	<b>Biden 2021</b>
<b>Record of nuclear non-use</b>	0	0	8	0	1
<b>Reduction of nuclear arsenal/ arms control</b>	16	32	163	37	49

By document type

	<b>Congressional Hearings</b>	<b>Official Documents</b>	<b>Think Tanks</b>
<b>Record of nuclear non-use</b>	7	1	0
<b>Reduction of nuclear arsenal/ arms control</b>	156	73	20

III.IV Extract nuclear use by the USA

By administration

	<b>Clinton 1993 - 2001</b>	<b>Bush W. 2001 - 2009</b>	<b>Obama 2009 - 2017</b>	<b>Trump 2017 - 2021</b>	<b>Biden 2021</b>
<b>Nuclear superiority</b>	0	0	2	0	0
<b>First use</b>	0	0	0	2	0
<b>Flexible and limited US nuclear response options</b>	0	0	20	20	13
<b>Investment in nuclear capabilities</b>	1	8	74	73	44
<b>Nuclear weapons as essential for security</b>	2	4	9	15	1
<b>Nuclear weapons to achieve objectives</b>	0	4	0	3	3
<b>Potential to escalate to nuclear employment</b>	0	0	8	6	4
<b>Nuclear retaliation</b>	1	0	3	5	4

By document type

	<b>Congressional Hearings</b>	<b>Official Documents</b>	<b>Think Tanks</b>
<b>Nuclear superiority</b>	2	0	0
<b>First use</b>	0	0	2
<b>Flexible and limited US nuclear response options</b>	28	10	15
<b>Investment in nuclear capabilities</b>	99	65	33
<b>Nuclear weapons as essential for security</b>	13	15	3
<b>Nuclear weapons to achieve objectives</b>	0	10	0
<b>Potential to escalate to nuclear employment</b>	7	3	8
<b>Nuclear retaliation</b>	2	5	6

Public Opinion is excluded from the frequency tables since ANES data was not coded and the data from PEW is not reflected through the extracted codes shown here (manly counterproliferation codes).



#### IV. Process tracing – Best Practice

by Bennet and Checkel (2014):

- “1. Cast the net widely for alternative explanations*
- 2. Be equally tough on the alternative explanations*
- 3. Consider the potential biases of evidentiary sources*
- 4. Take into account whether the case is most or least likely for alternative explanations*
- 5. Make a justifiable decision on when to start*
- 6. Be relentless in gathering diverse and relevant evidence but make a justifiable decision on when to stop*
- 7. Combine process tracing with case comparisons when useful for the research goal and feasible*
- 8. Be open to inductive insights*
- 9. Use deduction to ask “if my explanation is true, what will be the specific process leading to the outcome?”*
- 10. Remember that conclusive process tracing is good, but not all good process tracing is conclusive.”* (Bennet & Checkel, 2014).