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**SYMBOLS OF MASS DESTRUCTION: The Bomb Is What
States Make of It**

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ORION SIUFI NODA

**SYMBOLS OF MASS DESTRUCTION: The Bomb Is What
States Make of It**

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Abstract

Nuclear politics and weapons often draw security and military ideas to mind. Nevertheless, there is still an entire shadowed area of study within the realm of nuclear politics and weapons due to its unorthodox nature: nuclear symbolism. Current scholarship fails to acknowledge the importance of nuclear symbolism for the field of International Security and, more broadly, International Relations. This research aims to shed light on the non-orthodox facet of nuclear politics and weapons, linking the concept of nuclear symbolism to that of nuclear identity and State behaviour, through a case study of the United States since the end of the Second World War. To this end, the puzzle concerning this research refers to *what is the role of nuclear symbolism in the construction of US nuclear identity*, particularly within the scope of US nuclear behaviour in terms of proliferation and disarmament; to tackle this issue, discourse and documental analysis will be employed in order to assess the nuances of the symbolic facets of the possession of nuclear weapons within US nuclear strategy.

Keywords: Nuclear Weapons, Symbolism, Identity, Nuclear Policy, Nuclear Security.

Resumo

O estudo de políticas e armas nucleares atrela-se, geralmente, a ideias de segurança no sentido militar do termo. No entanto, dentro de tal campo encontra-se uma área ainda oculta devido à sua natureza heterodoxa: simbolismo nuclear. A atual bibliografia falha em reconhecer a importância do simbolismo nuclear para o campo da Segurança Internacional e, de forma mais ampla, Relações Internacionais. Esta pesquisa visa iluminar a faceta simbólica de políticas e armas nucleares, articulando os conceitos de simbolismo com os de identidade nuclear e comportamento Estatal, por meio de um estudo de caso dos Estados Unidos pós-Segunda Guerra. Para tal, o cerne da problemática da pesquisa é em analisar *qual o papel do simbolismo nuclear na construção da identidade nuclear estadunidense*, principalmente focando no comportamento nuclear estadunidense na temática de proliferação nuclear e desarmamento. A fim de alcançar tais metas, a pesquisa usufruirá de análise de discurso e documental visando acentuar as facetas simbólicas da visão acerca da posse de armas nucleares dentro da estratégia nuclear dos Estados Unidos.

Palavras-chave: Armas Nucleares, Simbolismo, Identidade, Política Nuclear, Segurança Nuclear

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Introduction

After the United States dropped two atomic bombs in Japan in 1945, it set in motion the beginning of the nuclear age. Throughout the last 75 years, the prospect of nuclear warfare has wildly oscillated, reaching high points in the 1960s, particularly during the Berlin and Cuban crises, and low points in the 1990s, after the dissolution of the Union of the Soviet Socialist Republics (USSR). Today, however, the tensions between nuclear weapons States (henceforth, NWSs) are rising. The ensuing dangers of a possible thermonuclear warfare have led the Doomsday Clock to be set to two minutes to midnight in early 2018; two years later, it advanced to 100 seconds to midnight. Mankind is the closest to worldwide man-made catastrophe since the 1950s (See Chan, 2018).

Despite their unrivalled destructive power and abundance, nuclear weapons have never been used in warfare since. The speculated reasons for their non-use are various. Guided by this puzzle, Nina Tannenwald (2007) lists several possible explanations before arguing in favour of her own. The explanations of why nuclear weapons have not been used since 1945 are:

- 1) deterrence; (2) the undesirable or uncertain long-term consequences of a use of nuclear weapons; (3) nuclear weapons' lack of military utility; (4) non-deterrence practical considerations (i.e., bureaucratic and readiness factors); and (5) the obsolescence of war (Tannenwald, 2007:30).

After underscoring either the fragility or inconsistency of each, Tannenwald (2007) proposes a sixth explanation: the existence of a taboo on the use of nuclear weapons. She argues that the nuclear taboo influenced decision-making through public and world opinion on the use of nuclear weapons, and the personal leanings of individual leaders. Considering all six explanations of nuclear non-use, they all – with the exception of deterrence, which will be engaged later – beg a follow-up question: if true, why do States still possess, pursue, and more importantly, value nuclear weapons?

This research does not fixate on the issue of nuclear use or lack thereof. The question of why States value nuclear weapons is broader and certainly more abstract than the investigations on nuclear non-use. It plays on a myriad of subjective factors varying greatly not only from case to case, but from period to period. With this research, I do not claim to present a single, definite answer to this extensive question. Through this research, however, I aim to contribute to this investigation and to the body of literature concerned with this puzzle. To this end, in this research I approach this puzzle from a symbolic angle – drawing from Constructivist,

Anthropological, and Cultural perspectives – focusing on US nuclear history from 1945 to 2020. The articulation between symbolism, identity, and behaviour within the nuclear arena may provide a foundation for the question of the underlying value of nuclear weapons.

Mainstream scholarship on nuclear politics and nuclear weapons tend to follow a more Realist school of thought and is mostly dominated by military-oriented and ontologically objective and material perspectives (See, e.g., Quinlan, 1993; 2009; Mearsheimer, 2001; Monteiro and Debs, 2014; Martin, 2013; Kroenig, 2018). These perspectives constructed what Nick Ritchie (2013) – drawing from the works of Michel Foucault – calls a ‘regime of nuclear truth’, in which nuclear weapons are seen as the crown jewel of national security and deterrence is taken at face value, thus corroborating to the maintenance of the perpetual menace of nuclear war. Nuclear weapons are not solely tools of security, but also political objects and symbols of identity (Sagan, 1996). Sagan’s work touches on the symbolic role of nuclear weapons, but merely scratches the surface. Rather than investigating deeper, he shone a light on the neglected relationship between symbolism and nuclear weapons. Not only is nuclear symbolism under-researched, but also the linkages with identity and behaviour from nuclear States are missing (Sagan, 1996). A deeper understanding about the symbolic valuing of nuclear weapons is required to break the stalemate of nuclear disarmament.

The study of nuclear weapons might seem highly abstract: despite nuclear weapons’ monolithic material capabilities, they have only been used once. Moreover, the fact that the majority of the population have been living under the shadow of the nuclear age and the prospects of nuclear warfare notwithstanding, most of us do not often think – or may, in fact, have never thought – about it. Nonetheless, their existence is not abstract and several nuclear warheads are still on high alert (Diehl and Moltz, 2008). Regarding nuclear weapons, “anyone – political leader or man on the street – can see that catastrophe lurks if events spiral out of control and nuclear warheads begin to fly” (Waltz, 1990:731). Consequentially, the study of nuclear conflict and weapons is of extreme relevance for the world, not only within the scope of International Security, but within the scope of life itself. The results of a potential nuclear warfare are, despite hypothetical for now, catastrophic to the highest degree.

These concerns were further amplified by the election of President Donald Trump. Trump’s erratic and undiplomatic character, and his inexperience in political offices have led to significant nuclear crises with North Korea and Iran – showing a stark contrast to his

predecessor Barack Obama. The layout of US nuclear command and control giving President Trump the sole authority to launch nuclear weapons has also captured the attention of the international community (Kaplan, 2020). Not only has Trump threatened to use nuclear weapons – not in a retaliatory strike, but as a first use – he also seems to strive for an increase in US reliance on nuclear weapons for national security (Kaplan, 2020). Despite stating that nuclear proliferation is the “biggest problem” in the world, President Trump also deemed US nuclear arsenals in poor shape and reportedly wanted to increase it tenfold (See Chan, 2016; Wilts, 2017). Trump’s refusal to deny the possibility of the use of nuclear weapons even in the European continent increases the need for extensive research on nuclear weapons and nuclear symbolism (See Chan, 2016).

Trump, however, seems to simply replicate the dominant regime of nuclear truth, crystallised during the Cold War. After the Second World War, Time magazine predicted that the two superpowers – the United States and the USSR – would not compete in regards to the number of nuclear weapons, given the fact that “two hundred bombs may be better than one thousand, but ten thousand are no better than five thousand because five thousand would destroy all important targets in a country” (Jervis, 1989:46). However, as Barry O’Neill (1999:215) states, “Time’s error was the premise that the [nuclear] arms race would be determined by the objective features of the weapons and the logic of strategy and deterrence”. A scholarship highlighting the subjective ontology of the topic will, thus, fill this conceptual gap in the literature. Analysing the three main pillars of this research – symbolism, identity, and behaviour – and how they articulate is a significant step towards a fuller understanding of a State’s nuclear choices.

From a Constructivist perspective, there are three main concepts being articulated here: symbolism, identity, and behaviour. Firstly, to define symbolism I borrow conceptualisations from the field of Semiotics and Sign Theory, within Anthropology. Symbolism, simply defined, is a system of representation in which an idea – an underlying meaning, not necessarily hidden, but not implicit – is transmitted and understood through a symbol – a vessel for this meaning, not necessarily related to it. Virtually anything can become a symbol, and the processes of imbuing meaning to these symbols – semiosis – involve a series of cultural, intersubjective processes. Moreover, an interpretation of a symbol is not permanent. Rather, it is fluid, reshaping itself with the changes in the environment in which the symbol is set.

This approach to symbolism dictates that there is no universal interpretation of a given symbol shared by all actors. Despite the existence of some widely diffused and shared interpretations of a symbol, this decoding relies on each actor's understanding of the world. Thus, the interpretation of a symbol is a subjective and individual process that is, however, affected by the Anthropocene, current political and cultural settings, and the parallel interpretation of the same symbol by others. Consequentially, the interpretation of a symbol by one actor shapes its relations with not only the symbol itself, but also with other actors.

Another key concept to be introduced in this research is that of 'nuclear identity', largely based on the idea of social identity (Wendt, 1994). Drawing from Alexander Wendt's concept of identity and focusing on one specific realm – nuclear politics and weapons – instead of using a broad concept on a 'one size fits all' basis, I define nuclear identity as a set of understandings a State has (and portrays) of *self* and its role on plural overarching structures within the International System in its relationship with the *other* on the domain of nuclear politics and nuclear weapons. Such overarching structures can be either worldwide/global, or focused/regional.

Questions of identity on a State level are perennially important. Given the constant of change in the world, States are forever revising their identity and adapting to new scenarios. The cyclical progression, from identity to behaviour is observable in International Relations. States that wish to create or cement an identity of cooperation, for instance, will most likely engage in cooperative efforts. States with an interest in conveying a humanitarian identity or one that praises international law will probably display signs of materialising their concerns.

Nevertheless, States might display a particular identity while not producing compatible behaviour. As Manea (2009) argues, States might forcefully create an identity for the sake of appearances or prestige. In this sense, it is crucial to analyse not only the formation of or the advocacy for an identity, but also the behaviour linked with it; it is, therefore, paramount to formulate a complete analysis of the whole identity-behaviour nexus.

The third pillar of this research is behaviour. By behaviour, I mean simply the planning and paths of action discussed and, more importantly, in the nuclear age. Behaviour, according to Realist perspectives, is an exclusive and direct consequence of interest, this logic applying both at State and societal levels. These interests are computed based on cost-benefit rational

calculations. Yet, as I will argue later, rationality is in itself a subjective concept contingent on a multitude of equally subjective factors.

Humanity has been living in the nuclear age for over 75 years. It is, therefore, nearly impossible to analyse every nuclear war plan and each course of action discussed and taken during three quarters of a century. Other works seminal works have tackled this issue, minutely detailing the history of nuclear strategy (See, e.g., Sagan, 1989; Nolan, 1999; Freedman and Michaels, 2019). To this end, I will focus on key moments of US nuclear history which carry high analytical value for this endeavour and in which, I argue, represented moments of change in the symbolic interpretation of nuclear weapons.

Within the formation process of a State's nuclear identity, symbolism is, I argue, an essential component. The Realist theorisation on nuclear weapons does not take symbolism unrelated to material might into consideration, claiming the supremacy of an objective ontology given the material characteristics of nuclear weapons (Martin, 2013). In this research, I do not take this argument as a crystallised truth and venture to fill the theoretical gap—namely the neglect of symbolism—left by the mainstream scholarship. Whilst Realism has not incorporated questions of ideas and symbolism in its calculations, it has included issues of status and even identity, in some more modern branches (See Wolhforth, 2009; Lobell *et al.*, 2009; Paul *et al.*, 2014). Yet, while I add strength to the recent movement of challenges to Realism's nuclear regimes of truth, it is not with Realism that I converse. Despite taking into account nuclear weapons' material factors and engaging with Deterrence Theory, I abandon positivist constraints for a subjective Constructivist analysis of the symbolic valuing of nuclear weapons.

Research Questions

The focus of this research is to bridge the gap between nuclear symbolism and nuclear identity, and how it articulates with State behaviour. To this end, I aim to trace the formation processes of US nuclear identity in the throughout the nuclear age, emphasising the role symbolism plays in it through a semiotic scope, and analyse how this symbolism-infused nuclear identity shaped—and keeps shaping—US nuclear doctrine. To solve this puzzle, I will be guided by the following research questions:

- ✓ How does symbolism play a role in the formation process of US nuclear identity?

- ✓ How does US nuclear identity shape US behaviour in the scope of nuclear weapons and, in particular, nuclear proliferation and disarmament?

The first research question requires a Constructivist approach and development of core concepts (notably symbolism and nuclear identity), not taking US nuclear identity as an independent variable, but as a dependent one, dissecting it, and analysing how it is composed and the role of nuclear symbolism in it. Mirroring the formation of social identity (See Wendt, 1992; 1994; 1999), nuclear identity follows the same methodology, relying on the meanings actors attributed to themselves under a specific structure – in this case, a structure revolving around nuclear weapons – and in which both factors are mutually constituted. Having defined how US nuclear identity is formed and the role of nuclear symbolism in the process, the second research question takes nuclear identity as an intervening variable and aims to analyse the dynamics of US nuclear identity and US behaviour, particularly within the nuclear nonproliferation regime.

The main hypothesis for this research is that, within US nuclear strategy since 1945, symbolism has played a crucial, though often hidden role in the formation of a State's nuclear identity and, consequentially, on State nuclear behaviour; in other words, that one symbolic interpretation of what nuclear weapons represent ultimately leads to a specific set of nuclear behaviour being pondered, whilst a change in that symbolic perception will shape nuclear identity, and will lead to a different factual outcome. Different symbolic interpretations of nuclear weapons have constrained behaviour in different forms through similar mechanisms applied by Tannenwald (2007) to measure the effectiveness of the nuclear taboo: domestic and international opinion, and a leader's personal beliefs. Yet, symbolism may be manipulated by the same mechanisms through discourse.

In the case of the United States, it is often present, but hardly specifically acknowledged as such. The US identity of a 'world police', based on its own doctrine of "full-spectrum superiority" is an example of how the United States strives to be seen and acknowledged as the *hegemon*. Throughout this research, I show how different nuclear symbolisms affect this US identity and, consequentially, how it leads to dependent behaviour.

Linked to this idea, a second hypothesis arises: despite the existence of the nuclear taboo (Tannenwald, 2007), particularly relevant for the United States due to its history of nuclear weapons, and US advocacy for a world free of nuclear weapons (See Obama, 2009a), the United States is unwilling to foreswear its position of a top nuclear power due not to the gains nuclear weapons bring to national security – as postulated by Deterrence Theory – but due to what they are perceived to symbolise. Nuclear symbolism also plays a critical role in this regard: States want to have nuclear weapons not necessarily to use them, but because it ascribes them power and prestige and the image of a modern State (Sagan, 1996).

Nuclear disarmament, thus, can be fomented by a specific symbolic perception of nuclear weapons – particularly a reversal of the standard of civilisation. In the present scenario, due to the slowly decaying, yet still diffused regime of nuclear truth – nuclear absolutism – nuclear disarmament seems unlikely. In order to advance the agenda of nuclear disarmament, a dismantlement of this regime is crucial, devaluing and stigmatising not only the use of nuclear weapons, but also their possession. A symbolic shift, thus, is an effective – if not the only – path towards the creation of an environment conducive to nuclear disarmament.

Research Goals

The development of nuclear weapons represented a significant change in the study of war, conflict, and power. These weapons had a previously unthinkable destructive and residual power, thus shaping the post-World War II order. Yet, nuclear weapons remained unused since the end of the war, and that is one of the most striking feature of the nuclear age. President Harry Truman, after understanding the consequences of the atomic bombs dropped in Japan, decided that nuclear weapons were not military weapons, and thus should not be used; instead they should be placed under civilian control (Kaplan, 2020). In light of that, from where does the continuing value of nuclear weapons stem?

Realists still argue that their value is still exclusively on their material capabilities, which cannot ever be overlooked (Martin, 2013). Indeed, the destructive power of nuclear weapons is impossible to miss. However, to claim that nuclear weapons' value derives exclusively from its objective features is false. Cases have been made for non-material value of nuclear weapons, such as domestic politics and status (See, e.g., Frey, 2006a; Ritchie, 2010). Furthermore, Tannenwald (2007), while stating her case for the nuclear taboo, shows several situations in which NWSs were in a favourable position to use nuclear weapons, but still refrained from

doing so. Symbolism, however, remains a fertile field for nuclear experts, as it has been severely under researched.

In light of that, my goals for this research are 1) to argue that the symbolism of nuclear weapons plays an important role in the formation of US nuclear identity; 2) to argue that US nuclear identity influences the formulation of US nuclear doctrine, which in turn affects US behaviour; 3) to present a theoretical model for explaining the pursuit, possession, and valuing of nuclear weapons based on their symbolic interpretations; and 4) to further the debate relating the symbolic value of nuclear weapons to nuclear proliferation and disarmament. While the first three goals are related to the academic significance of the project, the third goal touches the societal value of this study. Understanding these connections might prove a useful guidance tool for policymakers and disarmament treaties: by exploring the process of how nuclear symbolism eventually impacts State (nuclear) behaviour enables us to understand the matter from a different angle, which in turn might shed light on how to achieve nuclear elimination.¹

This research is ultimately theory-based, that is, it was born from a theoretical literature gap. Nevertheless, its methodological foundation is rooted in a case study, relying on qualitative methodology. Aided by official documents, discourses, and policy analyses, as well as an analysis of behaviour itself, I will be able to verify: 1) how were nuclear weapons conceptualised in the United States and, in particular, what were their symbolic interpretations; 2) if, how, and why did these symbolic perceptions changed; 3) what was the US nuclear doctrine regarding nuclear weapons and nuclear proliferation and disarmament since 1945, that is, what was being discussed and what actions were taken in regard to nuclear weapons; and 4) what is the relationship between the changes in US symbolic perceptions of nuclear weapons and US behaviour in the nuclear arena.

Methodology

Research on nuclear weapons is bound to have implications on policy. As a current worldwide security problem extending to the twenty-first century, the existence and valuing of nuclear weapons pose significant threats to world peace and stability. The frustrations of non-nuclear weapon States (NNWSs) in relation to the NWSs regarding the stalemate – and grim prospects – of nuclear disarmament are growing, contributing to a turbulent relationship between the two groups. Rooted in the belief that researchers cannot remain completely on the side-lines of their

¹ Nuclear elimination refers to the elimination of all nuclear weapons in the world. See Sauer, 2009:745.

field, I aim to tackle this issue by investigating what thwarts States from relinquishing nuclear weapons, despite their arguable military irrelevance and the existence of a taboo on their use. Shedding light on this issue will, hopefully, have practical implication in policy and contribute to a world free of nuclear weapons.

As a single-case study, this research is predominantly qualitative. Quantitative data referring to the size of nuclear arsenals and megatonnage are also incorporated, but the vast majority of the body of empirical data used here is composed of documents, meeting minutes, statements, and presidential and high-ranking officials' discourse. For the theoretical modelling, I climb on the shoulders of giants, analysing the scholarship on nuclear weapons within International Relations (IR) and Political Science, challenging arguments and pointing out gaps, before proposing a theoretical model based on Constructivist IR theory, and Anthropological and cultural approaches.

Methodologically, I follow three distinct steps for this research: theoretical, historical, and empirical. Firstly, I compile and review the current scholarship on the topics of nuclear politics and nuclear on a 'State-of-the-Art' section. The aim of this section is to map out the trends and models of explanation of nuclear value, that is, why States seek and hold on to nuclear weapons. With this panoramic snapshot of nuclear theory, I will be able to identify the gap in the scholarship related to the symbolism of nuclear weapons – particularly in the United States. Essentially, this section is a literature review, and the identified scholarship gap will allow me to introduce the guiding puzzle of this research and establish where my contribution fits.

Secondly, based on the scholarship gap, I propose a theoretical model connecting symbolism, identity, and behaviour to contribute to the overarching question of why States value the possession of nuclear weapons. For this section, I incorporate ideas from neighbouring fields of study, such as Anthropology, Sociolinguistics, and Political Psychology to Constructivist and cultural IR perspectives. Rooted in a semiotic approach, this theoretical model will seek to trace the construction of meaning of nuclear weapons, their diffusion and change through discourse, and how it is connected to the concept of identity and, consequentially, behaviour.

In the historical step, the focus is on US history of nuclear weapons and nuclear strategy. The scope is from 1945, when the world first witnessed the magnitude of a nuclear bomb in its real, intended use, to present date. Within this step the method of historical analysis will prevail, focusing on the development of US nuclear strategy and the key events throughout US nuclear

history. For this portion, documental analysis in addition to reviews of historical works recounting the evolution of US nuclear strategy will be paramount. The aim of this step is to trace the historical processes of the formulation not only of US nuclear strategy, but also how nuclear weapons were conceptualised throughout time, and to map these fluctuations centred on key events.

Lastly, the empirical step will focus on applying the theoretical model to the case study. The theoretical step of this research is centred on the construction of a theoretical model explaining how symbolism, identity, and behaviour articulate. The historical step maps out the timeline and the data to be used – governmental documents, statements, and discourse. In the third step, I will be able to verify whether how symbolism, identity, and behaviour articulate in in the case of the United States. In this last, paramount step, I analyse the data, and establish the connection between the three pillars of this research. In other words, I point out how symbolism is embedded in the historical construction of a US nuclear identity by determining firstly how each symbolic perception of nuclear weapons was constructed and how (and why) it changed, and secondly how this semiotic process affected the way in which nuclear strategy was discussed and formulated. I then turn my attention to the nuclear nonproliferation regime, focusing on the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) and US posture in relation to it; the aim is to assess whether the NPT is a symbol of nonproliferation and disarmament or if it perpetuates the symbolic perceptions of nuclear weapons as symbols of status through its asymmetric organisation.

Despite the fact that symbolism is a fluid concept, documental and discourse analysis will be particularly useful to extract the embedded symbolic perception of nuclear weapons in US documents and discourse, allowing for a more concrete analysis of subjective terms. Nuclear behaviour in itself will be analysed based on empirical facts and events revolving around the thematic of US nuclear politics and behaviour, such as US discussions and position in relation to nuclear weapons throughout the timeframe established. In this last step, I pinpoint the moments in which I argue there were changes in the symbolic perceptions of nuclear weapons, evaluating why these changes happened, how they were disseminated, and how they affected behaviour.

To tackle the guiding research questions, I base my initial analysis on Wendt's (1992; 1994) process of identity formation, but adapting it accordingly, moulding the initial shape of the nuclear identity formation process. To this end, I first establish the US's perception of *self*

within the International System regarding nuclear weapons and how the collective *other* perceives it. For this effort, I aim to underline the role of nuclear symbolism in the formation of US nuclear identity both in the domestic and the international arena by critically analysing discourse directed to internal and external audiences and how it portrays nuclear weapons, the US role in the International System regarding not only the generality of nuclear weapons, but topics such as disarmament, proliferation, elimination, and the threat of the use of nuclear weapons in conflict. I look for mentions of power, modernity, might, dominance, superiority, and prestige linked with the possession of nuclear weapons within the discourse, while also showing the constraints symbolism has in relation to behaviour, thus highlighting the relevance of nuclear symbolism within nuclear politics.

In regard to the second research question, I focus on the comparison between the nuclear identity and factual behaviour. I assess whether there is coherence between 1) what is portrayed by the *self* (the discourse); 2) what is perceived by both the *self* and the *other* (the nuclear identity and both the roles performed and prescribed); and 3) what is empirically done (behaviour). To this end, I base myself on official US documents, reports, speeches and all forms of discourse to understand what is preached in order to compare it to what has been executed *de facto*.

Moreover, depending on the results of what is achieved through these methodological goals, I will be able to expand this theoretical model to other case studies and, consequentially, further challenge positivist Cold War era dated explanations. This prospective theoretical model would dismantle the current normative view of nuclear weapons as a quasi-uniquely military security tool, broadening the scope of nuclear weapons to encompass more subjective factors, such as culture. Future case studies to test the robustness of this model include the remaining P-5 member States², India, North Korea, and Brazil. The P-5 member States are the sole 'legal' possessors of nuclear weapons, proving interesting cases on their own, whilst India has arguably procured nuclear weapons for reasons other than security and survival (Frey, 2006a). North Korea, as the pariah nuclear State also proves an interesting case-study, given the isolation of the State and being the sole State to withdraw from the NPT. Finally, Brazil forsworn its nuclear programme in the 1980s, yet its nuclear ambitions may have been recently

² The P-5 member States are the five permanent members of the United Nations Security Council and the five States legally allowed to possess nuclear weapons, as per the NPT. They are the United States, Russia, the United Kingdom, France, and China.

resuscitated by its projects for a nuclear-propelled submarine – being the only State other than the P-5 members and India to possess one).

Case Selection: Why the United States?

The case study chosen to be further explored is that of the United States. Being one of the leading nuclear powers, the United States is the only State to have used nuclear weapons in actual warfare (Sagan and Waltz, 2003). It has a history with nuclear weapons and especially with the formation and crystallisation of a strong military identity. There's considerable scholarship available on US nuclear strategy and politics, despite the lack of focus on nuclear symbolism.

The vast majority of NWSs and latent States³ would make for an interesting case study when analysing the different symbolic perceptions of nuclear weapons. I chose to focus on the United States for its unparalleled connection with nuclear weapons. It was the first State to acquire it, through the Manhattan Project, it was the first and only State to have used it in combat and it is the only State to have achieved nuclear monopoly and clear-cut superiority – albeit for a short while. Moreover, out of all NWSs, the United States is the one that threatened the use of nuclear weapons the most throughout the nuclear age (Tannenwald, 2007).

The United States also have a strong military identity. The use of nuclear weapons has always been an option for the United States and for a large portion of the nuclear age, the war plans drafted during the Cold War heavily relied on massive nuclear attacks even as the most modest option (Kaplan, 2020). As Fred Kaplan (2020) unveils, the history of US nuclear weapons after 1945 was heavily influenced by internal conflicts amongst the three division of the US military.

Furthermore, after the end of World War II – and particularly after the Cold War – the United States built and cultivated the role of 'world police' under the *Pax Americana*. This internalised identity role, characterised, for instance, by the explicit need for "full-spectrum superiority" (United States Department of Defense, 2000:59) makes it for a particularly interesting case to analyse the other, subjective facet of nuclear weapons. The United States have, to some degree, accepted and crystallised the regime of nuclear truth of nuclear absolutism despite being constrained by the nuclear taboo. All these factors add up to make the United States one of the

³ Nuclear latent States are States that have the technology to build nuclear weapons. See, e.g., Mehta and Whitlark, 2017.

– if not the most – military-oriented States when it comes to its nuclear politics. Officially, the United States never assumed a ‘no-first-use’ (NFU) policy, and as per the latest Nuclear Posture Review, reliance on nuclear weapons has increased under President Trump (United States Department of Defense, 2018).

Lastly, since in order to assert how symbolic interpretations constrained behaviour, I am applying similar mechanisms to Tannenwald’s enterprise to demonstrate the nuclear taboo – namely public and international opinion, and the personal beliefs of a leader – the strong democratic character of the United States makes it a perfect choice. Unlike in autocratic or illiberal democratic regimes, public opinion weighs heavily on US foreign policy. The United States, thus, proves to be an enthralling case, since it merges the tradition of strong US military identity and the historical threats and plans to use nuclear weapons with the strong value of public opinion.

Choosing the United States as my case study will hopefully provide valuable insights to broaden and generalise the application of this theoretical model. I am not, however, building a theoretical model to fit one case; rather, I plan to expand on this model and carry out future research applying it to other cases to verify the robustness of the model which, in turn, will allow me to fine-tune it and perfect it.

Scope, Challenges, and Limitations

As any other before it and all others to come, this research has a set scope and its fair share of challenges and limitations. A doctoral research entails the production of new knowledge and significant contribution to the literature, but on the other hand, it is a researcher’s first contact with and step towards independent research in a limited amount of time. Just as important as defining the scope of the research is defining what the research is not, that is, what falls outside its ‘jurisdiction’, what it is not its scope, and what it does not propose to do.

This research proposes a theoretical model based on symbolic perceptions of nuclear weapons to contribute to the explanation of why States pursue, possess, and value them. It does not, therefore, focuses on nuclear use or lack thereof, as the nuclear taboo does. I engage with the nuclear taboo and the tradition of non-use in this research, but as a foundation to strengthen my argument. Additionally, this research is centred on the case of the United States. Despite a few generalisations might be made – on which I elaborate in later chapters – it does not necessarily

translate to all cases; at this stage, my goal is to test the robustness of the model in a single case, allowing me to expand it in future research towards a more generalised model.

Despite focusing on a single case, the time frame I chose to analyse spans 75 years. Needless to say, a plethora of events have taken place in regard to nuclear weapons in the last three-quarters of a century. The United States has one of the – if not the – richest and most elaborate histories of nuclear weapons. Therefore, it is important to emphasise that the goal of this research is not to provide a detailed account of every single event, meeting, and decision in the United States concerning nuclear weapons since the dawn of the nuclear age. There are several other works whose scope is precisely that.

Rather, in this research I present an overview of the 75 years of US nuclear history, pinpointing the key events which I believe carry significant consequences to one of the goals of this research: map out the changes in US symbolic interpretations of nuclear weapons. That means that despite employing documental and discourse analysis using data spanning 75 years, I will not analyse every single document, speech, and statement that has ever been made by all US presidents and high-ranking officials. I focus instead on significant moments of symbolic change, analysing how and why the change happened, and how it was diffused.

Similarly, another challenge I faced during this research – also a common challenge to most, if not all doctoral researches – is related to the amount of readings. Any person undertaking a doctoral programme is required to have a high degree of knowledge of their object of study. Hundreds of thousands of pages were read for the production of this research, yet the feeling I have not read enough was a constant throughout the process. A challenge was to know when to stop reading what others have done and write something myself. A doctoral research is not an extensive literature review; it is not supposed to contain a summary of *all* knowledge produced on the topic. Rather, it is the production of knowledge itself, the contribution to new ideas and analyses. There are countless works with which I did not engage in this research, either because they were not precisely relevant to my research scope, or simply because I was not aware of their existence. At some point, I decided it was best to reflect on all I had read and start to produce my own ideas and theories, rather than transform my research in an encyclopaedic entry.

Furthermore, given the fact that I employ post-positivist epistemologies, using Constructivist and cultural approaches, it is always useful to remember what that entails. The abandonment

of positivism and adoption of the concept that everything is socially constructed means first and foremost that there is no universal, failproof truth. With this research, I am neither rewriting history nor reinventing the wheel. I do not claim that my model is the singular model that explains the pursuit, possession, and valuing of nuclear weapons or that all other models and perspectives – including Realist perspectives and Deterrence Theory – are wrong or obsolete.

I do not ignore nuclear weapons' material capabilities either. Rather, I present a small contribution to the literature; I present one model that helps shed some light on the larger puzzle at hand. Symbolism may not be the determining factor to explain why States pursue, possess, and value nuclear weapons. Perhaps it may not even be the most important in some cases. My contribution, however, lies in the fact that symbolism, through a colouring of identity, does play a role that must be acknowledged and further researched.

Lastly, and perhaps most importantly, is the perennial yet often (perhaps conveniently and maliciously) forgotten notion that Social Sciences – and in particular post-positivist – research is ultimately impossible to be indubitably proved. Social Sciences are based on compelling argumentation and sufficient evidence to support it. Unlike Natural Sciences, there are no universal laws that can be proved and demonstrated to an unquestionable extent. Within Social Sciences, however, it has become a common practice to criticise and label researches as unsustainable under the reasoning that its arguments cannot be proved. Yet, there are no universal laws governing Social Sciences, and within it, there is no research that can be certainly proved.

I cannot claim to prove 'through a + b' my core arguments in this research. How does one prove how one, let alone an entire collective actor (a State), interprets something? How does one perfectly measure the impact of a subjective factor, such as symbolic interpretation, in something concrete, such as behaviour? To this end, my effort through this research is to provide a robust, well-round argument which I can support with sufficient, credible evidence. Research on subjective factors, such as symbolism, semiosis, and cultural approaches tend to be scrutinised for their lack of scientific rigour – particularly by positivist branches of Social Sciences, such as Realism. However, returning to the core meaning of Social Sciences, scientific rigour is contingent on strong argumentation and compelling evidence, which is what I aim to present in this research.

Research Design

In what concerns the design of my research, I have divided it into six chapters, with the addition of this introduction and a conclusion. The first chapter, currently titled *Nuclear Theory*, consists of a review of the scholarship on nuclear weapons. In this chapter, I trace the evolution of the scholarship on nuclear weapons and present and evaluate the current theoretical models that focus on the pursuit, possession, and valuing of nuclear weapons. The objective of this chapter is to map the theorisations on nuclear weapons and to establish where my contribution fits.

The second chapter, titled *On the Foundations of Nuclear Symbolism*, is the modelling portion of this research. In this chapter, I introduce and define the concepts of symbolism, identity and, behaviour and elaborate a theoretical model that articulates these three pillars. Drawing from the field of Semiotics, I explain how symbols are formed and crystallised, how they change throughout time, how they penetrate and affect ideas of identity, and how, consequentially, they shape behaviour.

In the following four chapters, I trace the history of US nuclear politics and strategy regarding nuclear weapons from 1939 to present day, creating a timeline divided by periods in which the symbolic perceptions of nuclear weapons are established, each separated by what I call ‘symbolism markers’. These symbolism markers tag shifts in symbolic perceptions of nuclear weapons, either due to exogenous effects or internal, political issues. In these chapters, I map the symbolic perceptions of nuclear weapons in the United States in the last 75 years, identifying key moments of change, explaining the reasons and manner of these changes, and assessing how each symbolic interpretation shaped US nuclear identity and, consequentially, affected behaviour.

The first period, from 1939 to 1949, covers the development of the first nuclear weapon under the secrecy of the Manhattan Project until US monopoly of nuclear weapons came to an end. This period marks the beginning of the nuclear age and the first symbolic perceptions of nuclear weapons. The semiotic process resulting from this period was that nuclear weapons were symbols of power, prestige, and scientific development.

The second period, from 1949 to 1962, embodies the *zeitgeist* of the Cold War. After the USSR’s first nuclear test – First Lightning – the nuclear arms race rapidly accelerated. The fierce competition between the US and the USSR in all arenas transformed the meaning of nuclear weapons, moving from symbols of abstract power, linked to development, towards a

more pragmatic, security-based meaning. The novelty of nuclear weapons meant that there was no binding set of rules to be followed. Nuclear weapons became a quantitative asset, resulting in an escalation of nuclear arsenals by the two nuclear powers, and the pursuit of nuclear weapons by others. Unsurprisingly, this period covers the decade of nuclear crises and the tensest episodes of nuclear history, such as the 1961 Berlin Crisis and the 1962 Cuban Missile Crisis.

The third period, from 1963 to 1991, is represented by yet another symbolic shift. In the aftermath of the 1960s nuclear crises, US leaders – namely President Kennedy, Secretary of Defence Robert McNamara, and President Johnson – consider the current benchmark of quantitative superiority not as effective. In that sense, a shift towards qualitative aspects of nuclear weapons, such as accuracy, delivery vehicles, and the overall technology imbued in it, are prioritised. This new symbolic perception, focused on qualitative aspects of nuclear weapons, refers to the nuclear meanings of the 1940s. The nuclear arena became a proxy for a technological race. On the one hand, a shrinkage of nuclear arsenals is observed. On the other hand, these arsenals are modernised, incorporating cutting edge technology, overshadowing nuclear arsenals of previous decades. This new shift clearly illustrates how the symbolic perceptions of nuclear weapons are not completely abandoned in favour of a new one; rather, they evolve, still retaining characteristics of its previous iterations.

The last period, from 1991 to 2016, covers the aftermath of the Cold War, when high tensions were dissipated, and the US rose as the sole superpower. During this time, nuclear weapons were ‘invisibilised’, becoming less public, particularly after the turn of the century, when new threats – particularly terrorism – were prioritised. In contrast to the other periods, the striking feature here is not so much a stark change of symbolic perception, but a certain inertia (Sauer, 2005).

Lastly, in the conclusion, I not only summarise my findings and results, but also analyse what are this research’s consequences to nuclear proliferation and disarmament. Additionally, I briefly analyse how critical events outside the analysed timeframe – such as the election and policy of Donald Trump and deteriorating US relations with Russia, North Korea, and Iran – fit within or pose challenges to my theoretical model. Furthermore, I assess whether the lessons learnt from the United States case can be, to some degree, generalised to other cases, contributing to the agenda of future research in this latent field.

1. Nuclear Theory

Nuclear weapons are quasi-mystical tools. Long before the development of the first nuclear weapon, with the top-secret Manhattan Project (See, e.g., Gosling, 2005), security issues were thought of in a more straightforward fashion. Warfare was conceptualised in more of a lengthy and strategic manner, and wars of conquest and territorial disputes were more frequent and acted upon. With the development of nuclear weapons, a radical change has taken place in this war rationale – one of the many effects of the so-called “nuclear revolution” (Mandelbaum, 1981:1). Nuclear weapons were substantially more powerful in destructive scales and had the ability to obliterate large areas in a question of seconds – not to mention post-blast effects, such as radioactivity and environmental damages. Therefore, nuclear weapons became the ultimate weapon, the undisputed tool of security and survival, and the utmost show of strength and military might.

After the Second World War broke out, dismissing the preponderance of idealistic and optimistic thinking, Realist theories started to take space and filled that vacuum. Mentions of power and capabilities and their unchallenged importance are timeless virtues within all branches of Realism, and surely nuclear weapons would not fall short of that mark. With the arguable dominance of the Realist school as the mainstream school of thought in International Relations and the indubitable warlike importance of nuclear weapons, it is by no means far-fetched to assume that nuclear weapons would play a major role in the future of International Security.

The scholarship on nuclear weapons and politics since the dawn of the nuclear age follows, predominantly, an objective ontology (See, e.g., Jervis 1984; 1989; Quinlan, 1993; 2009; Mearsheimer, 2001; Freedman and Michaels, 2019; Cimbala, 2005; Schelling, 2009; Martin, 2013; Monteiro and Debs, 2014; Kroenig, 2018). Materialistic, military and traditional security conceptions of nuclear weapons are usually the driving forces of analysis, and it is not my scope to argue against their validity. It is, however, my aim to underline how this strand of analysis is merely one of many possible, and not one without flaws. Analysing nuclear weapons and their pursuit objectively overlooks the underlying reasons as to why States pursue, possess, and value them. The deployment of nuclear weapons in warfare has been restricted in history to the notorious cases of Hiroshima and Nagasaki, in 1945, and the scholarship shows the reluctance of States to deploy them, despite the myriad of opportunities arisen since 1945. This mainstream, ontologically objective and materialistic literature disregards the importance of

subjective factors embedded in nuclear weapons, one that goes beyond that of security and military tools.

1.1. Nuclear Realities

After the nuclear bombing of Japan, the world watched the nuclear revolution take place. The term ‘nuclear revolution’ was coined to demonstrate the magnitude of the consequences of the weaponisation of nuclear fission. Nuclear weapons’ destructive power was so much greater than conventional weapons, that its development issued a revolution in warfare, more so than the introduction of barbed wire and trench wars had done in World War I. Notwithstanding, nuclear weapons brought not only one, but two revolutions: while the first entailed the technological and material aspect of nuclear weapons and how it changed warfare, the second regarded the political aspect of nuclear weapons, and later on, their impact on strategy (Mandelbaum, 1981).

The technological side of the nuclear revolution is rather clear: nuclear weapons were – and still are – on a class of their own and no other instrument of war could come close to the destructive power of the nuclear weapon (Brodie, 1946). Even years after their development, nuclear weapons remain as the only factor capable of changing the balance of power to unipolarity, according to Realist logic. Mearsheimer (2001) argues that unless a State achieves clear-cut nuclear superiority, a global hegemony is extremely unlikely to take shape.

On the other hand, the political aspect of the nuclear revolution sparked debates on the field of Strategic Studies, Political Science, and International Relations due to the impact nuclear weapons brought to world politics (Jervis, 1986). The nuclear revolution helped elevate nuclear weapons to the position of ultimate deterrence tools. Jervis (1989) argues that the most prominent and significant meaning of the nuclear revolution was that it proposed a stark change in statecraft and warcraft. Statecraft could not continue following pre-nuclear strategies in a nuclear world; in this sense, nuclear weapons brought about more stability to the world due to the undisputed deterring power of nuclear weapons and the diffused idea of mutual assured destruction (MAD).⁴

In light of the nuclear revolution, nuclear weapons became one of the central pillars of the Cold War. During that time, nuclear weapons were the ultimate survival assurance. Being somewhat

⁴ However, it is important to highlight that the internalisation of the fact of MAD did not happen until at least the 1960s, with the Berlin Crisis in 1961, the Cuban Missile Crisis in 1962. See McNamara, 1967.

a novelty, there were few norms and no crystallised regime for them; they were seen through the military, on-alert scope of the orthodox security realm. As Quinlan argues,

[...] nuclear weapons, policies, and doctrines has taken place almost entirely within the context of a bipolar confrontation with a huge totalitarian power, in close and harsh proximity to much of the Western community, with a disquieting history, an alien and hostile political ideology and a massive military armoury of all sorts (Quinlan, 1993:485).

Realist and so-called Rationalist thinking was centred on Deterrence Theory. The Realist perception of nuclear weapons and the idea of deterrence are intrinsically connected. Tannenwald (2007) defines deterrence as “dissuading an adversary from doing something it otherwise would want to do (and which is perceived as threatening) through threats of either denial or punishment, or a combination of these”. In essence, deterrence entails the curtailing of another’s actions through means of threat – most frequently, the threat of use of force, in particular (Schelling, 2008). In other words, it would mean a threat to keep others in check, not requiring any actual use of force, but merely the signalling of the threat of use of force. Deterrence is often misinterpreted as coercion, and the two are frequently used interchangeably; nevertheless, there is a substantial difference between them. While deterrence rests on threats to thwart actions, coercion entails threats (often the same threats as in deterrence, that is, the threat of use of force) to bring about a particularly desired action. Coercion, thus, would mean to threaten a third party in order for it to pursue a course of action that the threatening party desires, instead of simply impeding the threatened party to follow a course of action (Schelling, 2008). The concept of deterrence is at the heart of military strategy, and the development of nuclear weapons created the ultimate deterrent.

Since 1945, nuclear weapons have never been utilised in conflict (Sagan and Waltz, 2003). It may be odd to think of a reason why, since it is the most powerful weapon available. The non-use of nuclear weapons is one of the most striking facts of the nuclear age – particularly from a Realist standpoint – and one can enter the debates and speculate on its reason. Deterrence Theory is the dominant explanation not only of why States have not used nuclear weapons, but also why they pursue, keep, and value them. Nevertheless, Deterrence Theory does not fully explain nuclear non-use and, more importantly, the high valuing of nuclear weapons.

On deterrence’s failure to fully explain nuclear non-use, Tannenwald (2007) highlights three key issues. First is the existence of multiple cases in which the bedrock assumptions of Deterrence Theory and Realist thinking did not operate. As the author explores in her book, a plethora of cases would dictate nuclear use even considering all theoretical assumptions of

Deterrence Theory. These include cases in the beginning of the nuclear age in which the United States boasted a status of either nuclear monopoly, or clear-cut superiority, and also cases of conflict involving NWSs and NNWSs. Most notably is the case of Vietnam, in which the United States effectively lost the war due to nuclear restraint against a NNWS.

Realists can argue that based on a rational choice calculation, the use of nuclear weapons might implicate severely negative consequences, primarily nuclear retaliation bearing unacceptable costs to the aggressor. This deterrence logic would hold in the events of a nuclear strike only against another NWS, since nuclear retaliation is the main *détente*. It sufficiently explains the current situation involving India and Pakistan, both NWSs with a history of conflict. Yet, this logic fails to explain why NWSs do not deploy nuclear weapons in conflicts against NNWSs, since there is no possibility of a nuclear retaliation.

A reasonable obstacle to this critique would be the existence – even within Realist logic – of military alliances and security organisations. Nevertheless, history shows us that these mechanisms are fragile and susceptible to failure. As an example, in 1924, Czechoslovakia and France signed the Treaty of Alliance and Friendship, which stated, that the two States would come to the other's aid in times of peril. In 1938, given the rise of tensions in Europe, Czechoslovakia also had a gentleman's agreement with the United Kingdom regarding the latter's aid in case of a military invasion of the former by Germany. When Germany invaded Czechoslovakia, neither agreement was fulfilled, following several of the bedrock assumptions of the Realist school of thought. Another example of the false promise – to use the Realist phrase (See Mearsheimer, 1995) – of military alliances, is France's General Charles de Gaulle's *tous azimuts* strategy.⁵

This fault is amplified given the current state of affairs as to the number of nuclear weapons available in the world (See Davenport, 2018), making it hard to imagine the possibility of a second-strike capability by the vast majority of States. In other words, given the number of nuclear weapons available to most of the NWSs, in case of an attack directed at a NWS's NNWS ally, it would mean risking its own survival to honour a treaty or agreement and retaliate the attacker – something that, considering the self-help and survival logic bedrock assumptions of Realism, defies this very logic.

⁵ The *tous azimuts* (free translation: all sides) strategy was Charles de Gaulle's strategy of aiming its forces not only towards the East, but to all sides. It derives from the Realist logic that an ally today can very well become a foe tomorrow. See, e.g., Hymans, 2006b.

The strength of the US nuclear umbrella guarantee raised questions from the very start, most notably from France. In the 1960s, General Charles de Gaulle was highly sceptical of US nuclear security assurances, particularly after the USSR developed intercontinental ballistic missiles with enough range to reach the United States. This scepticism led de Gaulle to pose the question whether US President John F. Kennedy would be willing to risk New York for Paris. Eventually, this very lack of confidence fomented the development of France’s *force de frappe*—the French nuclear arsenal – allowing France to be able to protect itself and avoid a strict dependency on NATO (Kaplan, 2020).

Alongside the same lines, the standard Realist logic posits that States should pursue nuclear weapons and as soon as possible, based on the self-help logic and the fragility of the military alliances rationale. However, **Figure 1** shows that there is a clear distinction between States with the resources and know-how to build nuclear weapons and those who have actually taken the step.

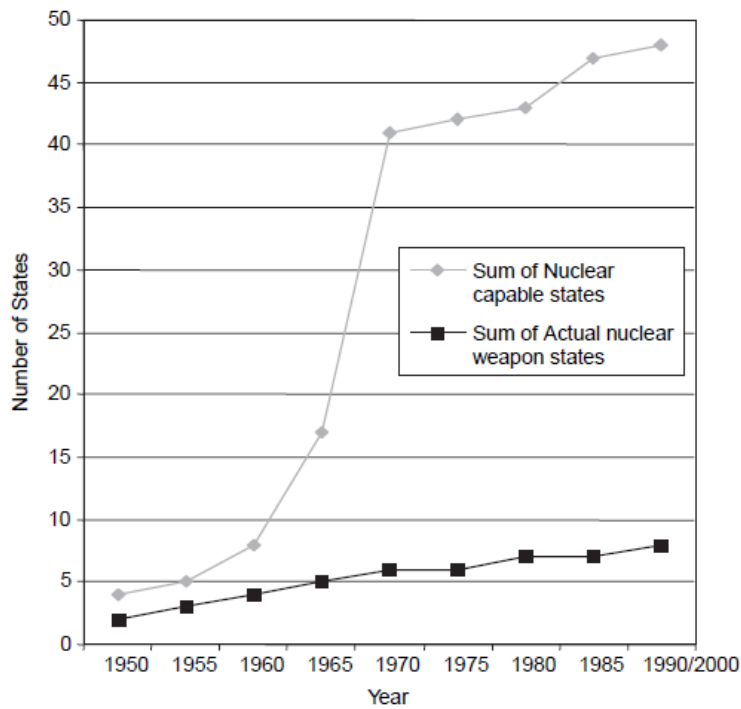


Figure 1: Potential vs Actual Nuclear Proliferation, 1950-2000. Source: Hymans, 2006b:457.

These figures go against the Realist rationale regarding nuclear weapons and politics (See, e.g., Chafetz *et al.*, 1996; Long and Grillot, 2000; Hymans, 2006b). Following the Realist logic, it is hard to explain such discrepancies. The nonproliferation regime has been fairly successful,

yet Realism has little regards for treaties of sorts, particularly the ones limiting State capabilities – and major ones.

The second deterrence failure to explain nuclear non-use lies in the theoretical gaps and lack of clarity regarding the basis of deterrence. Deterrence Theory does not objectively stipulate what deters and against what. In other words, it does not provide a framework to ascertain how many nuclear weapons would be able to deter others, what are unacceptable costs, and so on. This particular lack of clarity fuelled by Realist security dilemma anxieties has been a major factor in the nuclear arms race during the Cold War. This combination of issues seriously challenges Realism's claims as a rational theory, since nuclear stockpiles have a strict law of diminishing returns, meaning that "two hundred bombs may be better than one thousand, but ten thousand are no better than five thousand because five thousand would destroy all important targets in a country" (Jervis, 1989:46).

Lastly and more importantly is the existence of key factors neglected by Deterrence Theory. Differences in individual leadership styles, personalities, beliefs, as well as more objective factors such as domestic politics, are all determining factors of policy which are effectively overlooked by Deterrence Theory (Tannenwald, 2007). Domestic pressure has played a significant role in nuclear policy making in the United States, and so has the personal psychological characteristics of the leaders in charge. It proves that a leader's conviction, profile, and rationality is one of the driving factors of policy, further challenging the assumption of the universality of the concept of rationality.

Deterrence Theory not only fails to fully explain why States haven't used nuclear weapons since 1945, but contingent on that, it also fails to fully explain why States pursue, keep, and value nuclear weapons. The logic of Deterrence Theory for pure deterrence's sake would dictate that States should maintain a nuclear arsenal in order to threaten to use them seeking to thwart unwanted behaviour and aggressions from other States. However, there are cases in which States seek and maintain nuclear weapons not for security purposes, but for subjective values.

Tannenwald (2007) thoroughly explored the depths of nuclear non-use, arguing that a normative taboo is what restrains the use of nuclear weapons. More radically, John Mueller (1998) argues that nuclear weapons are essentially irrelevant, with no practical military purpose: States did not use nuclear weapons because they did not want to nor did they see any purpose in doing so. Realism would posit that what would keep States from using nuclear

weapons is the fear of consequences – the shadow of the future. Moreover, Deterrence Theory fails to account for nuclear non-use. There are several attempts to explain why nuclear weapons were not used. In light of that, whether it is because of a normative taboo, or their irrelevance, or the shadow of the future, if there are endogenous and exogenous forces restricting their use, why do some NNWSs seek and NWSs maintain and value them? Nuclear weapons serve a multitude of purposes other than military deterrents, and in the next chapter I further develop this argument alongside a theoretical model to explain it.

By the last years of the Cold War, past the most critical moments of nuclear history – such as the Berlin Crisis of 1961 and the Cuban Missile Crisis the following year – deterrence was still the dominant driver of nuclear weapons politics. After the end of the Cold War and the bipolar setting, the global role of nuclear weapons was questioned. In this aspect, the literature is torn. Some argue that at least for some time after the end of the Cold War, nuclear weapons were relegated to the background, devaluating and losing their primacy (See, e.g. Kroenig, 2018). As Kroenig (2018) argues, from 1989 to 2014, nuclear weapons were viewed as “Cold War relics”. In contrast, there are those (See, e.g., Quinlan, 1993; Martin, 2013) who refuse to accept the devaluing of nuclear weapons under the argument that “the material characteristics of nuclear weapons bound and constrain their essential value in important ways” (Martin, 2013:177).

Quinlan (1993) further argues that deterrence was still necessary despite the end of the Cold War and the East-West confrontation. In spite of the agreed reductions and arms limitation in the 1990’s, there were still thousands of nuclear warheads scattered around the globe, which would call for some degree of deterrence. As Quinlan (1993) argues, the fall of the USSR would end up leaving a considerable amount of nuclear weapons to its heir States and, given the uncertainty over the political stability of these new States’ rulers, it would be the West’s – namely the US, as nuclear prime possessor – task to keep an eye overseas to make sure a new Cold War was not triggered.

Such statements show that for this body of literature, nuclear weapons are either military tools of security, mainly playing the role of ultimate deterrent, or nothing. Along the same lines, Mearsheimer’s theory of Offensive Realism places considerable weight on the military and material faculties of nuclear weapons. Clear-cut nuclear superiority is the only factor that would separate a potential global hegemon from the other States in the International System

(Mearsheimer, 2001). Strengthening this argument, Martin (2013) argues that nuclear weapons can attain no role other than the ones attributed to their material usages.

In *The Continuing Value of Nuclear Weapons: A Structural Realist Analysis* (2013), Martin argues in favour of the material and objective perceptions and characteristics of nuclear weapons, refuting a Constructivist approach:

Structural Realism thus rejects the notion that weapons are, as Alexander Wendt said in relation to anarchy, what states make of them. The material characteristics of a weapon are an important determinant of its strategic effectiveness, and weapons cannot be stripped of their military value by changes in how we think about or act in relation to them. Nuclear weapons will continue to have value as long as states are constrained by the competitive nature of an insecure international system (Martin, 2013:176).

According to Martin (2013), the reasons for the irrelevance of Constructivist approaches to nuclear weapons are twofold. Firstly, that anarchy leads to the security dilemma. Martin, following the Realist school of thought, argues that due to the anarchic setting of the International System, States must resource to a self-help system and, in order to feel secure and achieve their ultimate goal – survival – must not only acquire the most powerful means for it, but acquire it in sufficient/superior quantities. Secondly, that the material characteristics of nuclear weapons cannot be overlooked. The argument here is quite straightforward: due to the destructive powers of nuclear weapons and the primal guarantee of survival they represent, it is not only impossible to discard their military role and material value, but also to attribute any other non-material role to nuclear weapons.

To the first reason, the entire ontological paradigm involving Realism and Constructivism shows that it is a purely a matter of perception. The existence of anarchy is a truism, a fact that neither side rejects. Nevertheless, Martin's argument is generic. The Constructivist claim that 'anarchy is what States make of it' serves the purpose of showing that the lack of a centralised governing authority in the International System does not necessarily result in a security dilemma. It does not imply, however, that the security dilemma does not exist or that self-help (or cooperation, for that matter) is not the standard go-to framework of States, given the settings of the International System. It does imply that if it is so, it is only because States perceive anarchy in that manner; it is not a direct, unquestionable and universal consequence of anarchy, it is merely one of the many possible perceptions States chose to collectively adopt for anarchy.

To the second reason, to state that realism is unreservedly immune to and against the addition of non-material factors in its logic is flawed. Within the epistemological spectrum, there are

branches of realism or, more specifically, works which allows for the inclusion of subjective and non-material factors. A prime example of this debunking of the ‘hardcore Realism myth’ is Neoclassical Realism. Coined by Gideon Rose (1998), Neoclassical Realism revamps mainstream Realist theories by recognising that considering the State a ‘black box’ – that is, not taking into account the formation of decision-making processes from within the State, at domestic levels – fails to provide full, satisfactory predictive power that IR theories claim to have. As Rose (1998:146) argues, “[...] the impact of such power capabilities on foreign policy is indirect and complex, because systemic pressures must be translated through intervening variables at the unit level”.

Neoclassical Realism, therefore, adds internal factors to the Realist equation. Such internal factors vary wildly in nature, but they are not limited to material factors. Neoclassical Realism, which adds the domestic politics factor to the Realist logic, may incorporate non-material factors – such as identity – to its analysis. Jennifer Sterling-Folker (2009), for instance, incorporates the concepts of group and national identity in its Neoclassical Realism analysis of the US-China-Taiwan relations. History also shows that non-material factors, even at the domestic level, affect foreign policy. Tannenwald (2007), while exploring the nuclear taboo, argues and demonstrates how public opinion played a role in US nuclear policy, even well within the boundaries of Deterrence Theory.

Furthermore, other non-material factors often incorporated to Realist works are the concepts of status (See, e.g., Wohlforth, 2009; Paul *et al.*, 2009) and prestige (Morgenthau, 1948; Gilpin, 1981). The “policy of prestige”, as Hans Morgenthau (1948) argues, shares the same relationship with the International System as does within individual relationships at the unit level. Prestige, roughly defined as the image others hold of you in comparison to what you represent, plays a crucial role in the quest for power both at the systemic and domestic levels:

[...] the policy of prestige, however exaggerated and absurd its uses may have been at times, is an intrinsic an element of the relations between nations as the desire for prestige is of the relations between individuals [...] In both spheres, the desire for social recognition is a potent dynamic force determining social relations and creation social institutions. It is only in the tribute which others pay to his goodness, intelligence, and power that he becomes fully aware of, and can fully enjoy, what he deems to be his superior qualities. It is only through his reputation for excellence that he can gain the measure of security, wealth, and power which he regards to be his due. Thus, in the struggle for existence and power, which is, as it were, the raw material of the social world, what others think about us is as important as what we actually are. The image in the mirror of our fellows’ minds, that is, our prestige, rather than the original, of which the image in the mirror may be but

the distorted reflection, determines what we are as members of society (Morgenthau, 1948:50-51).

Robert Gilpin (1981) also brings the idea of prestige to the systemic/domestic duality, arguing that prestige plays in the International System the equivalent role of the idea of authority at the unit level. Prestige would, thus, be understood as a badge with which States would be viewed and legitimised as superior to its peers, playing a dominant role in power hierarchy in the International System. Despite the lack of a governmental body at the supra-State level, prestige is the determining factor for the ranking of States to determine who is more likely to be legitimised to play the role of an international governing body, similarly with the authority a State government exercises at the domestic level.

Prestige is hardly an objective concept. Despite the fact that prestige can be (and, in some cases, not wrongly so) linked to material capabilities, the definition of prestige is ontologically subjective at its core. Several factors (material and non-material) can and should be taken into account, and to conceptualise prestige as a quantifiable variable rooted in material capabilities is to not grasp the concept of prestige in itself.

William Wohlforth explores the idea of status and identity, and the issue of great power conflict, arguing that non-material factors (or “noninstrumental” (Wohlforth, 2009:29), as he calls them) are one of the most important variables impacting on not only social behaviour at the unit level, but also State behaviour at the systemic level. In analysing hegemonic wars in the past, Wohlforth notices that material factors were rarely the underlying cause of conflict:

[...] Thucydides’ account tells us that the rise of Athens posed unacceptable threats not to the security or welfare of Sparta but rather to its identity as leader of the Greek world, which was an important cause of the Spartan assembly’s vote for war. The issues that inspired Louis XIV’s and Napoleon’s dissatisfaction with the status quo were many and varied, but most accounts accord independent importance to the drive for a position of unparalleled primacy. In these and other hegemonic struggles among leading states in post-Westphalian Europe, the rising challenger’s dissatisfaction is often difficult to connect to the material costs and benefits of the status quo, and much contemporary evidence revolves around issues of recognition and status (Wohlforth, 2009:31-32).

Wohlforth goes to argue that great powers, just as individuals, care deeply about status and status is a primordial driver of actors’ behaviour, and these claims are supported from a wide array of studies from an equally wide range of fields of research – such as neuroscience, political and social psychology, economics, anthropology, and even evolutionary biology. Material factors, thus, may be intrinsically linked to status, but status in itself, given the fact

that it is based not only on self-perception, but also on perception by others, remains a predominantly subjective non-material concept.

Status, being a concept usually brought down to the unit, human level, rarely stars in IR researches, particularly in Realist works which often stress systemic analyses and have little to no regards to intra-State interactions – with the important exception of Neoclassical Realism. Despite including status and prestige in their canonical works, Classical Realists, such as Morgenthau (1948), calculated status on material basis, particularly military capabilities. Yet, T.V. Paul *et al.* (2009:273) defined status as “collective beliefs about a given state's ranking on valued attributes (wealth, coercive capabilities, culture, demographic position, socio-political organization, diplomatic clout) [...] Status is collective, subjective, and relative”. Furthermore, in response to materially rooted Realist conceptions of status in International Relations scholarship, Paul *et al.* argue that:

If status were reducible to material attributes, then there would be no need to add to realist analyses of power dynamics. Status, however, is contingent on socially constructed standards of belonging that are normative, not just material, and states are judged as to whether they bear a particular status and can therefore legitimately claim that status and the authority that comes with it (Paul *et al.*, 2009:274).

To say that Realism and Constructivism are polar opposites with no common ground is a common, yet inaccurate statement. Even though both schools of thought are in contrasting sides of the epistemological spectrum, there is room for theoretical overlaps. J. Samuel Barkin (2010) argues that thinking of International Relations Theories in paradigms, that is, always trying to fit analyses and analysts in pre-defined ‘boxes’ – such as Realism, Constructivism and so on – thwarts the advances and production of knowledge, since it entices insular thinking focusing on differences.

Should scholars be able to look past this intrinsic norm that Realism and Constructivism are polar opposites, they will see that there is room for dialogue between the two. Realism does not have a mandatory requirement to discard non-material factors in their analyses. The idea of prestige, for example, is largely explored in the Classical Realism handbook *Politics Among Nations* (1948) from Hans Morgenthau, just as the concept of status is present in Gilpin’s *War and Change in World Politics* (1981) and Wohlforth’s *Unipolarity, Status Competition, and Great Power War* (2009). Realism and Constructivism must not be at war with one another; this antagonism is largely due to the scholarly community’s insular thinking and theoretical determination and validation by differentiation (Barkin, 2010).

Martin's second and main point is that that the material power of nuclear weapons cannot be overlooked, leaving no additional role to them other than military weapons. I agree that the material characteristics of nuclear weapons are solid factors and it is hard to look past them. Constructivism, however, does not deny the material value of military capabilities; it asserts that such material values are dependent on perception, and the utility of such material factors are subject to the social constructions embedded in the relationships amongst the actors in question. Nuclear weapons are tools of security and I do not mean to question this statement. I do question, however, the claim that "[nuclear weapons] are also limited to the role of a strategic deterrent" (Martin, 2013:174). Nuclear weapons, apart from having this intrinsic military power and material value, also have an embedded ever-evolving symbolic value – stemming from perception – outside the realms of objective epistemology. As William Long and Suzette Grillot (2000:25) argue, "nuclear weapons contribute to national power, or perceptions of power, in at least two ways: the obvious, military dimension and psychologically as prestige and evidence of national technological achievement."

The vast majority of literature on nuclear weapons considers them pawns in a deterrence chessboard (See, e.g., Quinlan, 1993; Cimbala, 2005; Sauer, 2009; Martin, 2013; Kroenig, 2018). The lack of use of nuclear weapons in more than 60 years after its development, the discrepancy between nuclear-capable and actual NWSs, and the categorical flaws of Deterrence Theory in explaining nuclear non-use and valuing all pose a problem to the materialistic and epistemologically objective conception of nuclear weapons shared by the strands of Realism and their 'high politics' and traditional security views. That is not to say, however, that Realism cannot provide a logic conceptualisation of nuclear weapons; it is important to highlight that it is not my task to discard Realist views on nuclear weapons based on an 'either/or', dualistic logic. Rather, I strive not only to highlight the deficiencies of this view, but also provide an alternative angle, capable of explaining the phenomenon of nuclear weapons from a different perspective focusing on the subjective epistemology and symbolism, arguably embedded in nuclear weapons, while contributing to the literature on the field of nuclear weapons and politics as a whole.

1.2. Towards a Social Construction of the Nuclear

There is a considerable amount of scholarship dealing specifically with States' nuclear strategies – with a particular focus, unsurprisingly, on the United States – and matters of nuclear deterrence. Major scholars on the field of nuclear politics, such as Stephen Cimbala, Robert

Jervis, McGeorge Bundy, Scott Sagan, Lawrence Freedman, and Thomas Schelling, amongst others, have written on the future of nuclear proliferation and US nuclear strategy in the twenty-first century. Yet, significant connections with identity are uncommon and even mentions of symbolism are scarce. However rare, after decades of being shadowed by a quasi-monopoly over the field of nuclear security,

In that sense, Scott Sagan's article *Why do States Build Nuclear Weapons? Three Models in Search of a Bomb* (1996) spearheaded the possibility of existence of alternative pathways to think about nuclear weapons beyond the positivist security and military rationale (Ruble and Cohen, 2018). In the article, Sagan explored the demand-side of nuclear weapons, investigating not only the positivist, but also subjective incentives States might have to pursue them. From the late 1990s and early 2000s, non-material and post-positivist facets of nuclear weapons began to be explored, studied, and theorised in IR. Not necessarily discarding the material factors that sustain the Realist model, the scholarship on nuclear weapons started to conceptualise a social construction of the nuclear.

Sagan provided three main explanations as to why States pursue nuclear weapons. The first model, the one most widely studied, is the Security Model and it entails the traditional, materialistic, and more Realist conceptualisation of nuclear weapons. In sum, the Security Model posits that States pursue nuclear weapons for their military might and destructive power; it serves not only as an offensive weapon – the most powerful one – but also a tool of nuclear deterrence. The Realist school of IR considers almost exclusively this model to explain the pursuit of nuclear weapons, due to its objective epistemology and material characteristics; nevertheless, Sagan (1996) explores two other models, adopting different frameworks and rationales.

The second model is the Domestic Politics Model. As the name suggests, the Domestic Politics Model is one in which domestic actors and drivers are the ones responsible for pushing for the pursuit of nuclear weapons. These domestic actors can vary, yet they are most likely focused in three groups: nuclear energy establishments, professional military, and politicians. The problem, however, is that the Domestic Politics Model can – and often will – overlap with the Security Model, especially within the last two domestic groups. Professional military personnel and politicians can create and/or amplify the idea of a substantial threat to the State, justifying the pursuit of nuclear weapons. As Sagan argues,

In this literature, bureaucratic actors are not seen as passive recipients of top-down political decisions; instead, they create the conditions that favor weapons acquisition by encouraging extreme perceptions of foreign threats, promoting supportive politicians, and actively lobbying for increased defense spending. This bottom-up view focuses on the formation of domestic coalitions within the scientific-military-industrial complex. The initial ideas for individual weapons innovations are often developed inside state laboratories, where scientists favor military innovation simply because it is technically exciting and keeps money and prestige flowing to their laboratories (Sagan, 1996:64).

At last, the third model – coined the Norms Model – sees nuclear decisions mainly as symbolic functions, shaping a nation’s identity. It is, however, understudied and often neglected, with scholars and policymakers paying little attention to nuclear symbolism (Sagan, 1996). This is the literature gap that I aim to fill, providing a well-rounded theoretical model of nuclear weapons pursuit, maintenance, and valuing focusing on the symbolic – rather than exclusively on the material – functions nuclear weapons employ in the decision-making process regarding nuclear politics.

Despite this categorisation, none of the models are immune to the influence of the others; no single model fully explains the reason why States pursue and/or maintain nuclear weapons. Any case analysis under these terms would come short of a well-rounded explanation, requiring insight from the other models. There may be varying levels of influence from each model, and some scholars have argued so. Karsten Frey (2006a), for instance, argues that India and Pakistan’s reasons for pursuing the bomb were predominantly based on domestic politics, however, one cannot neglect the security concern in this case, particularly given the two States’ history, disputes, proximity, and nuclear capabilities.

Therefore, in arguing that the symbolism attached to the possession of nuclear weapons is an important, explanatory variable to the puzzles relating to the nuclear regime, one does not necessarily – and I, in particular, certainly don’t – argue that security-based explanations, or the domestic politics variable are irrelevant; instead, the argument is centred on the fact that symbolism and the socially constructed symbolic perceptions of nuclear weapons are also significant drivers and may, in some cases, overshadow other variables. It shows that non-material factors, such as symbolism, play a significant role in nuclear strategy and policy, refuting the argument that nuclear weapons have a singular value and role – tools of material security and deterrence.

Striving towards a social construction of the ‘nuclear’, identity is a pivotal concept from which nuclear weapons have been moderately shielded. Status and prestige have been mentioned in

Realist analyses, and even identity has played the role of an explanatory variable in Neoclassical Realism; yet, as Paul *et al.* (2009) argue, these are chiefly subjective concepts, more closely associated with Constructivism and post-positivist epistemologies. In analysing the relationship between identity, interests and behaviour, Wendt argued that “without the Cold War’s mutual attributions of threat and hostility to define their identities, these states seem unsure of what their interests should be” (Wendt, 1992:399). As a legacy of the Second World War and the Cold War, the United States internalised the role of ‘world police’ under the *Pax Americana*.⁶ Consequentially, in the post-Cold War period, the United States adopted a military doctrine emphasising the need for “full-spectrum superiority”, which translates to clear superiority in all areas of the military spectrum (United States Department of Defense, 2017:96), an idea that converges with the thought that US identity relies on a “logic of foundation and augmentation” (Campbell, 1992:144).

While David Campbell (1992) focuses on the relationship between States’ identities and physical security threats, Jonathan Mercer (1995) relates identity to non-tangible threats, such as self-esteem, hinting at the relation between identity and ego. The idea of a State perception of *self* within the domain of nuclear politics and weapons plays a leading role in the formation and consolidation of said identity. In the case of the United States, merging this idea with the US doctrine of full-spectrum superiority, it is possible to see beyond the military/orthodox security explanation of said doctrine and incorporate the symbolic facet in it.

The ‘agent-structure’ cyclicity (See Wendt, 1987) in the process of identity formation is also vital: social identity is formed through a process of attribution of meanings of *self* and the role it plays on a given structure, and is subject to change in face of interaction (Wendt, 1992; 1994). Nevertheless, as the agent influences the structure, the latter is also influenced by the former, in cyclical form. This aspect of social identity formation is mirrored in the concept of nuclear identity. Similarly, I argue that as US Nuclear identity is shaped by US behaviour, the former also affects the latter.

Linking the concepts of identity and nuclear politics, Jo-Ansie van Wyk *et al.*’s (2007) contribution to this body of literature is important. The authors analyse the nuclear weapons regime through the same Constructivist lenses proposed in this research, also linking the agent-structure cyclicity to the identity-behaviour nexus. Nuclear weapons and nuclear technology

⁶ *Pax Americana* refers to the concept of relative peace guaranteed by the United States, due to its preponderance of power.

ascribe States with a sense of power and prestige, which is actively portrayed in a State's identity (Van Wyk *et al.*, 2007). However, these identities are not universal and are contingent on a set of subjective factors particular to each State. Van Wyk *et al.* (2007) mention the example of Japan's approach to nuclear weapons and its aversions towards them, given their singular history with their destructive power and consequences.

Critiques to the so-called rationalist logic often associated with Realism are not scarce, yet, challenges to the crystallised orthodoxy of the Realist explanation in regard to nuclear weapons only began to surface in the last few decades. Rublee (2009) argues that the Realist disregard for the shaping of State preferences at the domestic level is outdated; rather, Constructivists opened the black box of the State in order to identify how interests are formed and the impact of the process itself to the final product:

Proponents of the Constructivist framework reject the assumption of the stable preferences and “black-boxing” of preference formation, arguing instead that the creation and shaping of interests are among the most important questions in international relations (Rublee, 2009:3).

Long and Grillot (2000), takes the connection one step further, criticising the Realist theorising of nuclear weapons for its limitations whilst proposing their own model incorporating subjective factors including beliefs and ideas – strengthening the Constructivist core within this field of study. As Long and Grillot argue,

[...] despite the popularity of structural realism, nuclear proliferation predictions drawn from it have twice proven themselves inadequate: first, during the Cold War and second in its immediate aftermath. Paradoxically, we have seen the unprecedented phenomena of several states choosing to denuclearize at the end of the Cold War despite systemic factors that allegedly encourage all states to retain their nuclear weapons or pursue new weapons capabilities (Long and Grillot, 2000:25).

In stark contrast, the authors propose what they call the Ideational Model (**Figure 2**), one in which actors are, as in the Realist model, rational, but the shaping of the policies is affected by intersubjective factors, such as ideas and beliefs. Long and Grillot argue how the Ideational model “demonstrates how causal beliefs shape policy outcomes through their impact on both state preference formation and state selection of strategy in a changing environment” (Long and Grillot, 2000:27). The Ideational Model is applied to explain the rare cases of denuclearisation of South Africa and Ukraine. It is a significant step away from the quasi-uniquely objective views on nuclear weapons, however, applied only to cases of nuclear reversal.

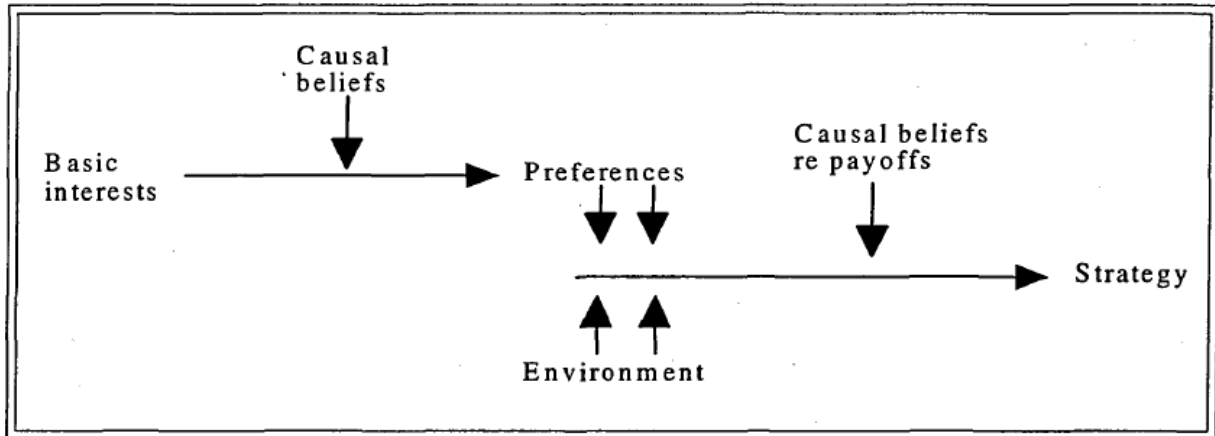


Figure 2: The Ideational Model. Source: Long and Grillot, 2000:27.

In the same vein, Glenn Chafetz *et al.* (1996) apply Role Theory to the cases of the denuclearisation processes of Ukraine and Belarus. The authors start off with a critique of the Realist approach to nuclear weapons, in which the main argument is that the logic of the Realist school of relative power does not fully explain States' nuclear strategies in several cases:

[...] there were also strong ideological, religious, or ethnic motivations in all the situations in which States chose illegitimate proliferation: Algeria, Argentina, Brazil, Egypt, India, Iran, Iraq, Israel, Libya, North Korea, Pakistan, South Africa, South Korea, and Taiwan (Chafetz *et al.*, 1996:728-729).

Chafetz *et al.* (1996) go on to explain how Role Theory's concept of national role conception serves to explain the nuclear strategies of Ukraine and Belarus. The concept of role can be defined as the "attitudinal and behavioural expectations that those who relate to its occupant have of the occupant and the expectations that the occupant has of himself or herself in given situations" (Rosenau, 1990:220). Role Theory focuses on the relationship between a role prescription and a role performance, the former being the norms attached to particular positions and the latter the behaviour derived from such expectations. As K.J. Holsti argues,

[...] the term role (or role performance) refers to behavior (decisions and actions) and can be kept analytically distinct from role prescriptions, which are the norms and expectations cultures, societies, institutions, or groups attach to particular positions. The foundations of human behavior, according to role theory, are both the position and the norms and expectations the alter projects on the position. Role theory thus emphasizes the interaction between the role prescription of the alter and the role performance of the occupant of a position (Holsti, 1970:239).

Applying Role Theory to IR, the idea of national role conception surfaces. A national role conception is a State's own perception – with the leader as a proxy – of its own role within the

overarching structure of States (Holsti, 1970). It represents an auto-prescription of a role and its performance before the International System. Nevertheless, just as with the Realism versus Constructivism paradigm, Role Theory scholars also debate on the epistemological nature of the factors which impact national role conceptions. As Sebastian Harnisch (2011) argues, there is a clear division between American Role Theory and its European counterpart. Whereas the American strand focuses on material and cognitive traits' impact on national roles, European Role Theorists employ a Constructivist approach to Role Theory, emphasising aspects such as language and social interaction. Role Theory is intrinsically linked to ideas of identity and self-conception, which already allows for a strong connection to Constructivism and the idea of national role conception is present within Constructivist scholarship (See, e.g., Wendt, 1992).

Following this theoretical bend towards the field of Political Psychology, another major breakthrough for the field came with Jacques Hymans's *The Psychology of Nuclear Proliferation: Identity, Emotions, and Foreign Policy* (2006). Hymans produces an insightful contribution to the linkage of nuclear politics and identity through his concept of "national identity conception", defined as:

[...] an individual [leader]'s understanding of the nation's identity – his or her sense of what the nation *naturally stands for* and of *how high it naturally stands*, in comparison to others in the international arena. [National identity conceptions] are individual, or *subjective*, sets of choices about how to interpret the collective symbols and memories that are common to all in the nation, but often highly multivalenced in their potential meanings and significance (Hymans, 2006a:18-19).

He argues that a State's formulation of a nuclear strategy and, consequentially, behaviour towards the nuclear arena stems from a leader's view on the national identity conception, which are, just as the Constructivist principles of construction of meanings and structures, always shifting and perennially susceptible to changes. Contrary to Benoît Pelopidas's (2012) findings that changes in leadership had little to no effect on nuclear policies⁷, Hymans's concept of national identity conception seemingly interprets the entire State identity via the perception of a single person – the State leader.

On the one hand, Hymans argues that in order to accurately use the concept of identity to explain policies made *de facto*, particularly on the nuclear arena, one must "must drop down below the level of national identity as a social fact and instead look at what the leader has

⁷ Pelopidas's work investigates the changes in nuclear policies between the presidency of Jacques Chirac and Nicolas Sarkozy, particularly in relation to Iran and the United Arab Emirates. See Pelopidas, 2012.

adopted as his or her specific interpretation, or “conception,” of the national identity” (Hymans, 2006a:19). On the other hand, a leader’s singular national identity conception might be unable to successfully shift behaviour – precisely on the nuclear arena – singlehandedly, as was the case of US President John F. Kennedy (JFK) and the so-called “double game” after the Cuban Missile Crisis of 1962 (See Cameron, 2018).

Maria Rost Rublee (2009) gives continuity to the interdisciplinary analysis of nuclear politics by incorporating an analytical framework rooted in norms and social psychology. Rublee argues that social factors have a significant impact on States’ nuclear decision-making processes, strengthening the argument opposite Realist logic (Rublee, 2009). This model rooted in social psychology and a normative framework put forward by Rublee involves the articulation of two key methods of behaviour change: persuasion and social influence, drawn from Alastair Johnston’s work (2001), with nuclear policymaking, particularly nuclear proliferation, and restraint (Rublee, 2009).

The social psychology model adapts Johnston’s concepts, replacing social influence for social conformity and adding the crucial concept of identification. Rublee’s model revamps mainstream conceptualisations of nuclear proliferation by challenging the Realist assumption that States’ behaviour is brutally reduced to simple security-based factors, arguing that States relations are akin to human interactions. The social factor plays a crucial role, whether it is conforming to the ruling norms – social conformity – or by abiding to the rules not only due to the fear of penalisations, but due to a feeling of belonging to a community – identification (Rublee, 2009).

Tannenwald’s contribution to this research is immense particularly through her research on the US non-use of nuclear weapons – the “nuclear taboo” – since its first (and only) use to a post-Cold War world: “The nuclear taboo refers to a de facto prohibition against the use of nuclear weapons. The taboo is not the behavior (of non-use) itself, but rather the normative belief about the behavior” (Tannenwald, 1999). The mere lack of deployment of nuclear weapons can be explained by a myriad of theoretical conceptions – including Realist analyses, relating to rational choice and retaliation – yet, by emphasising the normative belief about the behaviour in lieu of the bare behaviour itself, Tannenwald provides a non-material restraint to nuclear non-use.

The lack of utilisation of nuclear weapons well into the nuclear age, as she argues, is “the single most important phenomenon of the nuclear age” (Tannenwald, 2007:1). Tannenwald goes on to analyse three post-war instances in which the United States could well have employed nuclear weapons – particularly following a Realist logic – but refrained from doing so, going against the theoretical mainstream current: the Korean War, the Vietnam War, and the Gulf War.

Deterrence, as Tannenwald argues, is insufficient to explain the constraints in nuclear use – or non-use. Rather, the contra-argument is that normative elements must be taken into consideration in order to explain the non-use of nuclear weapons in history. The so-called “nuclear taboo” is a stigma, a demonization of sorts, of nuclear use:

I argue that a normative element must be taken into account in explaining why nuclear weapons have not been used since 1945. A powerful taboo against the use of nuclear weapons has developed in the global system, which, although not (yet) a fully robust prohibition, has stigmatized nuclear weapons as unacceptable weapons – “weapons of mass destruction” (Tannenwald, 2007:2).

The mainstream literature on nuclear weapons focuses only on the material power of nuclear weapons, emphasising the effects of this material power to military use. Nevertheless, the existence of this nuclear taboo cannot be adequately explained and researched from this epistemologically objective, positivist, and material standpoint. Subjective factors are necessary to be incorporated in the literature in order to provide a more complete and dense explanation. As Tannenwald argues,

[...] a key feature of the deterrence and other conventional explanations for non-use is that they are primarily materialist. They emphasize the effect of material power and other more bureaucratic material considerations. Normative or ideational factors tend to play little role in these explanations. Indeed, the operation of rational “self-interest” in the case of nuclear non-use has seemed so self-evident that there has appeared little need to invoke the role of norms (Tannenwald, 2007:43).

The nuclear taboo would be, in sum, a norm, which she defines as “a shared expectation about behavior, a standard of right or wrong. Norms are prescriptions or proscriptions for behavior for a given identity” (Tannenwald, 2007:10). Sagan’s (1996) third model of explanation as to why States pursue nuclear weapons – the Norms Model – also praises the role of norms, in contrast to, particularly, the Security Model. What standardises these sets of behaviour are subjective factors – identity, for instance. Tannenwald (2007) argues that the use of nuclear weapons would clash with US identity in the ‘developmental arena’, since nuclear non-use is

associated with a developed and civilised State identity. Nevertheless, the concept of a ‘nuclear identity’ and the role of symbolism in this process is still unexplored.

Building upon the nuclear taboo, Walker (2010) analyses it from a different angle, particularly the possession of nuclear weapons. Tannenwald’s nuclear taboo is linked to the non-*use* of nuclear weapons; Walker aims to analyse how does the nuclear taboo articulate with the idea of nuclear possession. The question he poses is why do States glorify the possession of nuclear weapons if there is a taboo on their non-use in place?

Walker (2010) observes that the nuclear taboo is an informal norm, akin to customs in International Law, and its lack of formality and clear definition leads to a denial of its existence on non-nuclear States’ part. This denial of the existence of a nuclear taboo, in turn, corroborates to nuclear pursuit, since nuclear weapons are, thus, seen as a symbol of prestige. The nuclear taboo is only acknowledged, Walker argues, by NWS; it is a two-step process in which States must first acquire nuclear weapons to then be held accountable for their non-use in the form of the informal norm of the nuclear taboo:

[...] denial of the existence of a taboo on use is as engrained as the taboo itself. It feeds, often contrarily, into each of the discourses on deterrence, non-proliferation and nuclear disarmament and into the policies and practices associated with them [...] I shall also draw attention to the opposing effects of prestige on the taboo on use and possession. Whilst preoccupation with esteem discourages the use of nuclear weapons in war, limiting them to defence in extremis, it may strongly encourage states to acquire and hold on to them (Walker, 2010:866).

Despite the widespread acceptance, the nuclear taboo is now being brought to question. When tensions between the United States and North Korea sharply rose in 2016 – much due to Donald Trump’s US national role conception and, as a consequence, its threats of use of nuclear weapons and general aggressive posture – the global nuclear regime was threatened. The normative structure that held it in place for over 70 years trembled, and the US Nuclear Posture Review of 2018 showed that (Tannenwald, 2018a). The path in which disarmament talks are heading leaves progressively less space for the nuclear taboo:

After decades of arms control agreements, security cooperation, and a growing consensus about the unacceptability of nuclear weapons, the world is now headed in the opposite direction. Geopolitical tensions have heightened. New arms races have started. States have reverted to valorizing nuclear weapons. The nuclear taboo is weakening (Tannenwald, 2018b:24).

The revisiting of the nuclear taboo under Trump became more apparent after Scott Sagan and Benjamin Valentino (2017) showed that the US population is likely to back the use of nuclear

weapons in case of war. In *Revisiting Hiroshima in Iran: What America Really Thinks about Using Nuclear Weapons and Killing Noncombatants* (2017), Sagan and Valentino analyse the US nuclear taboo and public opinion regarding not only the US atomic bombing of Hiroshima and Nagasaki in August 1945, but also the possibility of US nuclear strikes in the future. A comparison of two identical polls – one conducted in November 1945 and the other in July 2015 – shows the decrease of support by the US public regarding the bombing of Japan, as illustrated by **Figure 3**.

Sagan and Valentino also mention two public opinion polls regarding the possibility of a US nuclear strike in the future – taken in 1949 and 2010 – in which the popular support or approval of a US nuclear strike are drastically reduced: in 1949, only 20% of the population agreed that the US should only employ nuclear weapons if they felt themselves victim to a nuclear strike, whilst in 2010 a similar survey found that number rose to 57%. Additionally, according to the same survey by the Chicago Council on Global Affairs, 20% of the public agreed that the United States should not use nuclear weapons under any circumstances.

Polling in the United States on the Use of Atomic Bombs on Japan		
Polling Question: "Which of these comes closest to describing how you feel about our use of the atomic bomb?"	Elmo Roper "Atomic Bomb" Poll (November 30, 1945)	Roper 1945 Poll Replication (July 30, 2015)
"We should not have used any atomic bombs at all."	4.5%	14.4%
"We should have dropped one first on some unpopulated region, to show the Japanese its [atomic bombs'] power, and dropped the second one on a city only if they hadn't surrendered after the first one."	13.8%	31.6%
"We should have used the two bombs on cities, just as we did."	53.5%	28.5%
"We should have quickly used many more of them before Japan had a chance to surrender."	22.7%	2.9%
"Don't know."	5.5%	22.7%

SOURCES: "The Fortune Survey," *Fortune*, November 30, 1945, reprinted in "The Quarter's Poll," *Public Opinion Quarterly*, Vol. 9, No. 4 (Winter, 1945/46), p. 530; and "Japan 1945 Poll Replication" (Redwood City, Calif.: YouGov, July 30, 2015).

Figure 3: Polling in the United States on the Use of Atomic Bombs on Japan. Source: Sagan and Valentino, 2017:43.

Nevertheless, Sagan and Valentino question the seemingly hopeful data. In a nutshell, their critique is centred around the fact that methodologically the questions were not posed appropriately, arguing that had the questions been asked in a different manner, providing a panoramic view of the situation, the results of the polls would have been different:

[The] decline in support for the atomic bombings in 1945 and contemporary uses of nuclear weapons are a misleading guide to understanding the real views of the American public about the use of nuclear weapons and the killing of noncombatants. Such polls failed to place respondents into a mind-set in which they are forced to make a trade-off between risking U.S. soldiers' lives (if the United States does not use nuclear weapons) and killing foreign noncombatants (if the United States does use nuclear weapons). Sagan and Valentino, 2017:45.

To strengthen their argument, Sagan and Valentino show data from a poll also conducted in July 2015 in which they created a hypothetical scenario regarding a war against the United States started by Iran as a result of economic sanctions, and asked the respondents their preference and approval of an eventual US nuclear first-strike – against Iran, a NNWS – in order to save US soldiers' lives (**Figure 4**).

Respondents were shown a series of mock articles depicting a situation in which the United States had placed economic sanctions due to Iran's alleged violations of the Iran Nuclear Deal and, as a result, Iran had attacked a US aircraft. Following the reading of the mock articles, respondents were given three options on how to proceed, and they were asked two questions: 1) "Given the facts described in the article, if you had to choose between launching the strike against the Iranian city or continuing the ground war against Iran, which option would you prefer?"; and 2) "Regardless of which option you preferred, if the United States decided to conduct the [nuclear] strike against the Iranian city, how much would you approve or disapprove of that decision?".

Question 1 (A, C, E) : “Given the facts described in the article, if you had to choose between launching the strike against the Iranian city or continuing the ground war against Iran, which option would you prefer?”

Question 2 (B, D, F): “Regardless of which option you preferred, if the United States decided to conduct the strike against the Iranian city, how much would you approve or disapprove of that decision?”

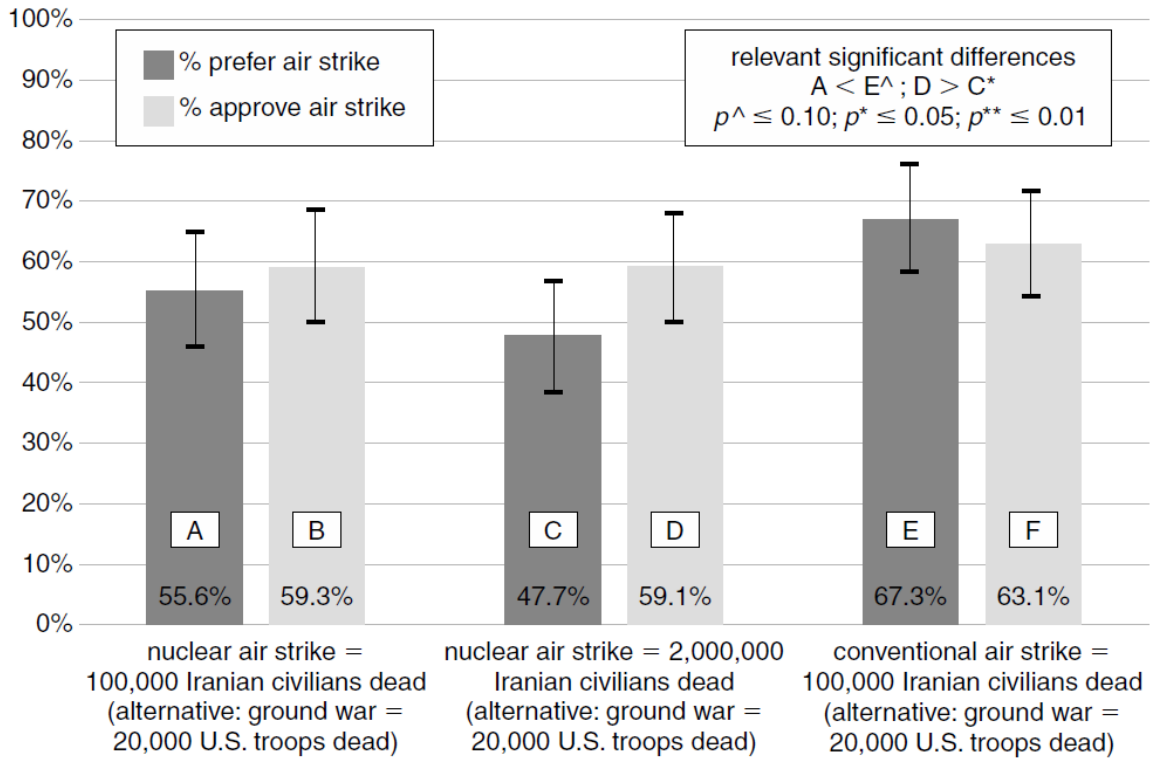


Figure 4: US Public Opinion on Bombing Iran. Source: Sagan and Valentino, 2017:59.

As expected, the results portray a population much more prone to the use of nuclear weapons than in the previous polls. Sagan and Valentino would argue that this larger portion of support and/or approval of the use of nuclear weapons and a first-strike situation against a NNWS indicate that the nuclear taboo is not truly crystallised in US nuclear identity. Rather, they argue that non-use of nuclear weapons is limited to an ideal and utopic mind-set overly concerned with precedent; when faced with ‘real’ situations, the nuclear taboo is quickly lifted and the US public would consider nuclear weapons a viable strategy.

Methodologically speaking, however, Sagan and Valentino’s poll and the data retrieved from it both fall victim to the same critique they weaved in relation to the previous set of polls. Their argument that the phrasing of the question did not accurately portray reality can also be applied, to some degree, to their own phrasing and polling methodology. By formulating the questions the way they did and ‘painting the full picture’ that specific way, they: 1) may not be actually

portraying reality as they claim; and 2) sway respondents to replying to the question in a biased manner which (not so) blindly favours their argument.

The manner in which a survey is conducted is crucial to the data type of data retrieved; a plethora of factors, ranging from the tone of voice and speech cadence may affect a respondent's answer. Even trivial factors such as the ambient lighting and logistical set-up may influence data; there is no shortage of scholarship on how nearly all factors, banal as they might seem, are important to surveys. Thus, it comes as no surprise that any background information provided – particularly fabricated, hypothetical material – the timeframe in which it was provided, and the framing of the questions itself has a massive influence on the respondents' reactions and, consequentially, answers.

Sagan and Valentino's methodological procedure consisted in giving respondents a set of mock articles telling a story with the pretext of mimicking a real-life situation; the articles have the goal of informing respondents of a situation which they were so-far unaware and immediately after, pretentious questions are asked in relation to the information deliberately – and cautiously crafted – distributed. The methodological issues, so far, are twofold.

First and foremost, it is crucial to question the content of the articles and how the mock situations are portrayed: by using a specific "security grammar" (Buzan *et al.*, 1998:33), opinion is easily swayed one way or another. The choice of words and phrasal structures – US soldiers' body counts with no mentions at first of Iranian casualties and constantly repeating US military jargons – appeal to the respondent's patriotic feeling which may result from a 'heat of the moment' scenario, thus not symbolising an accurate representation of the respondent's true beliefs. In addition to that, the choice of Iran as the 'enemy' – as valid as it may be, given the tensions between the United States and Iran over the current situation of the Iran Nuclear Deal (See, e.g., Jett, 2018) – sparks a specific set of pre-conditioned emotions rooted in religious basis; the articles given to respondents only strengthen the Islamic fear and prejudice already diffused amongst US population since the attacks of September 11.

Second – and closely related to the first issue – immediately after this arguably coercive move, the respondents are asked to make a snap decision based solely on the information to which they were just exposed and to pick one of three solutions they may or may not fully understand as far as consequences (both to the United States and to Iran and the world) goes, and which they had no role in the making. Sagan and Valentino's critique of the first set of pools mention

that they did not replicate reality and that by conducting the survey in this manner, they accurately mimic Truman's decision of dropping two atomic bombs in Japan in 1945. However, the methodological choices for carrying out their survey is far from a faithful recreation of Truman's decisions. The main issue is that Truman was well informed of the entire situation at the time – and its consequences – and was 'sitting' on the decision to drop the bombs or not for some time, in stark contrast to the snap decisions respondents were asked to make. This exposes a significant double-standard present in Sagan and Valentino's argument for not accepting the first set of polls, since their own poll is passive of the very same critique.

Relating to the options given the respondents, they weren't numerous. The first two involve a nuclear strike at the cost of 100,000 and 2,000,000 Iranian civilians lives, respectively, and the third involves a conventional airstrike at the cost of 100,000 Iranian civilians lives. The alternative to all situations was the continuation of ground war at the cost of 20,000 US troops lives. Even though Sagan and Valentino forged a situation highly tempting to the use of nuclear weapons, the largest percentage of the data still show that the non-use of nuclear weapons is preferable. When 100,000 Iranian civilians were at stake, 55.6% of the public preferred to employ nuclear weapons, but when the number of casualties rise to 2,000,000, the percentage drops to less than half – showing there is still something holding the nuclear taboo in place, be it norms, precedent, or morals. However, 67.3% of the public preferred a non-nuclear airstrike instead of ground war. Even by tampering with the methodological tools available, the data fails to effectively debunk the nuclear taboo as a valid theory of non-use of nuclear weapons. As for the 'approval' questions, given the nationalistic setting in which the respondents were put in, it is expected that they would not disapprove of a government decision on national security – particularly involving the lives of US soldiers. The purpose of the paper, however, was to measure US public opinion on the use, just as the previous set of polls did – and not their approval or not of national security matters.

Lastly, it is important to point out that the assumption that the purpose of the atomic bombing of Japan was a *conditio sine qua non* to end the war is taken for granted. This is not a methodological flaw exclusive to this paper. Rather, it is an assumption widely accepted, defended, and nearly immune to questioning in the American tradition of IR; it is practically a taboo of sorts in itself. Nevertheless, the situation prior to the bombing of Japan showed that the Second World War was already reaching an end: Italy had already shifted its military alliances and Germany had already surrendered, leaving Japan alone in the war (See, e.g.,

Weinberg, 1995). To adamantly state that the bombing of Japan was an utmost necessity to end the war is a dubious statement at best.

Alternatively, Truman's decision to drop the bombs in Japan might have been influenced by another driving factor: symbolism. The Manhattan Project was initiated before the Axis started to crumble, so the idea of developing and using a nuclear bomb might have been, at that early stage, as a real *conditio sine qua non* to end the war. The United States spent massive amounts of resources – economical, human, scientific, and technological – in order to develop the bomb. Nevertheless, by the time the final product of the Manhattan Project was ready, its necessity had sharply dropped. In spite of that, Truman used the still on-going warfare pretext to argue for its necessity when in fact, the intention was to allow for the ultimate display of US military and scientific power, prowess, modernity and, more importantly, prestige.

In conclusion, Sagan and Valentino aimed to rectify polling data, but ended up falling victim to the same critique they weaved – but, obviously, on the other side of the spectrum. The research itself is, nonetheless, carefully crafted and important insights can be taken from it – such as the US public's proneness to approve anything crafted by the 'black box' of US government when it comes to matters of national security. However, there is a disparity between the conclusions they aimed to draw, and the possible conclusions drawn from it – particularly after a critical review of the methodological paths they chose to follow.

While the nuclear taboo entails a negative normative predisposition towards the use of nuclear weapons, the "nuclear myth" is a deviation from this norm particularly regarding their pursuit (See Frey, 2006b). Non-nuclear States see nuclear weapons as a modernity and status symbol, related to power and prestige. The nuclear myth might even share the same views on the actual use of nuclear weapons with the nuclear taboo, however the sole possession of nuclear weapons symbolises power. To this end, NWSs' efforts to curtail horizontal proliferation of nuclear weapons might represent not only the normative advocacy for world peace and security, but also an attempt to thwart the emergence of new powers on the symbolic level and maintaining the status quo of the balance of power. As James Cameron (2020) has noted, history teaches us that arms control is a tool for the maintenance of the status quo and disruption of any shifts in the power balance in the International System, particularly nuclear arms control and nonproliferation. It is, therefore, crucial to understand the root causes of the pursuit and valuing of nuclear weapons, if not their military use. The objective epistemology of the scholarship on nuclear weapons and politics fails to address these intrinsic factors.

Despite the overall acceptance of the general Constructivist argument centred on the nuclear taboo, Paul (2009) points out its shortcomings (as well as those related to the Realist argument centred on ‘real world politics’ rather than ideas – or *Realpolitik*), while pondering his own ‘eclectic model’, incorporating both material and non-material factors to the tradition of nuclear non-use. The problem with the Realist argument identified by Paul is akin to what has been exposed here; the focus is on the fact that States chose nuclear non-use even in scenarios in which the leaders were *Realpolitik*-oriented leaders. Additionally, *Realpolitik* cannot adequately explain why nuclear non-use came into place after just one occasion of nuclear use, and, more importantly, why States further developed their nuclear weapons, both quantitatively and qualitatively (Paul, 2009).

The Constructivist argument centred on the Nuclear Taboo, on the other hand, overplay ideational and cultural subjective factors, understating material ones; Paul also goes one step further and refutes the role of identity in nuclear non-use on basis that different States self-conceptualising different national roles have chosen nuclear non-use (Paul, 2009). Moreover, Paul criticises the semantic phrasing of the idea. He considers “the tradition as an informal and intermediate norm; its regulatory and constitutive effects are not as powerful or absolute as a taboo-like prohibition” (Paul, 2009:21). This imperative characteristic of a taboo leads Paul to call it a ‘tradition’ instead (Paul, 2010). Lastly, Paul argues that the entire idea of a tradition of nuclear non-use is rooted in material factors, not ideational. The argument is that in the eventuality that States develop low-collateral damage nuclear weapons, the entire normative framework ruling the current global nuclear order might collapse (Paul, 2009).

In that sense, Paul presents his own so-called ‘eclectic model’. It is important to highlight the reason for its naming, since semantics constitute a significant factor in Paul’s critique of Constructivist models for nuclear non-use. The model is eclectic because it is puzzle-based, rather than paradigm-based. This is a key distinction since it reinforces the idea that different IR theories cannot dialogue with one another in a non-hostile, paradigm-like environment. Paul’s eclectic model draws both from the Realist/*Realpolitik* and the Constructivist/Taboo models, considering both material and ideational factors in its explanatory reasoning. **Figure 5** shows the outline of the eclectic model.

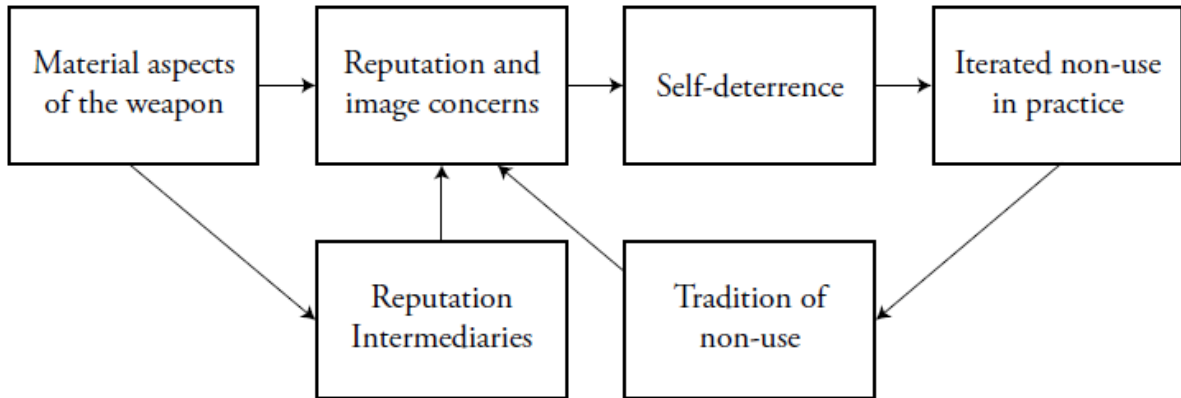


Figure 5: The Eclectic Model. Source: Paul, 2009:23.

The eclectic model, as depicted above, shows that both material aspects and the ideal/subjective aspects of nuclear weapons are taken into consideration when constituting a tradition of nuclear non-use. As Paul argues in his critique of the Constructivist model, material aspects are the primordial factor. Only then those are linked to subjective factors – in this case, reputation – which will then lead to self-deterrence, or nuclear non-use. This will result in an iterated practice, which will then crystallise itself in the form of a tradition of nuclear non-use – not a taboo, as Tannenwald (1999; 2007) argues.

Paul’s eclectic model is a cornerstone for the theoretical debate – not only for the specific field of nuclear politics, but for IR theory as a whole. Despite leaning ever so slightly to the Realist/*Realpolitik* interpretations, Paul still manages to intertwine two contrasting and paradigmatic theories, breaking the IR theory glass ceiling, criticising the constant practice amongst International Relations scholars of pledging allegiance to one school of thought and blindly defending it at all costs. Yet, as large a stride as this may be to the field of International Relations as a whole, Paul’s eclectic model falls victim to its own set of criticism.

Firstly, Paul’s final critique of the Constructivist model revolves around the idea that material factors are the primordial angle of analysis, stating that low yield weapons might be able to unravel the global nuclear regime, disrupting the nuclear taboo – or rather the tradition of nuclear non-use, in his words. However, the existence of tactical nuclear weapons (TNWs) cripples this argument. TNWs (also called non-strategic nuclear weapons) are nuclear weapons with a much lower yield and range. They are relatively small and light, making them suitable for use on the battlefield, rather than intercontinental deployment. TNWs may come as small as the M-29 Davy Crockett system, with a yield of between 10 to 20 tons, and which could be

fired from a small tripod. TNWs have been around for decades, and still, not a single one was deployed.

Secondly, Paul's reluctance to incorporate identity as a driving factor and the acceptance of its role in nuclear decision-making is slightly contrasting to his other works in which he gives vital importance to identity-related factors, such as status and prestige (See Paul *et al.*, 2010). Paul does develop his twin-concept of reputation in his eclectic model, yet he fails – or rather simply chooses to overlook – its relationship with identity. Closely related, a third critique relates to his development of the reputational factor in the model – or lack thereof. Paul argues that “unique material character of the weapon leads to reputational costs involved in its use” (Paul, 2009:25); yet there is no clear and precise definition of what he calls reputational factors. The importance of such factors is discussed at length, stemming from the insufficiency of Realist logic to explain nuclear policy and nuclear non-use, however what is actually meant by reputational factors is still unclear. By following a path in which identity has no significant role in the nuclear non-use whilst lacking a clear definition of non-material factors in the equation, Paul leaves room for a plethora of criticism regarding what constitutes non-material factors and whether identity should have been included in this model.

Apart from the nuclear taboo and/or the tradition of nuclear non-use, there are other works focusing on non-material factors of nuclear weapons unrelated to their use. Anne Harrington de Santana (2009) provides an insightful contribution through her work comparing the current state of nuclear weapons politics to the Marxist idea of Commodity Fetishism, making nuclear weapons the currency of power in the twenty-first century. In *Nuclear Weapons as the Currency of Power: Deconstructing the Fetishism of Force* (2009), Harrington de Santana hints at a shift of perspective to analyse nuclear weapons by enmeshing the Marxist concept to it, turning nuclear weapons into the primal merchandise ruling the International System. The author argues that nuclear weapons are valued because we attribute value to them due to a coalescence of subjective factors: “the power of nuclear weapons is not reducible to their explosive capability. Nuclear weapons are powerful because we treat them as powerful” (Harrington de Santana, 2009:327).

Barry O'Neill (2006) explores the very same idea of prestige within IR, a moderately overlooked concept so far within the field (O'Neill, 2006). O'Neill's work focuses on an extensive epistemological study of prestige in IR and how nuclear weapons – especially their testing – are an effective way of amounting prestige (O'Neill, 2006). Similarly, Ritchie's

(2010) research on British nuclear weapons yields matching conclusions. In analysing the British processes and plans of modernisation of their nuclear arsenal, he argues that the United Kingdom values and, consequentially, refuse to relinquish nuclear weapons not for security concerns, but because they grant the United Kingdom a “major pivotal power” status (Ritchie, 2010:468). In order to justify and legitimise their status, the United Kingdom, then, abides by and reinforces an absolutist “regime of nuclear truth” (Ritchie, 2013:152). Within this framework, the core assumptions of deterrence are taken as unquestionable truisms, which further legitimises and increases the reliance and role of nuclear weapons within the State apparatus.

Another possible emerging example of this symbolic and status-driven role of nuclear weapons is Brazil’s quest for a nuclear-powered submarine. The justifications for this project are that a nuclear-powered submarine would be crucial to Brazil’s security particularly through area denial, given the country’s sizeable coast. However, Brazil has no military conflicts either with its neighbours or with any other State across the Atlantic, challenging the claims that such a watercraft is required. Despite the device in question not being a nuclear weapon *stricto sensu*, Brazil would be the only NNWS to possess a nuclear-powered submarine, which would already fulfil the purpose of granting it status and prestige through its nuclear ambitions.

A review of the literature of the field of nuclear weapons shows that despite an emergence in recent years, studies taking into account the non-material, subjective factors of nuclear weapons are still a minority. Also, works relating nuclear weapons and politics to identity exist, but are also scarce. Nevertheless, the study of symbolism and nuclear weapons are scant. Few are the examples relating the abstract concept of symbolism to nuclear weapons, and often they benefit from an outsider gaze and interdisciplinary input, that is, a reliance on literature external to core IR, such as Political Psychology.

On this front, in his previous, more extensive work *Honor, Symbols, and War* (1999), O’Neill further explores the links between symbolism and nuclear weapons, compiling a fundamental work on the so-called “thought-styles” (O’Neill, 1999:216) of the post-war period, pinpointing the zeitgeist of the Cold War. O’Neill (1999; 2006) connects subjective factors such as symbolism and honour to concrete objects, such as war, conflict, and nuclear weapons. Prestige and status appear as crucial goals through the pursuit of nuclear weapons, instead of their military, material power – contrary to the mainstream Realist logic.

Another example of the study of nuclear weapons and symbols is the work of Frey. Frey (2006b) discusses the importance of symbolism directly to identity and nuclear weapons, arguing that the norms in the arena of nuclear weapons and politics must take into consideration these intersubjective factors, such as symbolism:

In the nuclear realm, the norms composition oscillates between strict normative prohibition, termed nuclear taboo, and the opposing effect, referred to as nuclear myth. This emerges when certain symbolic meanings are attached to nuclear weapons and perceived as reflective of a state's identity, its self-image, and its desired position in the international system (Frey, 2006b:341-342).

To illustrate this importance of norms and symbolism within these norms, Frey (2006a) studies the case of India. The case of India could be widely fit into the Security Model by Sagan (1996). The presence of a substantial threat right on its front door, and a nuclear one at that – Pakistan – would make India seek security assurances to deter. Nevertheless, Frey argues that:

Right from its beginning, the nuclear programme was inseparably linked by this elite to the idea of India as a proud and sovereign nation. This metaphoric meaning of nuclear weapons became one of the major symbolic attributes justifying their acquisition. Empirical evidence is not clear about the extent to which the general public accepts this meaning. While the nuclear tests of 1998 triggered a wave of nationalism which affected all classes of Indian society, the general interest in the nuclear issue and the symbolic values attached to it appears to be rather limited to the upper urban classes (Frey, 2006a:28-29).

It is somewhat problematic and dubious to affirm that theoretical standpoints on nuclear politics have advanced or even suffered significant changes throughout the years. The reason for that is the fact that Realist strands, which compose the mainstream nuclear theories and models, have remained unaltered. Deterrence and 'hardcore' security-based analysis rooted in rational choice and the material factors of nuclear weapons dictate the core of the theory, and despite the critiques from all sides highlighting the insufficiency of its explanatory power, the Realist stance rests unchanged.

On the other hand, the field of nuclear theory has seen the rise of Constructivist-based analysis of nuclear politics. However shy, they pose as an alternative to the mainstream Realist theory, incorporating non-material and subjective factors such as ideas, status, prestige, and identity. Despite its importance, the volume of scholarship produced and the number of scholars focusing on these angles of analysis is scarce. With the exception of a handful of key-contributions, such as Tannenwald's *The Nuclear Taboo: the United States and the Non-Use of Nuclear Weapons since 1945* (2007), spearheaded by Sagan's *Why do States Build Nuclear*

Weapons? Three Models in Search of a Bomb (1996), the academic community’s efforts to advance research in this area have been limited.

T.V. Paul’s *The Tradition of Non-Use of Nuclear Weapons* (2009) presented a critique of both sides of the spectrum, culminating in the creation of an eclectic model composed of both material and non-material/reputational factors. However innovative and crucial to structural change in the field of IR theory – due to the merging of two paradigmatic theories – Paul’s eclectic model still fails – or rather chooses not to – insert identity factors in its formulations. The lack of clear definition of what is called “reputational factors” also poses a problem to the model, in which symbolism is not mentioned, but also not explicitly ruled out. **Figure 6** presents an overview of the main models of nuclear politics and decision-making presented in this chapter.

	<i>Realpolitik Model</i>	<i>Ideational Model</i>	<i>Norms Model</i>	<i>Eclectic Model</i>	<i>Social and Political Psychology Model</i>
<i>IR Theory Branch</i>	Realism	Constructivism	Constructivism	Mixed	Constructivism
<i>Main Exponents</i>	Quinlan, 1993; Martin, 2013	Long and Grillot, 2000	Tannenwald, 1999; 2007	Paul, 2009	Hymans, 2006a; Rublee, 2009
<i>Ontology</i>	Material	Non-material	Mixed, emphasising the non-material	Mixed, emphasising the material	Mixed, emphasising the non-material
<i>Focus</i>	Security and Deterrence	Ideas	The Nuclear Taboo	Material and reputational factors	Norms and the socialisation of the State
<i>Driving Forces of Nuclear Policy</i>	Security Dilemma	Ideas and beliefs	Normative and moral factors	Security and reputational factors	Social conformity and identification, and National Role Conception

Figure 6: Nuclear Politics Conceptual Models. Elaborated by the author.

All in all, the State-of-the-Art of Nuclear Theory has stagnated – on part of the Realist model – and has been slowly evolving – on part of the Constructivist and mixed models. In this research, I aim to contribute to such evolution, presenting an encompassing model focusing on the *symbolism* behind nuclear weapons, while not completely ignoring their material capabilities.

1.3. *Pax Atomica versus a ‘Nuclear Weapons-Free World’*

With the nuclear revolution, questions regarding the future of warcraft and the nuclear regime arose. The long-standing debate over nuclear proliferation has been rekindled in recent years due to a few key events, namely the Iranian and North Korean nuclear crises. Notwithstanding the acclaimed scholarly debate over the stability-instability paradox and the often-two-sided arguments on the *Pax Atomica* versus a Nuclear Weapons-Free World, there is a third –

arguably more probable, at least in the foreseeable future – alternative, which is the maintenance of the current setting.

The current nuclear regime allows for five States to legally possess nuclear weapons: the United States, Russia, the United Kingdom, France, and China – all the permanent members of the United Nations Security Council – are conferred the legal capacity (Treaty on the Non-Proliferation of Nuclear Weapons, 1968). In addition to these five States, the NWS club is also composed of India, Israel, Pakistan and North Korea - with the first three never signing the NPT and the latter withdrawing from it in 2003.

After the end of the Second World War, the United States - for a brief period of time - had a monopoly on the nuclear weapons arena. Nonetheless, it attempted to free the world of nuclear weapons with the Baruch Plan, which would entail the United States handing their nuclear weapons over to the United Nations, a plan that fell through due to Soviet denial (Holloway, 2010). The reason was that the USSR believed the United Nations itself to be an organisation under strong influence of the United States. In 1949, the USSR tested their atomic bomb, and in the following decades, the United Kingdom (with US aid), France and China followed suit, thus shaping the current nuclear regime (Holloway, 2010). The year of 1968, when the NPT opened for signature, marked the cornerstone of the current nuclear regime.

The mere existence of a legally binding distinction between which States are *allowed* or not to develop nuclear weapons are a clear snapshot of power relations embedded in the International System. It creates an environment in which the powerful may retain their power, whilst constantly monitoring the weak based on ‘sticks and carrots’ policies. Hugh Gusterson coins the term “nuclear orientalism” (1999:113) to expose Western views on nuclear proliferation reaching Third World States. This shows strong links with the idea of identity formation in the scope of this research for it relates with the perception of the *self* (in this case, the United States) and the *other*: the construction of an identity of hegemon is heavily linked with nuclear superiority, within the concept of full-spectrum superiority of US doctrine, which allows no room for horizontal proliferation.

Nevertheless, what is the effect of nuclear weapons on stability under these circumstances? Ever since the deployment of the two nuclear weapons in Japan in 1945, there has never been a recurrence (Sagan and Waltz, 2003). To this end, it would be fair to say that nuclear weapons do have a stabilising effect on the International System, given that since their development, no

major power war has broken out in the world, be it due to deterrence or normative forces - with the so-called nuclear taboo. Yet, to consider nuclear weapons a pacifying factor is a significant overstatement. Despite the fact that no major war (nuclear or not) took place, nuclear weapons have been the epicentre of dispute and the rising of tensions amongst NWSs and nuclear latent States, as is the case of Iran and North Korea. Even though a supposed stability has settled, a single change in this balance may have catastrophic consequences. Out of all the three possible scenarios that hover the future of the global nuclear regime, the maintenance of the status quo is the most likely to take place. The reason may seem obvious – since it requires no substantial changes – but the normative and legal framework are fundamental for the maintenance of the current nuclear setting.

Regarding the *Pax Atomica* vs a Nuclear Weapons-Free World, Sagan and Waltz's (2003) debate on nuclear proliferation provides insights, both from a pro- and anti-horizontal nuclear proliferation stance.⁸ The debate is whether a world half-nuclear is better or worse than a fully nuclear or a nuclear-free world. Alternatively, Pelopidas (2015) poses a different question, asking whether nuclear weapons should be eliminated – or reduced to a rather low amount – or whether they should remain at alarmingly high quantities; in other words, either the international community is reconditioned to adapt to this new environment, or it is doomed to rely on the 'luck' of deterrence forever.

Out of the two non-status quo hypothetical scenarios regarding the nuclear regime, the worldwide horizontal proliferation of nuclear weapons is generally the most feared, since the idea of most (or even all) States being NWSs might indeed seem frightening and apocalyptical to some. The *Pax Atomica*, as the name implies, suggests a peace held by the power (and the fear of said power) of nuclear weapons. The concept is rather simple: in a scenario in which every State possesses nuclear weapons, no State would dare launch a nuclear strike given the fact that the chances of nuclear retaliation are extremely high. Moreover, given the possibility of conflict escalation towards a full-scale nuclear war, States would even refrain from conventional wars.

In this imaginative exercise, deterrence is taken to its extreme. If all States are armed with nuclear weapons, all States would think twice before entering into conflict with one another. The concept of "flexible response" adopted by the United States nuclear policy (Burr and

⁸ Horizontal proliferation refers to a spread-out proliferation, where non-nuclear States acquire nuclear weapons, rather than already nuclear States enlarging their nuclear arsenals.

Rosenberg, 2010:88) would not be a guarantee; instead, States could lean toward US President Dwight Eisenhower's "massive retaliation" policy (Freedman, 2013:157). In this sense, the balance of power would be substituted for a "balance of terror" (Edwards, 1986:1). To quote Winston Churchill, "by a process of sublime irony, [we] have reached a stage in this story where safety will be the sturdy child of terror, and survival the twin brother of annihilation" (Churchill, 1955).

Compared to the current nuclear regime the logic of the *Pax Atomica* would be to bring stability, extending it not only to great powers, but to all States in the International System. In a completely nuclear-armed world, the smallest conflict might escalate to all-out nuclear warfare, thus reducing the probability of even minor altercations and elevating the role of diplomacy in Global Governance.

The debate on the worldwide spread of nuclear weapons is an ongoing debate which has rendered a book authored by Scott Sagan and Kenneth Waltz. In *The Spread of Nuclear Weapons: a Debate Renewed* (2003), there is no set answer or solution to this debate, but Waltz brings his Neorealist rhetoric to the realm of nuclear proliferation and argues that a world brimming with nuclear weapons would be a more stable world.

Waltz's argument is inspired in the empiricism of the Cold War and the nuclear stalemate between the United States and the Soviet Union: in a bipolar setting with tensions reaching a record-high, not a single nuclear weapon was deployed. The crushing fear of MAD hinders States from using nuclear weapons and, due to the fear of conflict escalation, thwarts conflicts in general. Essentially, not only nuclear weapons have a stabilising effect on the world, but the more widespread is horizontal nuclear proliferation, the farther we are from all-out nuclear war (Sagan and Waltz, 2003).

Yet, Waltz's argument shows his weak side when non-State actors are considered. A significant increase in the number of nuclear weapons in the world would also increase the possibility of one (or many) falling in the hands of non-State actors, such as terrorist cells. Waltz responds that even in such a hypothetical and unlikely scenario, these nuclear weapons still would not be used, given the same logic of deterrence, but there is no evidence to support either argument at this point.

In stark contrast to the *Pax Atomica*, the opposite scenario entails a nuclear weapons-free world. Efforts of nuclear disarmament have been one of the pillars of the NPT, whose article

VI clearly states that efforts towards nuclear disarmament must be pursued in good faith (Treaty on the Non-Proliferation of Nuclear Weapons, 1968). The term “nuclear weapons-free world” has even been used in presidential discourse, when US President Barack Obama cites it as an important, collective goal for the future (Obama, 2009a).

Nuclear disarmament commonly strikes as the most peaceful and safe option for the world. The core argument is also simple: if there are no nuclear weapons, then there is no risk of nuclear warfare; disarmament is often the option sought by Non-Governmental Organisations and the vast majority of advocacy groups. The idea behind a nuclear weapons-free world would be for NWSs to dismantle their nuclear arsenals and abide by international regulations on the nonproliferation of nuclear weapons, thwarting their development. As for NNWSs, these international regulations – similar to the current nuclear regime – would impede them from pursuing nuclear weapons. Nuclear energy would, thus, be restricted to peaceful purposes.

In response to Waltz’s Neorealist position, Sagan argues that horizontal proliferation would significantly increase likelihood of nuclear weapons use, be it by accident, theft, or intention. Sagan builds upon Organisation Theory: even with highly trained staff and State-of-the-Art equipment, accidents still happened in the United States. Not only during the Cold War, several cases of ‘close-calls’ have been reported due to technical failures and organisational deviations. Nuclear weapons under control of less organised and ill-equipped nuclear programmes are accident-prone. Additionally, the possibility of theft and/or the expansion of nuclear bazaars would also increase risk. To this end, nuclear weapons would bring substantial instability to the International System on security and economical basis (Sagan and Waltz, 2003).

Sagan’s take on nuclear proliferation is rooted on a separate conception of governments. While Waltz – and Realism as a whole – views the State as a monolithic black box, that is, all intra-State processes are irrelevant, Sagan perceives the government as an organisation, thoroughly fractioned into sub-organisations (Sagan, 1994). In contrast to Waltz’s ‘indivisible unit of the State’, Sagan’s fractioned view highlights the organisational complexity of governments, in which there are:

[...] multiple conflicting goals and the process by which objectives are chosen and pursued is intensely political.¹⁸ Such a political perspective envisions apparently irrational behaviors as serving the narrow interests of some units within the organization, even if the actions appear "systematically stupid" from the leadership's over- all perspective (Sagan, 1994:72-73).

Along the same lines, Eugênio Diniz (2016) argues that nuclear horizontal proliferation would have deep negative impacts in regard to the stability of the global order. Drawing from the same logic of Sagan's Organisation Theory argument, Diniz (2016) observes that a safe and stable possession of nuclear weapons (not only to the possessing State, but to the International System as a whole) would dearly depend on advanced, complex, and costly command and control systems and early-warning capabilities. Cimbala (2005) argues that a scenario of a fully nuclear world would lead to the terrors of the deterrence logic of the Cold War period. As the author argues, "proliferation-permissive arguments mistakenly, and dangerously, extend Cold War deterrence reasoning into a very different political and military future" (Cimbala, 2005:58).

In response, Thomas Schelling (2009), when conceptualising a world without nuclear weapons, observed that the technology and knowledge to weaponise nuclear energy are facts; they exist and, in the information age, are no secret. In essence, the world can never go back to a time in which mankind does not possess the required knowledge to develop nuclear weapons. Consequently, even in the unlikely scenario in which nuclear weapons are abolished and the nuclear stockpile reaches zero, the groundwork for a new, more dangerous nuclear arms race are laid. As Schelling (2009) argues, this (hardly possible) nuclear-free world would mean that at the slightest stumble, all the nuclear-capable States would enter a rapid and massive nuclear arms race, in which the first to acquire it would be tempted to deploy to counter the acquisition of other pursuing States.

Alternatively, going against the *Pax Atomica* versus Nuclear Weapons-Free World, Mueller (1988) defends the notion that the overall impact of nuclear weapons on the stability of the global order is nil. The controversial chief argument is that it is not absolutely clear whether nuclear weapons had any impact in history after World War II. Moreover, Mueller argues that post-war stability stems not from nuclear weapons, but from mere memory of World War II:

[...] the long peace since World War II is less a peculiarity of the nuclear age than the logical conclusion of a substantial historical process. Seen broadly, deterrence seems to be remarkably firm; major war – a war among developed countries, like World War II or worse – is so improbable as to be obsolescent; imbalances in weapons systems are unlikely to have much impact on anything except budgets; and the nuclear arms competition may eventually come under control not so much out of conscious design as out of atrophy born of boredom (Mueller, 1988:56).

Mueller's argument, however, does not sustain itself when World War I is presented as a counterfactual, for instance. The mere memory of World War I was not enough to avoid a

second major war a little over two decades later. Moreover, the time in which Mueller wrote his piece (late 1980's) was relatively stable, at the end of the Cold War and with nuclear tensions decreasing. The volatility of Cold War tensions symbolise how meaningful nuclear weapons are for stability, regardless of one's stance on the nature of the impact they have. Nevertheless, Mueller restates his argument in 2018 by noting that the importance of nuclear weapons has been massively overestimated, regardless of one's opinion about their effect on stability. In both the material and ideational realms, nuclear weapons remain irrelevant (Mueller, 2018).

Furthermore, the nuclear revolution, despite being thoroughly played down, triggered what Mueller (2009) calls "atomic obsession". Nevertheless, the author repeatedly argues that such obsession is irrelevant, highlighting the point that nuclear weapons have no significance other than to "stoke the national ego or to posture against real or imagined threats" (Mueller, 2018:10).

Regardless of its shortcomings, Mueller's work is useful to highlight two different realms of nuclear weapons: possession and use. Mueller defended the thesis that nuclear weapons as a whole were irrelevant, yet it depends on whether possession or the potential use of nuclear weapons are analysed. On the one hand, to state that nuclear weapons are irrelevant for use dialogues with the literature on the nuclear taboo and also on the idea of MAD. On the other hand, to state that the possession of nuclear weapons is irrelevant overlooks symbolic values and subjective values of nuclear weapons. The use of nuclear weapons is highly unlikely, yet a focus on its use encompasses merely the material facet attached to nuclear weapons; to possess nuclear weapons – even with zero intention of ever deploying them – is to display a paramount symbol of status and prestige before the International System. The symbolic perceptions of nuclear weapons are crystallised – through discourse – in a State's identity, altering its self-perceptions and its performed roles, and, ultimately, its behaviour in the nuclear arena.

In spite of the debate regarding the hypothetical scenarios over the future of the global nuclear order, Sauer (2009) argues that worldwide nuclear elimination is near. Over time, nuclear policies' emphasis on nuclear weapons will gradually decline, going from potential⁹ nuclear

⁹ The US nuclear modernization combined with the Russian arsenal deterioration would elevate US nuclear policy from "maximum deterrence" to "nuclear primacy", though there is a scholarly debate on this matter. See, e.g., Sauer, 2009:748.

primacy to post-existential deterrence (See Sauer, 2009). Yet, most of the reasons he advances¹⁰ have been present for some time, and we are not significantly closer to nuclear elimination.

The debate over nuclear proliferation is latent. Relating to the case of the United States, it is possible to observe a certain pattern of behaviour of the United States to thwart horizontal proliferation. Despite the nuclear disarmament rhetoric (See Obama, 2009a), the hints of US dominance and full-spectrum superiority are clear. The works of Gavin (2015) explore the so-called “US Grand Strategy” of inhibiting nuclear proliferation, observing:

[...] the extraordinary lengths the United States has gone to since the beginning of the nuclear age to inhibit (i.e., slow, halt, and reverse) the spread of nuclear weapons and, when unsuccessful, to mitigate the consequences of their spread. To accomplish this end, the United States has developed and implemented a wide range of tools, applied in a variety of combinations, which might be thought of as the “strategies of inhibition” (Gavin, 2015:10).

The United States is arguably the possessor of the most powerful nuclear arsenal in the world. On a first reading, it is a textbook case for Realism. However, considering all the limitations and frailties of this strand of theoretical explanation exposed here by the several reviewed and cited authors, I question whether Realism and its new branches can completely and indubitably explain the case of the United States alone. Recent de-classification of official documents shows that symbolism, an overlooked concept within Realism, played a significant role in the formation of the US (nuclear) identity and, consequentially, its strategy and behaviour.

In this section, I focused my efforts on presenting a brief, yet well-rounded exposition of the State-of-the-Art related to what I call Nuclear Theory. The scholarship on nuclear politics in general still encompasses a considerable volume of work, demanding a filter regarding what to include. Therefore, only the key-literature for the course of this research was reviewed in this chapter, and the chapter-bound goals were 1) to concisely present the Realist view on nuclear politics – what I called the mainstream literature; 2) to expose the critiques of this mainstream literature; 3) to explore alternative analytical frameworks applied to nuclear politics – namely Constructivist and mixed approaches; 4) to expose the existing explanatory models regarding nuclear politics and nuclear proliferation; 5) to point out the lack of attention paid to both symbolism and identity in a single articulated model, emphasising where my contribution will

¹⁰ Nuclear horizontal proliferation, the threat of nuclear terrorism, the nuclear taboo, missile defence and the growing role of international law. Sauer, 2009:752.

fit within the scholarship; and 6) to recount the long-standing debate on nuclear proliferation and the future of the global nuclear regime.

Based on this review of the current trends of nuclear theory and the questions that remained unanswered (or merely neglected), the next chapter will focus on building a theoretical model rooted in the articulation of the three main pillars of this research – symbolism, identity, and behaviour. Drawing much from the Constructivist models while avoiding the flaws often associated with them, I set my sights on constructing a concise, elegant, yet balanced theoretical model to explain why States pursue maintain, and value nuclear weapons – even without intentions to use them.

2. On the Foundations of Nuclear Symbolism

The relationship between the subjective and the objective orders has fuelled the research of a wide range of social sciences – namely Sociology and Anthropology – for decades. The articulation and incorporation of abstract factors into the equation determining behaviour can be interpreted as a research goldmine and minefield simultaneously. Analyses of how the abstract can shape or create possible pathways for behaviour is open to virtually infinite interpretations, yet equally abstract theorisations not grounded in robust scientific processes are also abundant.

Within the field of IR, dominant schools of thought – namely Realism – see themselves as a quasi-natural science, trying to emulate the scientific processes of the so-called ‘hard sciences’. In this effort, subjective factors were discarded and their relationship with behaviour – particularly State behaviour – was considered insignificant or residual at best. Constructivist theory challenged these claims and streamlined the introduction of subjective factors into IR causal theorisations; identity, for instance, became a key variable in IR analyses (See, e.g., Wendt, 1992).

In light of that, the concept of culture and its relationship with processes of identity construction were more valued within IR research. This valuation was significant to the point that even more resistant subfields of IR, such as Security Studies, were unable to withstand the penetration and diffusion of these subjective factors. Ideas of strategic cultures (Johnston, 1995) started to appear, analysing how cultural factors played a role in the shaping of military organisations and operations.

Symbolism, however, remains a neglected concept within the field. Despite being occasionally used in IR research, it usually blends in with other sociological and anthropological jargons, and it is assumed its meaning is understood, whilst no clear definition is given. Mentions of symbolic events or actions are frequent, and the interpretation of what a symbolic event or action is is taken for granted. Even within Sociology and Anthropology – two fields of study more concerned with the robustness of definition of terms such as symbolism, there are several working definitions, most grounded in the subfield of semiotics and/or sociolinguistics, and a variant of a theory of signs (See, e.g., Buchler, 1955; Morris, 1971). To this end, given the interdisciplinary character of this research, a clear definition of all key terms is of the utmost necessity.

2.1. On Symbolism

The conception that symbolism is a predominant driver of everyday life, from major events to micro-decisions, is rooted in the philosophical tradition of Pragmatism, particularly within the sociological perspective of Symbolic Interactionism. The main tenet of Pragmatism was its rupture with the ruling rationale that logic was derived from metaphysics, rather than social interaction. Charles Sanders Peirce defended the idea that logic is contingent to semiotic processes enabling actors to read and interpret the world around them, thus, devising their own logic (Buchler, 1955). Pragmatism sees the world ruled by individual interpretations and perceptions, which, in turn, are derived from social interactions. To that end, George Herbert Mead postulates that everything is symbolic in its own way and the symbolism is perceived and interpreted in plural forms by different interpreters (Miller, 1982).

Herbert Blumer (1986) builds on the work of Mead, identifying the methodological tradition of symbolic interactionism, focused on three bedrock assumptions: firstly, people act towards everything surrounding them – other people, things, ideas – based on what these units mean for them. Secondly, these meanings are not inherent; rather, they are constructed and arise from social interactions between oneself and others. Lastly, these meanings are not permanent. They evolve and change throughout time through interpretative processes.

The world is composed of symbols. Like many other abstract concepts in the Social Sciences, the definition of a symbol is not universal. The term ‘symbol’ is often employed with no rigorous care, attentive definition, or even a basic notion of what is meant. In this research, a symbol is defined as a placeholder for an underlying meaning; an object, an image, a word – virtually anything – that stands for something else, that is, whose meaning and interpretation is linked to a third idea. The same way a flag’s underlying meaning is that of a country or nation it depicts, the image of a skull with crossed bones underneath is quasi-universally understood as poison, danger, or death (O’Neill, 1999).

In the same vein, what I call symbolism can be defined as a system of representation. It connects two concepts: one concrete (the symbol) and one abstract (the meaning or idea) through a semiotic, meaning-making process. It focuses on what something represents (or, more precisely, what it was shaped to or naturally came to represent), despite their natural, material, and objective features. Symbols are vehicles of meaning, an arbitrary representation of an underlying meaning or idea; they transmit the same concept or message without relying

on the explicit physical, visual, or objective display of the meaning or idea. Returning to the example of the flag as a symbol, its natural, material, and objective characteristics (coloured cloths pieced together) have no standalone meaning; nevertheless, due to the idea imbued behind, it becomes a symbol of a country or nation.

Symbols, thus, transcend the objective barrier to reveal underlying ideas for which they stand, often serving as the materialisation of such abstract ideas. Medals and trophies illustrate well this transcendence from the objective to the subjective meaning. The physical objects – medals and trophies – have little meaning or practical use by themselves, in contrast to, say, practical objects such as a hammer or a pencil. Trophies and medals serve no practical purpose other than symbolising something: achievements. They materialise an abstract concept and serve as symbols to represent them. Yet, since virtually anything can become a symbol, they may play both symbolic and practical roles. A pencil has its practical purpose (a tool for writing) and may also be perceived as a symbol – say, for education or even creativity, for instance.

In that sense, my conception of symbols draw from what Barry O’Neill (1999:7) calls “value symbols”. These symbols have two main defining characteristics: affect and polysemy. Affect is the strong emotion the symbol causes, evoking ideas that are shared by a determined group. Polysemy, on the other hand, reflects the complexity of the meanings behind the symbols. Flags symbolically represent not only the geographical delimitation that constitutes a country, but also the country’s history and culture. Moreover, the meaning of these symbols is not necessarily universal.

Symbols may represent different, and often contrasting meanings and ideas, depending on the referential point: while guns may symbolise protection for some groups, it may equally symbolise threat, violence, and death to other groups. This variation of meaning behind symbols is due to several intersubjective factors, including culture, shared experiences, and the environment in which a symbol is created or portrayed. These meanings, on the other hand, are subject to semiotic processes of construction of meaning – or *semiosis*.

Semiotics, broadly defined, is the study of signs (Cobley, 2010). The main objective of Semiotics is to “understand both a species’ capacity to make and understand signs and, in the case of the human species, the knowledge-making *activity* this capacity allows human beings to carry out” (Sebeok, 2001:8). Within the field of Semiotics, the definition of ‘sign’ is similar to what I defined as a symbol: “any physical form that has been imagined or made externally

(through some physical medium) to stand for an object, event, feeling, etc.” (Sebeok, 2001:3). Symbols, thus, are a type of sign, ones which go through *semiosis* – that is, the process of construction of meaning of signs. Morris (1971) argues that what differentiates a symbol and a sign is the fact that symbols are signs that represent other signs, whilst regular signs retain their primal meaning. Moreover, Sebeok (2001) reinforces the argument that anything can be symbolic and that these symbolic perceptions are crystallised through social convention and norms. Such conventions and norms, on the other hand, are constructed and shaped through discourse.

Similarly, a symbol’s meaning is not fixed. The symbolic perceptions of these objects, images, and words may change, be it naturally over time, or deliberately, through discourse in semiotic processes. Natural changes or loss of a symbol’s meaning may occur when either the symbol or the meaning is no longer perceived as compatible or relevant to the group which recognised it and legitimised it as a symbol. The quasi-universal symbol of peace (☸) was initially designed by Gerald Holtom to represent the movement for British nuclear disarmament in the late 1950s; nevertheless, it naturally shifted its meaning to the broader idea of peace, as it is often recognised today (CND UK, 2018).

Symbols may also naturally fall into disuse if the group that employed and recognised as a symbol fades. Ancient societies, such as Nordic, Celtic, or Native constructed and recognised a plethora of symbols in their own cultures, but due to their disappearance, these symbols are no longer recognised in modern times. Nevertheless, it is important to differentiate a ‘natural’ fade from erasure. The eradication of a specific group will certainly lead to the eradication of the symbols used by that group alone, yet it is hardly a natural disappearance, as the Post-Colonial literature in IR will argue.

The meaning and ideas represented by symbols may also shift deliberately and strategically. Akin to Securitisation practices¹¹, an actor may take measures to shift the meaning and idea of a symbol through discourse. These changes occur through semiotic processes, that is, processes of construction of meaning, and may be shaped by specific interests. Nuclear weapons, I argue, have suffered these deliberate symbolic shifts shaped by national interests, while simultaneously constraining national behaviour. They served multiple symbolic purposes throughout time, and each shift was deliberately executed when there were strategic reasons

¹¹ For more on Securitisation Theory, see Buzan *et al.*, 1998.

for that. Nevertheless, not only are such shifts difficult and delicate to execute, the symbolism constructed through discourse may at times constraint a State's behaviour, despite a change in the national interest.

There are several factors that play a role in the shift of meaning of a symbol. Moreover, the same symbol may be interpreted and internalised differently, given the cultural setting and the environment in which it is employed. Symbols, as a result of intersubjective processes, are perceived in a plethora of ways, and different environments and different cultures are accountable for this discrepancy and the lack of universality in their meaning.

To illustrate, the infamous swastika symbol is a prime example of the different meanings the same symbol can represent. Mostly associated with Nazism in Germany, the swastika predates the Nazi movement. The symbol has been used for over 3000 years in a variety of cultures and societies around the world – ranging from ancient Greek, Chinese, Japanese, Native American, and Indian – and it already stood for a plurality of ideas, be it alchemy, good luck, or even the Christian cross before it was ever associated with Nazism (Piercy, 2013). Nevertheless, the adoption of the swastika as the symbol for the Nazi party changed the meaning of the symbol in the 20th century in Western culture – a meaning that persists to this day.

The different environment in which a symbol is used – in the case of the swastika, the rise of Nazism and everything it represented – had a significant impact on how the same symbol stood for plural meanings. The swastika is still interpreted and stands for its original meaning in Eastern culture, despite its uses by the Nazi party in Germany and the zeitgeist of the Second World War. Similarly, different cultures can have completely different meanings for the same symbol, regardless of their deliberate use, as was the case with the swastika. Nuclear weapons and even nuclear energy, for instance, may symbolise positive assets for sectors of society – regardless of geographical limitations – or dangers and undesired by-products for others.

Culture, thus, plays an important role in defining the shared meaning behind symbols, as well as the symbols to be shaped into representing said meanings. Regardless of the difficulty in defining broad terms such as culture – out of which entire fields of study have sprung – Clifford Geertz defines it as “an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life” (Geertz, 1973:89). To illustrate his conceptualisation of culture, Geertz (1973) borrows the

following analogy from Max Weber: man is an animal trapped by webs of significance he himself created; these webs of significance, he argues, are the definition of culture.

Ann Swindler (1986:273) argues that culture in itself consists of “symbolic vehicles of meaning”. Culture transmits particular meanings or ideas through practices imbued with symbolic value. Nevertheless, culture does not directly dictate behaviour. It does not ascertain specific courses of action ascribed in a robust, positivist framework. Rather, it shapes behaviour by narrowing the scope of action and providing strategies of action: “culture appears to shape action only in that the cultural repertoire limits the available range of strategies of action” (Swindler, 1986:284).

When applied to Security Studies, the role of culture culminates in a variety of so-called “strategic cultures” (Johnston, 1995). For decades, the field of Security and Strategic Studies has been shielded from more abstract and subjective concepts such as culture. It was only in the 1980s that cultural approaches infiltrated the realm of International Security given academics and experts’ interest in different styles of national strategy (Johnston, 1995).

Strategic culture, thus, blends the objectivity of traditional, military-focused Security approaches with the subjectivity of cultural, sociological, and anthropological lenses. Alistair Johnston (1995) concludes that strategic culture theorists agree that a State’s strategic preferences stem not only from traditionally conceptualised rationality and objective and ahistorical factors – such as capabilities in the material sense or technology – but from a State’s (and its elite’s) formative experiences, which in turn are rooted in cultural, sociological, philosophical, and cognitive factors. In fact, these intersubjective factors account for a larger explanatory share of a State’s strategic preferences than objective, ahistorical factors.

In that sense, the infusion of cultural approaches to IR shatters the once shielded concept of a universal rationality and the image of the ‘rational actor’ as conceptualised by Realist theories. Rationality becomes a plural concept which relies on other, intersubjective and fluid factors. There is no one true rationality; rather, rationality is composed of what a specific actor considers rational, given its own formative experiences. Rationality, thus, is dependent on each individual actor’s perceptions. The common belief in IR literature that States behave in a rational manner is not necessarily analytically accurate insofar as it is helpful (Sagan, 1994:71). Rather, actors do behave rationally, but each on its own grounds, following its own rationality, influenced by a plurality of factors, be it organisational – as Sagan (1994) argues – or cultural.

Different cultures result in different rationalities, which, in turn, results in different courses (or rather, strategies) of action (Swindler, 1986:284). As Peirce argues, “logic is rooted in the social principle” (Ochs, 1998:92). This formulation is observable not only at the domestic, individual-based level, but also on the international stage. The operations of a State’s decision-making process are not independent from the subjective and cultural ties that compose and shape the lives of individuals. In other words, Realism’s assumption that the State’s operations are a ‘black box’ might facilitate analyses, but at the cost of accuracy. Rationality and the ‘rational actor’ are often unquestioned truisms of IR diffused by Realist theories which, in reality, do not provide an accurate, bona fide methodological tool. To differentiate from what became the standardised, Realist, materially oriented concept of rationality, Uriel Abulof (2015:378) argues that actors follow “*reasoned* choices” rather than rational choices, taking into account individual rationalities formed by a fabric of particular subjective and cultural factors. This decentralised notion of plural rationalities, each influenced by subjective and cultural formative experiences, paves way for different perceptions and interpretations of symbols. As Pierre Bourdieu argues:

Symbolic power is a power of constructing reality, and one which tends to establish a *gnoseological* order: the immediate meaning of the world (and in particular of the social world) depends on what Durkheim calls logical conformism, that is, 'a homogeneous conception of time, space, number and cause, one which makes it possible for different intellects to reach agreement (Bourdieu, 1991:166)

Nevertheless, perceptions of a symbol can be diffused for large audiences (or actors) under “symbolic structures” (Bourdieu, 1977:407). This sharing of meaning of symbols is part of a practice of social and moral integration. These constructed symbolic structures serve plural purposes, but in particular, the purpose of an instrument of power and domination. Actors in positions of power fabricate symbolic structures to propagate shared symbolic perceptions and maintain their symbolic power. Discursive practices are a prime example of tools to create and reinforce symbolic structures. States create symbolic structures and share symbolic perceptions to ascertain their power and domination over others.

US President Harry Truman’s discourse after the bombing of Japan, in 1945, is filled with technological and scientific praise for the endeavours of the Manhattan Project and the development of an unprecedented device. It creates a symbolic structure around nuclear weapons, fomenting desire and nuclear ambitions, associating nuclear possession with high international status.

In order to maintain the exclusivity of nuclear possession-induced status, legal frameworks were constructed in order to limit nuclear proliferation and denying others the pursuit of the same status. The NPT and its constant critiques illustrate how nuclear weapons and their possession are seen as symbols of power and status, despite the objective goals of the treaty. The NPT institutionalises, legalise, and legitimate nuclear possession for a limited number of States, granting exclusivity to those within the small NWSs club. Despite their Article VI obligations – “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament” (The Treaty on the Non-Proliferation of Nuclear Weapons, 1968:173) – NWSs have been accused of doing little to that end.

Due to the nature and objective and material faculties of nuclear weapons, their symbolic power is concealed under security reasons. The quasi-unquestioned (alleged) belief in deterrence and the legitimisation of possession granted by the NPT and the nonproliferation regime allow for NWSs to maintain their nuclear arsenals under the argument of deterrence and retaliatory practices, regardless of their actual defence and security concerns. As Bourdieu (1977:407) argues, symbolic power is often hidden and rarely explicit. Under the broad and unquestionable aegis of ‘matters of security’, NWSs retain their nuclear weapons, and nuclear weapons proliferate their symbolic power and value.

Cultural and subjective factors play a key role in shaping symbolism, constructing symbolic structures, and spreading symbolic perceptions. In turn, symbolism is a significant driver for behaviour, even when considering the rationality of actors as a premise. The system of representation embodied by symbolism serves as a set of lenses through which each actor constructs its own rationality and, consequentially, its behaviour. The shaping of interests is contingent on how actors see, understand, and react to the world around them, that is, how they create and interpret the symbols present in their environment. In IR and state-level analyses, the symbolism created and shaped by a State is capable of constraining State behaviour.¹² Once crystallised in a State’s society and cultural formative fabric, symbolic perceptions may gather support and catalyse policies in line with the symbolism portrayed as well as hinder contrasting policies, in spite of possible shifts in national interests. Symbolism and culture play key roles in the shaping of behaviour. Symbolic perceptions, built upon subjective and cultural factors,

¹² This claim is particularly focused on liberal, democratic regimes. However interesting, it is not the scope of this research to analyse the varying degree of symbolism’s constraints on State behaviour between democratic and autocratic, and liberal and illiberal regimes.

are reinforced or disrupted through its incorporation within one's identity – be it individual, or State.

2.2. *On Identity*

The way actors see the world and the meaning things have for them will determine how they see themselves, how they shape and pursue their interests, and how they act. The collective symbolic perceptions of an actor will culminate in the construction of its identity. Identity is yet another concept abstract in nature. IR has been concerned with the analytical value of identity for decades, particularly in post-positivist approaches. Wendt (1992:397) defines identities as “relatively stable, role-specific understandings and expectations about self”. Identities are constructed personas that reflect the values of oneself. The concept of identity, however, is not limited to the micro level of individuals. Sociology has a stern focus on identity of individuals and collective identities, yet IR also analyses identities at the State level, how States construct and reflect an overarching collective identity referring to shared ideas and values of the nation.

The formation and consolidation of identities is contingent not only on the *self* – that is, the actors whose identity is in question – but also on the *other*. Identities are constructed and displayed yet are only consolidated if the perception of the identity of the *self* is perceived in the same way and shared by the *others*. In other words, identities involve internal and external structures to function: both how the *self* perceives and projects itself and how the collective *other* perceives it.

In IR Constructivist theory, identity is conceptualised as a significant driver of national interest. Actors shape their interest based on what they value and what they want to convey. They shape their identities based on how they perceive themselves and others – and the relationship between them. The result is an overarching set of understandings about what an actor values, how it is perceived (and how it wants to be perceived), and how to act in a way to achieve these goals. Actors might develop and defend plural identities, while firmly believing that the amalgam of these identities make them unique (Lebow, 2012). For instance, States might value an identity of military power and hegemony, or one concerned with peacebuilding and human rights. Simultaneously, actors might wish to portray identities of economic leadership.

Similar to symbolism, identities are not fixed and change over time. New developments – both endogenous and exogenous – triggering new perceptions might alter the way in which an actor

sees itself, how it sees other, and how others see it. Consequentially, this shift in identity is accompanied by a shift in conditioned set of actions. For instance, an underdeveloped State might portray an identity of alignment and alliance to larger powers at a given moment and, contingent to a number of factors, shift its identity to one of independence and power projection.

As a result, a State's conditioned paths of action (or behaviour) change. Based on that, the relationship between identity and the formulation of interest is established. An actor will decide what it wants based on how it sees itself and how it wishes to be seen by others. Consequentially, identity has a direct link to behaviour: based on the formulation of interests (in its turn, based on identity), actors will decide how to behave in order to achieve these interests and cultivate their desired identities.

Nevertheless, the central role and importance of identity in shaping interests and behaviour is often brought into question in IR scholarship. Richard Lebow (2012; 2016), for instance, questions the degree of importance identity has in ultimately conditioning State behaviour. Lebow's critiques of the centrality of identity in shaping and conditioning behaviour can be, thus, categorised in two main camps: firstly, the scientific rigour of analysis pointing to the causality of identity, and secondly, tautology.

Despite this strong link between identity and the formulation of interest – and its consequential effects on behaviour – some research point to the fallacy of unquestionably linking an actor's sense of *self* – its identity – and behaviour. Lebow (2016) argues that the concept of identity as a whole is severely problematic in analytical and causal terms. Identities may be fleeting, and different facets of identity might point to contrasting courses of action. Furthermore, drivers of behaviour are richer than identities alone.

In addition, the ontology of identities evokes a complex set of factors whose holistic understanding is often bypassed in analyses. In other words, analysts assume a simple, direct, and straightforward relationship between identity and behaviour when in fact, such a relationship is far more complex and uncertain. Lebow (2016) further argues that the causality of identities is problematic due to tautology: identities may simply be the rationalisation of interests rather than their cause.

As valid as the critiques sound, there are some issues to be raised; they are twofold. Firstly, addressing the scientific and analytical basis of causality between identity and behaviour,

unquestionable truths and causal relationships are a trademark features of positivist epistemologies, trying to emulate hard and natural sciences. Constructivist IR theory, based on post-positivist epistemology, is rooted in the abstract ontology of reality. It is inadequate to fit shielded variable flows indicating irrefutable causality in human (or State) behaviour.

The field of IR has been severely dominated by positivist, (mostly) Western epistemologies that *de facto* standardise the validity of knowledge (Noda, 2020). Post-positivist epistemologies seek to break this habit by basing its analysis on degrees of influence rather than cause. Based on a socially constructed reality, it is impossible to *undisputedly* affirm that any factor *causes* behaviour. Instead, the analysis is focused on which factors *shape* and *influence* behaviour. Given the overarching concept of identity as a set of understandings an actor has of self and others – that is, values and roles attributed to the world around it – the argumentation pointing to the relationship between identity and interests/behaviour is vast, credible, and solid.

Secondly, the ‘agency-structure’ problem in IR is often called tautological and endogenous due to its (assumed) cyclical nature. However, that is a misconception of how the dynamics of structure and action work. Identity (structure) and behaviour (action) are not perfectly cyclical, taking into account solely internal and endogenous factors. Rather, it evolves, incorporating the outcomes of actions into the formation of new structures. Exogenous factors are also at play, influencing this agency-structure mutual constitution and escaping the endogeneity trap, in what Walter Carlsnaes (1992:260) calls “morphogenetic cycles”. **Figure 7** illustrates how structure and action (or policy/behaviour) relate in this morphogenetic dynamic.

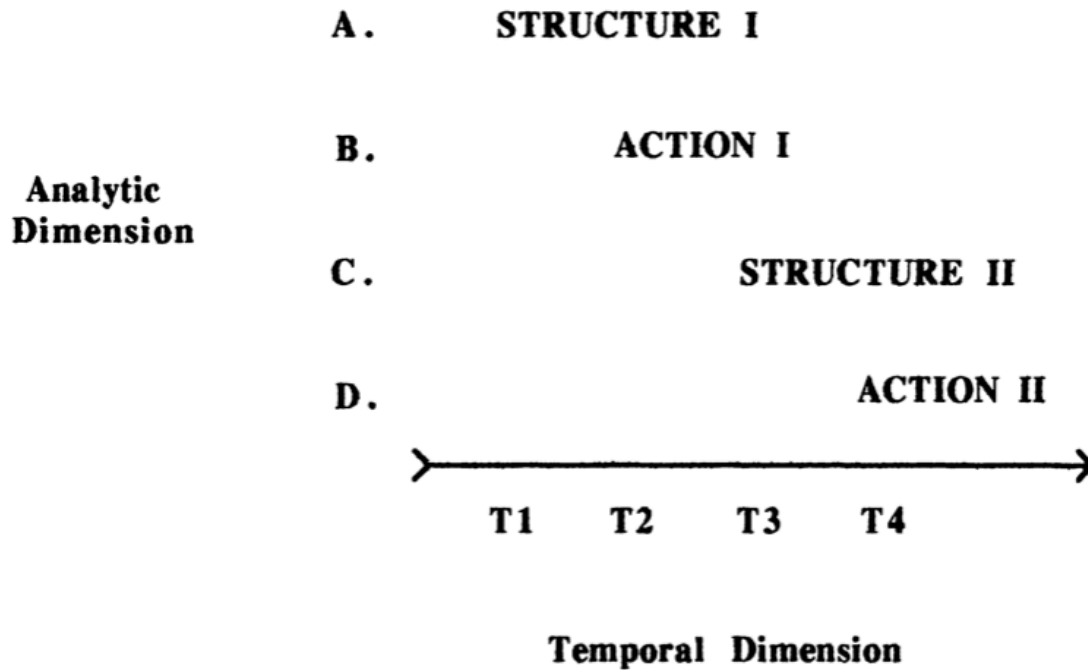


Figure 7: Morphogenetic Cycles. Source: Carlsnaes, 1992:260.

Structure I is not the same as Structure II, as it would be in an actual endogenous and tautological cycle. Structure I shapes Action I and the outcomes (exogenous factors) are incorporated to form Structure II, a derived version of Structure I. This relationship persists to a point in which Structure *n* may no longer be similar to Structure I.

Furthermore, characterising identity as the rationalisation of interests (Lebow, 2016) inverts the logic of influence. Considering rationality as an ‘independent variable’ conceptualises rationality as a given – a singular concept. This is a severe, but common flaw of positivist IR theories, as explained above. Rationality is not a singular concept, applicable to all actors in a similar fashion. Each actor develops its own rationality based on how it views the world – its symbolic perceptions. These symbolic perceptions, once established, shape an actor’s rationality and identities. The concept of national interests, thus, is contingent on how actors understand their surroundings, their needs, and their roles – that is, their identities (Weldes, 1996).

The ‘practical’ role of identity in the interactive dynamics of States, however, has been played down by some studies. Daryl Press (2005), for instance, analyses how peer perceptions of identity influence future interactions. His findings show that perceptions of reputation and status in previous activities do not incur practical costs in future interactions: States are not

constrained by their past behaviour or imperfect reputation. In other words, identities perception – that is, how the *other* perceives the *self* and its identity – is not always a significant factor.

In spite of that, identities are still highly cultivated, and actors are deeply concerned about their identities. Brent Steele (2008) argues that States act in particular ways not (only) to maximise their physical integrity and survival, but to nurture and protect their ontological security and their self-identity, that is, their sense of who they are, how they see themselves and how they are seen (and want to be seen) by others. States' pursuit of the integrity of their ontological security/identity, Steele (2008) argues, goes beyond the point of physical security and survival concerns. To this end, regardless of the practical impact of identity as a variable in State interactions, States are still concerned about their identities. Consequently, these identities and sense of *self* will shape States' interests and condition behaviour.

2.3. From Nuclear Exceptionalism to Nuclear Identities

In order to delve deeper into nuclear identities, one must ask what it is to 'be nuclear'. To this end, Gabrielle Hecht (2006) sought to explore the ontology of the nuclear state. 'Nuclearity' is not a dichotomy, but a spectrum, and a State's nuclearity is in constant flux:

The nuclearity of a nation, a program, a technology, or a material – that is, the degree to which any of these things counts as “nuclear” – can never be defined in simple, clear-cut, scientific terms. Rather, nuclearity is a technopolitical spectrum that shifts in time and space. It is a historical and geographical condition, as well as a scientific and technological one (Hecht, 2006:322).

Thus, the ontology of the nuclear state enmeshes technical activities – activities related to the development of nuclear programmes, such as uranium mining, processing, enrichment etc – and political histories. Hecht (2012) shows that African States – with the singular exception of South Africa, due to its (now fully reversed) nuclear weapons programme in the 1980s – are not considered nuclear States despite detaining a large share of uranium production in the world. Niger, Namibia, and Gabon alone, for instance, accounted for 25 percent of the uranium production in 1995, yet, in a report by the Office of Technology Assessment, none of them were listed as States conducting 'nuclear activities' (Hecht, 2006).

Therefore, the question 'what makes a State nuclear?' is far more complex than it seems. Is it the participation in any activity related to nuclear/fissile materials? Is it the development of a uranium enrichment programme, as Iranian president Mahmoud Ahmadinejad declared in 2010

(Hecht, 2012)? Is it the testing of nuclear weapons? There is no set answer for this question. What is observable, however, is how the concept of nuclearity is contingent on subjective factors and that the very concept of a nuclear state is often linked to ideas of status, modernity, and prestige through what Gabrielle Hecht (2006:321) calls “nuclear exceptionalism”.

The rhetoric behind nuclear exceptionalism is that nuclear weapons are unique not only because of their unparalleled destructive power, but due to its history and essence. Nuclear weapons involve “creating rupture in nature’s very building blocks” (Hecht, 2006:321). It requires a high level of skill and technology and the audacity to play divine architect with the organic fabric of life; to split the atom is to defy natural laws that binds us all. In essence, nuclear weapons are different from all other weapons – even other weapons of mass destruction (WMDs), such as chemical and biological weapons. Given this crystallised discourse of nuclear exceptionalism, nuclear weapons symbolically ascribe an equally unparalleled status to whoever develops them. Nuclear weapons are analogous to a certificate of status and prestige. It attests that a particular State was able to overcome the technopolitical obstacles and successfully ‘played God’.

Nuclear exceptionalism, however, extends far beyond nuclear weapons. All things ‘nuclear’ became exceptional. The level of excitement and fantasies about everything ‘nuclear’ was bound to have significant influence in States’ identities. States saw in nuclearity a trump card, a manner in which a State could show its relevance within the International Community. Nuclear nationalism began to grow, and ‘the Bomb’ became a strong symbol of a State’s identity:

Shattering the atom had apparently put humanity’s ageless dreams within grasp. These were the many promises of nuclear things, and the promise of many nuclear things: limitless electricity, atomic-powered transportation, huge increases in crop yields, cures for disease, and if not eternal life at least one much longer and far more comfortable [...] Utopias can be infectious. Atomic fantasies spread quickly on both sides of the Iron Curtain. Nuclear nationalism comforted state leaders anxious about their country status. The French compared reactors to the Arc de Triomphe and the cathedral of Notre Dame. The Russians likened them to samovars. In Communist China, leaders spoke of “the people’s bomb”; in India, of the “Smiling Buddha” (Hecht, 2012:7-8).

This apparently inherent exceptional quality of nuclear things that seemingly set them apart from the ordinary arena, however, is not inherent at all. William Kinsella (2005) argues that nuclear exceptionalism – or the ‘hype’ of nuclear things – stems from discursive practices constructed for that particular end: to set the nuclear sphere apart from the ordinary. What is

often neglected is that the discourse behind nuclear exceptionalism “masks an internal fragility best characterised by ‘nuclear ambivalence’” (Abraham, 2016:2).

The realm of the nuclear stands on a fine line between fear and marvel. The discourse shrouding nuclear exceptionalism is often ambivalent and contradictory (Nye, 1994). Ideas of terrifying fear and irresistible exhilaration are often contrasting forces surrounding the nuclear debate. The very ontology of nuclear energy and all its applications is rooted in what Spencer Weart (1988:421) calls “transmutation”, that is, the passage from destruction to rebirth. The realm of nuclear things became a vessel for the divine and arcane, “from secrets, punishments, rage, uncontrollable urges, to triumphs, miraculous life, regeneration, and rebirth” (Abraham, 2016:3); nuclear energy became:

[...] a receptacle for projections of these hidden thoughts. Impossible hopes could seem almost plausible when attached to possession of bombs and reactors. And evils we denied within ourselves could be projected as a property of the men who controlled nuclear devices or of the devices themselves (Weart, 1988:424).

Narrowing the scope of the overarching question ‘what makes a State nuclear?’, Hymans (2010) asks the question ‘when does a State become a NWS?’. Traditionally, the prime indicator of nuclear armed capability of a State has been nuclear testing: a State was considered a NWS if and when it conducted a successful nuclear weapons test detonation. From this perspective, Israel’s denial of being a NWS is valid, since the Vela incident¹³ was not proved to be, in fact, a nuclear test conducted by Israel, as it is widely believed. Challenging the test/no-test indicator, nuclear experts have been focusing on other indicators, such as the acquisition of significant quantities of fissile materials or a qualitative analysis of a State’s incentives to ‘go nuclear’.

All indicators are flawed: not testing nuclear weapons does not indicate a State does not, in fact, developed them. With the advancement of technology and digital modelling, nuclear weapons are becoming increasingly ‘virtual’, and consequently, tests are becoming increasingly unnecessary. The possession of significant quantities of fissile material also does not incur a State’s nuclear state. Fissile materials alone do not produce nuclear weapons; technology and knowledge are necessary. Moreover, fissile materials have other (peaceful) uses than being processed into fuel for nuclear weapons. Lastly, an analysis of States’

¹³ For more on the Vela incident, see Geer and Wright, 2018.

incentives is difficult to assess, given the infinite reasons a State might choose to develop nuclear weapons or not, to test nuclear weapons or not, etc.

No approach was ever expected to be perfect, so the best option is a blend. Hymans (2010) argues that the test/no-test indicator serves the best purpose (for now) for an initial assessment, but States labelled NNWS based on this methodology should append an asterisk to their status, contingent on whether the nuclear programme is civilian- or military-run, whether there are qualitative incentives for the production of nuclear weapons etc. All these incentives (both to develop nuclear weapons, test them, or even simply acquire significant quantities of fissile materials) come into play when delineating a State's nuclear identity.

But what are nuclear identities? Based on the Constructivist conception of identity and its centrality to the theory, I focus on a specific arena: nuclear weapons and politics. Mirroring Wendt's (1992) definition, I define nuclear identity as a set of understandings a State has (and portrays) of *self* and its role on plural overarching structures within the International System in its relationship with the *other* on the domain of nuclear politics and nuclear weapons.

A State's nuclear identity is contingent on a wide set of factors: whether it is a NWS or a NNWS, its regional relationships and military alliances, but more importantly, on how the State perceive nuclear weapons. These nuclear identities condition behaviour such as the pursuit the development of nuclear weapons or not, whether NWSs will advocate and advance the agenda of nuclear disarmament (beyond the rhetoric level), whether States will sign or boycott arms control and disarmament treaties, the adoption of no-first-use (NFU) policy etc.

Essentially, the nuclear identity of a State encompasses how the State sees itself and how it is (and wishes to be) seen by others in matters of nuclear weapons and its attached politics and policies. These nuclear identities are not given, but constructed and practiced in order to strengthen their widespread acknowledgement and acceptance. Nuclear identities are also not fixed. States' symbolic perceptions of nuclear weapons fluctuate and with them, so does their nuclear identities.

It may be common sense to assume there are two types of contrasting nuclear identities: one held by NNWSs, conceptualising nuclear weapons as 'bad', and the other, held by NWSs conceptualising nuclear weapons as a 'necessary evil', meaning they are ultimately 'good', putting in simple terms. Nonetheless, that is not the case. Identity *per se* is a widely complex concept, and one single factor, albeit an important one – whether a State possesses nuclear

weapons – does not account for the entire formation of a State’s nuclear identity. It does, however, heavily influence it.

The traditional rhetoric shrouding the nuclear identity of NWSs is that nuclear weapons are necessary for peace and strategic stability. The latter concept, on itself, rightfully deserves an entire chapter or even books due to its complicated and elusive nature. On this prerogative, Elbridge Colby and Michael Gerson (2013) edited a volume whose goal was to discuss the definition and evolution of the concept of strategic stability. As they argue, there is no singular and common shared understanding of what strategic stability is. It is, thus, an empty concept; a signifier to attribute importance. In other words, in the way that it is used, linked with nuclear weapons, it is a tool to attribute importance and highlight the role of nuclear weapons.

Even so, NWSs do not all share the same views on nuclear weapons either, something noticeable particularly through their policies. The United States and Russia, for instance, maintain large nuclear stockpiles and constantly develop new technologies to incorporate in this nuclear military machinery. Furthermore, neither State officially adopts a NFU policy. China, on the other hand, keeps a comparatively low number of nuclear weapons, despite its capacity to enlarge its arsenal, and was the first NWS to adopt NFU as its official nuclear policy. It shows the disparity of identity relations each of these States (all NWSs) have with nuclear weapons.

As for NNWSs, there is also divergence between each’s nuclear identity. Some States have been accused of attempts to develop nuclear weapons programmes, whilst others voiced (conditional) interest in developing them. The IAEA has notified the United Nations Security Council (UNSC) of breaches in safeguard agreements – a violation of the NPT – several times, most notably Iraq in 1992, Iran in 2002, Libya in 2003, and Syria in 2008 (Goldschmidt, 2009). Such violations are not synonymous to the development of a nuclear weapons programme; however, it raises questions, creating instability regarding nuclear proliferation and the ‘pursuant’ or ‘desirer’ nature of their nuclear identities.

States like Saudi Arabia, who has signed and ratified the Chemical Weapons Convention in 1996, the Biological and Toxin Weapons Convention in 1972, and the NPT in 1970, is labelled as a low risk of nuclear proliferation (Bahgat, 2006). Nevertheless, following the situation of Iran’s nuclear weapons programme, Saudi Arabia has allegedly declared that if Iran acquires

nuclear weapons, Saudi Arabia would follow suit – despite Saudi Arabia being committed to a nuclear weapons-free zone in the Middle East (Urban, 2013).

On the other end of the spectrum, there are NNWSs who are actively fighting to prohibit nuclear weapons by all means. States like Fiji have voiced their concerns regarding nuclear weapons through their support of the Treaty on the Prohibition of Nuclear Weapons (TPNW). Small island States are actively engaged in global nuclear disarmament, partly given their history with nuclear weapons. Throughout the Cold War, several nuclear weapons tests were conducted in small island States, causing severe damage to the region (Bolton, 2020). This relationship with nuclear weapons has led States like Fiji to develop a nuclear identity more strongly centred on disarmament and prohibition.

There are, of course, States whose nuclear identities fall in the middle. States, for instance, who had nuclear weapons programmes, but abandoned them since acceding to the NPT – such as South Africa – or so-called nuclear latent States, who possess the means to develop nuclear weapons, but refrain from doing so, such as South Korea or Japan. Brazil, for instance, is often accused of having a nuclear weapons programme in the 1970s despite having signed and ratified the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco) in 1972.

Brazil has signed and ratified the NPT in 1998, and since has been considered a nuclear latent State with low risk of ‘going nuclear’. However, Brazil has been developing a nuclear-powered submarine, which blurs the line between military and peaceful uses of nuclear technology. The device in question, whilst not being a nuclear weapon *per se*, is a military vessel with nuclear propulsion. If/when complete, Brazil will be the only NNWS to possess this technology, which raises numerous questions on the matter of dual-use of nuclear technology and applications.¹⁴ Furthermore, in 2019 Eduardo Bolsonaro – a federal deputy and son of President Jair Bolsonaro – has publicly defended the idea of Brazil acquiring nuclear weapons in order to obtain respect, status, and to guarantee the peace (G1, 2019).

These cases illustrate how nuclear identity is not dichotomous, but a wide spectrum and, just like it’s parent-concept, particular to every actor. NWSs and NNWSs tend to have different nuclear identities, yet discrepancies amongst the same group are also frequent. Moreover, some

¹⁴ For more on the debate whether Brazil’s nuclear programme aimed at developing nuclear weapons and the current project of the nuclear-powered submarine, see Spektor, 2016.

cases show how nuclear identities are not static. Rather, they are in constant flux, always changing and susceptible to a number of different factors, both internal and external to the State. These nuclear identities, which shape and condition (nuclear) behaviour, such as policies and postures, are conditioned themselves to how States see and perceive nuclear weapons and nuclear behaviours around them.

2.4. Symbolism and the Identity-Behaviour Nexus

The relationship between identity and behaviour has been widely researched in IR literature, particularly through Constructive tenets of the scholarship. Identities ultimately condition behaviour through their influence on the formulation of concepts of interest. States deem a goal desirable (shaped by identities) and act accordingly in order to achieve this goal. Identities condition behaviour, yet, what shapes identities? Similar to the relationship between identity and behaviour, the relationship between symbolism and identity is also established.

The construction of identities is a subjective process which depends on one's perceptions. The form in which one symbolically sees, perceives, and understands everything around oneself is a significant – if not the main – driver of identity construction. If a State perceives nuclear weapons to be inherently bad, its nuclear identity will be centred around this tenet, which, in turn, will be a pivotal feature of its interest, thus, shaping and conditioning the State's behaviour.

Identities are not inherently given. A State does not construct, develop, and cultivate an identity centred on aversion towards nuclear weapons 'just because'. The pillars of this (nuclear) identity stems from what nuclear weapons symbolise for them, and these symbolic perceptions are contingent on cultural and historical formative experiences. If a State's first contact with nuclear weapons (cultural and historical formative experiences) has been negative, it will assimilate and perceive (symbolism) nuclear weapons to negative aspects, such as death and destruction. Consequently, these perceptions will become central to the State's nuclear identity, dictating its interests and, ultimately, shaping and conditioning its behaviour related to that particular domain.

Drawing from Constructivism and the agency-structure nexus, the agent creates the structure, which then will shape the agent's behaviour. Considering symbolism and the identity-behaviour nexus, symbolic perceptions are established, and constitute the foundations of

identities, which will then condition behaviour and so on.¹⁵ Structure and agency are mutually constituted, but not in a perfectly cyclical, endogenous manner. Exogenous factors play a role in the agency-structure dynamic, permitting each structural form to condition a new set of actions. Similarly, symbolism is established, constitutes the structure, penetrates identity, thus influencing behaviour, and being itself influenced by the outcome of this behaviour. This dynamic cycle happens not in a close circuit, but in a morphogenetic manner, as illustrated by **Figure 8**.

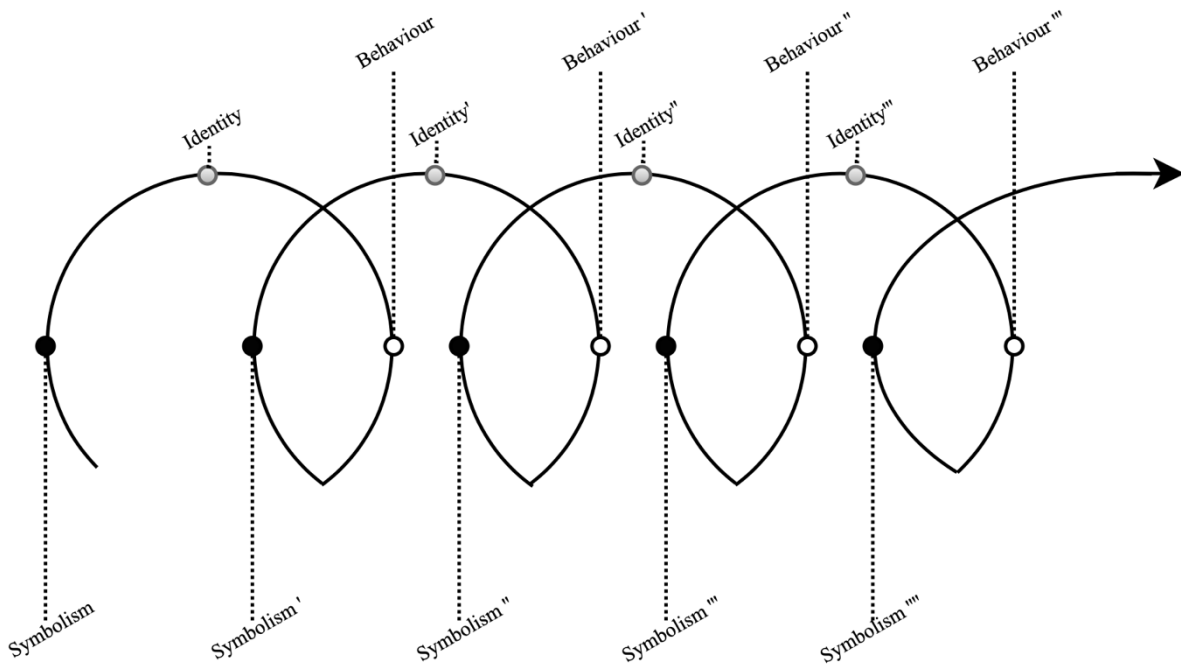


Figure 8: The Symbolism-Identity-Behaviour Dynamic Cycle. Elaborated by the author.

The fluidity of symbolism allows it to be influenced by the outcomes of the actions it itself helped shape. In that manner, a determined symbolism – amongst other factors – will ultimately lead to a conditioned set of actions. The results of this behaviour will serve as input and affect the initial symbolism, resulting in a new version (symbolism '), which will then condition a new set of behaviour (behaviour '), and so on.

This analytical model, based on cultural factors, such as symbolism, can be applied to nuclear weapons. Much has been researched about nuclear weapons as tools of security and deterrence

¹⁵ For more on Constructivist theory and the agency-structure 'problem', see Wendt, 1992; Carlsnaes, 1992.

theory, and new approaches to nuclear weapons have broadened the horizon of the field. The symbolic framework, outlined here, aims to contribute to this new and much needed literature.

2.5. Nuclear Weapons as Symbols

Despite the recent growth in diverse approaches to nuclear weapons in the last decades, the mainstream scholarship on the field is still predominantly materially oriented. It follows the ‘single rationality’ logic of Realism and, consequentially, falls into the ‘deterrence trap’. Deterrence Theory was developed to respond to the immediate threats of the Cold War, and it incorporated that particularity into its core. Nevertheless, the world has changed significantly since then, yet for decades the literature was idle to these changes.

Thinking about nuclear weapons through a symbolic framework and aiming to analyse them as symbols dependent on culture, environment, and zeitgeist provides an escape route from the close-minded positivist-focused rationale while not necessarily excluding material and positivist factors as significant elements. A symbolic analysis will not magically strip nuclear weapons of their materiality and their possible deterring capacity. Rather, it will illustrate how nuclear weapons are more than that, symbolising a wide range of ideas and meanings, and how even when considering their materiality, this analysis is conditional to a particular symbolic perception contingent to a set of intersubjective factors.

Conceptualising nuclear weapons as devices outside the exclusively military and material sphere is not exactly something new, and neither is establishing a relationship between nuclear weapons and symbolism. I do not claim to reinvent the wheel and to be the first scholar to argue that nuclear weapons are symbols, nor is my task to do so. Rather, my focus is on how these symbolic perceptions affect factual outcomes.

Scholars such as Barry O’Neill (1999; 2006) Karsten Frey (2006a; 2006b), and Nick Ritchie (2010; 2013) have already approached the symbolic facet of nuclear weapons. This line of research tends to point to the overarching conclusion that nuclear weapons, apart from their material capacities, often retain symbolic power, be it as a sign of modernity (Frey, 2006), or reminiscences of great power feelings (Ritchie, 2010). The shift from physical security to ontological security (that is, survival in the material to the subjective and identity sense) mimics the shift from physical power to abstract power, observed by Foucault (1995) at the turn of the 19th century.

After Sagan (1996) opened the doors for alternatives to the security model, different approaches to nuclear weapons proliferated. Drawing from Semiotics and cultural approaches in Anthropology, and Constructivism and Strategic Culture in IR, the symbolic framework outlined here can provide useful insights to rethink nuclear weapons and the NNP regime. The idea that nuclear weapons are merely military weapons or deterrence pawns, singularly serving practical, security purposes is severely limited and outdated. Nuclear weapons, given their attributed special status and exclusivity, play a myriad of different roles, such as a constructed symbol of modernity, status, and prestige.

Wendt (1992) wrote that anarchy is what States make of it. Nuclear weapons, despite their materiality and objective existence, are also what States make of them. Wendt's point was not that anarchy cannot lead to uncertainty, fear, and self-help in the International System; if States perceive anarchy in such way, then anarchy will in fact play the role Realism dictates. Rather, the point is that anarchy does not necessarily leads to a power struggle and political free-for-all. Similarly, if a State perceives nuclear weapons uniquely as tools of security, that is the role they will play, and the State's nuclear strategy and behaviour will be driven by these perceptions. Contingent on cultural formative experiences and exogenous factor, such as the political environment and context, symbolic perceptions are driving forces in the process of identity construction and crystallisation, which will ultimately shape and condition behaviour. As Harrington de Santana (2009:327) argues, "Nuclear weapons are powerful because we treat them as powerful".

From the Manhattan Project and the beginning of the nuclear age, the global social and political landscape has changed several times. States' identities, national interests, and strategies have varied in the last 75 years; it is, thus, extremely restrictive to assume nuclear weapons have always played the same role since 1945. There is no consensus – nor there will ever be – as to a singular, universal symbolic perception of nuclear weapons. These different perceptions vary across both time and space, influencing oscillations in nuclear identities. Just as with any symbol, nuclear weapons symbolise different ideas for different actors – in this case, different States – and at different times.

The first symbolic perception of nuclear weapons can be traced back to the development of the Manhattan Project. Amidst fears of a German nuclear weapons programme during World War II, the United States developed a nuclear weapon in collaboration with the United Kingdom and Canada (Bernstein, 1976; Holloway, 2010). A security concern and the context of war

drove the development of nuclear weapons. The acquisition of nuclear weapons in that particular context was perceived as a survival tool; nuclear weapons symbolised a security need. After the bombing of Japan, however, this symbolic perception shifted drastically. The United States being the sole NWS, nuclear weapons were perceived as symbols of status, scientific and technological achievement, intellectual capacity, and modernity: “What has been done is the greatest achievement of organized science in history” (White House, 1945:2).

Consequentially, for the USSR, at the time, it became a matter of national security and a “strategic imperative” (Sagan, 1996:58) to develop nuclear weapons in order to compete with its rivalling superpower and restore the strategic balance. Similarly, after India developed nuclear weapons in 1974, it became a national security issue for Pakistan to pursue its own nuclear device in order to guarantee its survival, given both countries’ history of conflict (Frey, 2006a). In both cases, nuclear weapons symbolised survival and a mean to guarantee it. This argument falls in line with the Realist reasoning that nuclear weapons are primarily military tools that serve no other purpose than to maximise security and, consequentially, survival (Mearsheimer, 2001; Martin, 2013).

In contrast to what Deterrence Theory – and much of the Realist scholarship dictates – India’s development of nuclear weapons did not stem from security or deterrence concerns. Rather, it originated from the need to display status and symbolic power, and India’s neglect of delivery vehicles development shows it. As Karsten Frey argues:

According to the widely accepted and officially announced Indian position, this neglect was justified by the nature of nuclear devices as unusable, symbolic elements of political power. Inherent to this attributed symbolism of nuclear weapons is the prioritization of conceptualizing nuclear weapons as devices to demonstrate national power rather than as elements of military power [...] Within India’s discourse on nuclear weapons, neither its relationship with China nor its relationship with Pakistan figured prominently, despite these being the two major strategic targets of India’s nuclear deterrence capability (Frey, 2006a:19-20).

Nuclear weapons, in this instance, symbolised status. It served to show the International Community that India was capable of competing – militarily, but mainly technologically – with the developed States. It did not develop it with intents to deploy it due to security and deterrence concerns. It did so in order to acquire international status. India’s bomb was, thus, a symbol of international prestige, rather than one of security and survival.

The effects of India’s acquisition of nuclear weapons, regardless of the reasons, spilt over in Pakistan. A nuclear-armed India created severe security concerns, as Indian nuclear weapons

were perceived as existential threats to Pakistani survival. Similarly, after 1945 and the US development of nuclear weapons, a Soviet nuclear weapons crash-programme became a “strategic imperative” (Sagan, 1996:58) to the USSR.

Ritchie’s (2010) analysis of the British nuclear condition suggests that prestige plays a more prominent role in the UK’s nuclear policy. The self-identity of a “major world power” (Ritchie, 2010:469) is what keeps the UK from relinquishing their nuclear weapons. Were it not a NWS, it is highly unlikely the UK would pursue nuclear weapons based on security concerns. Ritchie’s argumentation coalesces in the role identity plays in driving national interests.

The form in which we see the world – both ourselves and others – is what shapes how we think and how we attribute roles in this world. Our formative experiences and our symbolic perceptions are defining characteristics of our (self-)identity. Consequentially, this identity is what directs us towards our interests. Symbolism, thus, plays a role in the process of identity formation, which in turn, impacts how one acts. Considering the different rationalities, the shaping of interests is also fluid and conditioned by our perceptions and identity.

Different States – both NWSs and NNWSs – perceive nuclear weapons in different manners. Each State has their own perspective and strategic culture through which the semiotic process of imbuing symbolic value to nuclear weapons occurs. National interest should not be analysed as a set concept formulated inside the opaque black box of the State and taken face value. A multitude of intersubjective factors play a role in the formation of a State’s symbolic perception, identity, national interest, and consequentially behaviour (Johnson, 2008).

Once national interests are shaped and have paved the possible courses of action, they play an influential role in the formulation of new symbolic perceptions, in a cyclical manner (**Figure 8**). A symbolic perception is not replaced by an entirely new one. Rather, it morphs into another, shaped by previous behaviour and interests, which in its turn, were shaped by a previous symbolic perception.

In the mid-late 1940s in the United States, when the symbolic perception of nuclear weapons was associated with scientific and technology prowess, security-based concerns were not completely abandoned or erased. They remained in the background and became visible in talks about developing thermonuclear weapons. The justification of the Working Group of the Special Committee of the National Security Council to move forward with the development of

thermonuclear weapons illustrate how security-based concerns were still present, though in a less prominent role:

The United States military position with respect to the development of the thermonuclear weapon should be: Possession of a thermonuclear weapon by the USSR without such possession by the United States would be intolerable (United States Department of State, 2015:597).

This is only one of the shifts of symbolic perception of nuclear weapons in the US. **Figure 8** illustrates how these shifts evolve throughout time, incorporating new factors – exogenous, such as international political events and developments, or endogenous, such as a new political configuration or priorities – whilst not abandoning old notions of the meanings of a symbol. Although the meaning of nuclear weapons might seem straightforward at first glance, it is anything but. The term ‘nuclear weapons’ is likely to evoke ideas of war, military or conflict, yet there is much more to them. Different actors – whether they are States or individuals – have different views and attribute different meanings to them, and even a single actor can perceive them differently in the future.

To say that nuclear weapons are limited to the role of tools of security is in itself a limited argument. Nuclear weapons are much more than that. Seeing these weapons through symbolic lenses help us understand the multitude of roles they serve and are perceived to serve. The semiotic fluidity of symbols is present even in symbols whose meanings are thought to be fixed or resilient to change, such as nuclear weapons. More than 75 years have passed since the bombing of Hiroshima and Nagasaki. It is naïve to think that symbolic perceptions surrounding nuclear weapons remained unchanged. The meaning attributed to symbols – and their interpretation – are not universal, nor are they perpetual. Given the case study at hand, in the next three chapters I demonstrate how these symbolic perceptions change and how this process takes place. Starting from the first period analysed, Chapter 3 focuses on the aftermath of World War II, but also covers the initial machinations and understandings the US had of nuclear weapons.

3. 1939-1949: The Bomb and the “Greatest Scientific Gamble in History”

On the 6th of August 1945, mere hours after the deployment of the *Little Boy* atomic bomb in the city of Hiroshima, Japan, the White House released an official statement. In it, President Truman discourses on the marvels of the bomb and sees it as a scientific achievement for the United States, rather than focusing on the fact that such bomb would bring forth an immense number of civilian casualties:

Sixteen hours ago an American airplane dropped one bomb [that] had more power than 20,000 tons of T.N.T. It had more than two thousand times the blast power of the [...] largest bomb ever yet used in the history of warfare [...] it is an atomic bomb [...] Before 1939, it was the accepted belief by scientists that it was theoretically possible to release atomic energy. But no one knew any practical method for doing it. [...] We have spent two billion dollars on the greatest scientific gamble in history – and won [...] But the greatest marvel is not the size of the enterprise [...] but the achievement of scientific brains putting together infinitely complex pieces of knowledge held by many men in different fields [...] it is doubtful if such another combination could be got together in the world. What has been done is the greatest achievement of organized science in history (White House, 1945:1-2).

In the end of his statement, President Truman calls for the establishment of a regulatory commission to control the production of use of nuclear power in the United States, given its immense power to “influence world peace” (White House, 1945:3). Three days later, however, the United States would deploy the *Fat Man* atomic bomb on the city of Nagasaki, Japan.

The official statement by President Truman shows a single side of history. Following the truism that “history is only told by the winners”, President Truman deliberately chooses to overlook the social and civil impact such a weapon would and did cause in Japanese society – vestiges of which are still observed today – focusing instead on the military and intellectual prowess of the United States and its endgame ability. It displays a symbolic message of might and certain pride of the US feat, while also showcasing an alleged caution as to the future of nuclear power. From that moment on, humankind entered the nuclear era and with its first display, the United States shaped the first symbolic perceptions of nuclear weapons.

3.1. A (Brief) History of the Manhattan Project

War and conflict are common phenomena in history. The evolution of war has followed the evolution of technology. World War I saw the rise of battle tanks and machine guns in the battlefield. These novelty factors were the result of acute military research and development and represented the state-of-the-art military technology. By that time, the idea of a nuclear weapon was exclusive to science fiction. One year prior to the beginning of World War I, H.G.

Wells wrote *The World Set Free*, a science fiction novel which, for the first time, conceptualised a nuclear bomb. Two decades later, when Otto Hahn and Fritz Strassmann split uranium atoms in Germany, nuclear weapons became less impossible. From that moment on, a nuclear weapon became theoretically feasible and so it started what became the race for the bomb.

In August 1939, before World War II officially started, several scientists that have fled European fascist regimes and emigrated to the United States sent a letter to President Roosevelt alerting him not only of the possibility of nuclear weapons, but also stating their concern over a German bomb. Albert Einstein, Leo Szilard, Edward Teller, and Eugene Wigner, amongst others, shared their belief that Nazi Germany was actively supporting research and development of a nuclear device and that Hitler would be willing to make use of such a weapon, regardless of the consequences. In form of advice, they suggested that Roosevelt began to mobilise, starting a US nuclear project (Gosling, 2005; Kelly, 2007; Reed, 2019; Wellerstein, 2021).

At first, not only Roosevelt, but also Vannevar Bush – Roosevelt’s scientific adviser – dismissed the idea, deeming the idea of nuclear weapons “wild” (Kelly, 2007:20). Nevertheless, Roosevelt did set up a committee to study uranium. Meanwhile, British scientists made progress on their nuclear research, particularly through Otto Frisch and Rudolf Peierls, which culminated in the creation of their own nuclear research group – the MAUD Committee. In 1940, the UK sent a mission to the US – neutral in the war at the time – to cooperate in science and technology. The Tizard Mission, named after Sir Henry Tizard, brought to the US many of the UK’s scientific and technological secrets, including research on the feasibility of a nuclear weapon through the Frisch-Peierls memorandum. The following year, the MAUD Committee concluded that a nuclear weapon was not only feasible, but also its development was urgent. The Tizard Mission galvanised Vannevar Bush to change his opinion and support US research on developing a nuclear weapon, setting the stage for the creation of the Manhattan Project (Rhodes, 1986; Zimmerman, 1995; Gosling, 2005; Kelly, 2007).

The feasibility of the bomb, confirmed by uranium research both in the US and in the UK, the tidings of the war in Europe, and the recurring fears of a German weapon of such nature, particularly since nuclear fission had been discovered in Germany three years prior, fast-tracked the US nuclear project. Vannevar Bush met with Roosevelt in October 1941 to discuss the findings of the MAUD Committee report and at this stage, Bush was already convinced of

the need for a US nuclear project. Roosevelt indicated that he would be able to find a budget to finance it, and allowed Bush to pursue more information about construction, but to stay within the boundaries of research and development, investigating only if a nuclear weapon could be built in the US and at what cost; advancing to the production stage would require further authorisation. Arthur Compton, a US physicist, and Head of the National Academy of Sciences, reported back on November 1941 confirming that a nuclear bomb was indeed feasible, and the cost would be around \$50-100 million. Bush forwarded the report to Roosevelt later that month. In January 1942, when the nation was already at war, Roosevelt replied positively to Bush's plans (Gosling, 2005).

Several paths to build the bomb were explored and in March 1942, Bush sent a progress report to Roosevelt, to which the president replied: "I think the whole thing should be pushed not only in regard to development, but also in due regard to time. This is very much of the essence" (Reed, 2019:159). By the summer of 1942, considering all options and the inability of the committee to highlight a front-runner, all methods were pushed. In July 1942, after rejecting an initial offer for further collaboration, the UK reassessed the situation agreed to merge their nuclear efforts. At last, in August 1942, the Manhattan Project – under the name "The Manhattan Engineer District" – was formally created (Hewlett and Anderson, 1962; Stacey, 1970; Gosling, 2005; Wellerstein, 2021).

The determining factors of the US push to develop nuclear weapons, eventually culminating in the Manhattan Project, are numerous. The US formal entry in the war and the several reports attesting to the feasibility of the enterprise are some; yet, the deciding factor, accompanied by the former, was the mere possibility and belief of a Nazi German nuclear weapon. Fears of Hitler developing a bomb triggered a chain of decision-making processes which expedited the US nuclear programme. The race for the bomb, in its first instance, prior to its actual materialisation, was a matter of security and survival. Despite the fact that there was little information about the stage of a German bomb, the mere possibility of its existence was enough to incentivise the US to act.

The fact was that by mid-1942, before the Manhattan Project officially started, German efforts to develop a nuclear weapon had already waned (Walker, 1993). In his post-war memoirs, Albert Speer – Hitler's Minister of Armaments and War Production – states that Germany's nuclear ambitions faded by the autumn of 1942, since calculations showed that it would take all of Germany's resources to produce a bomb, and it would take an estimate five years (Speer,

1970). In the end, German nuclear research continued solely aiming towards energy production, since the production of a nuclear weapon was impractical at best (Walker, 1993).

The original US and UK predictions from 1941 stated that the US could achieve a nuclear weapon by late 1944. Whilst not accurate, it was a close estimate. Two months prior to the bombing of Japan, the US conducted the Trinity Test – the first ever nuclear weapon test. The weapon had a yield of 19 kilotons (19,000 tons of TNT; a little under the yield of the bomb dropped in Hiroshima the following month) and it became a landmark of the nuclear age. By the end of 1945, the Manhattan Project managed to produce four devices: the Trinity ‘gadget’ – name given to the bomb used in the test – Fat Man, Little Boy, and an additional unused Fat Man bomb (Hewlett and Anderson, 1962).

One of the pillars of the Manhattan Project was secrecy. As the project grew, the Army got involved, and construction received the green light, entire secret cities were created, housing thousands of scientists and their families. At first, reports show that this secrecy proved to be a hindrance to the procurement of intellectual workforce; many scientists were unwilling to abandon their current projects, move to an unknown location and to work on a project whose full scale and purpose they were not meant to know (Kaplan, 2020; Wellerstein, 2021). General Leslie Groves, the man in charge of the Manhattan Project, later wrote that this ‘need-to-know’ basis was key to the entire project’s success (Wellerstein, 2021).

The magnitude of the Manhattan Project was immense. A secret \$2 billion project spanning three years and a number of hidden sites, gathering thousands of workers and producing something that only a selected few fully understood contributed to the idealisation of the development of nuclear weapons being linked to matters of scientific, technological, and industrial status. Despite the fact that, at the time, the technology to develop nuclear weapons was unknown and the tools to make them were far inferior to the ones have today, the Manhattan Project still remains the fastest nuclear project ever undertaken (Wellerstein, 2021).

3.2. *“Now I Am Become Death, the Destroyer of Worlds”*

The Manhattan Project was so significant and the matters of war so pressing that all energy went into the production stage of nuclear weapons, with little thought of political or moral matters involving the bomb. The humanitarian consequences and costs of the militarisation of nuclear fission, despite unknown, could be speculated. Yet, the rhetoric within the Manhattan

Project and US Government was that reaching the bomb (before Germany) was a security need and time was of the essence (Gosling, 2005; Reed, 2019).

On 16 July 1945, in the middle of a New Mexico desert, the world's first nuclear weapon was detonated. Robert Oppenheimer, the Head of the Los Alamos Laboratory and a key figure in the development of the US nuclear weapons, watched the entire affair and later told that, at that moment, a passage from the *Bhagavad Gita* came to his mind: "Now I am become death, the destroyer of worlds". There is heavy speculation regarding the meaning of the phrase, the accuracy of the translation, and more importantly the reason why this fleeting thought came to the mind of the 'father' of the atomic bomb that specific time.

Oppenheimer's famous quote is illustrative of the numerous factors changed by the success of the Trinity Test and, consequently, the Manhattan Project. Years later, Oppenheimer himself explained the context of the quote. In the *Bhagavad Gita*, the deity Krishna talks to Prince Arjuna to fulfil his duty, despite his conflicted state of mind. Arjuna is set to face an army which his family and loved ones are part of. Torn between his sense of duty and his personal feelings, Krishna reveals their true form and speaks the words Oppenheimer thought of. In his own mind, Oppenheimer believes his own sense of duty took over (Pais, 2006).

In that sense, Oppenheimer's actual first words following the test were "it worked" (Kelly, 2006:56), denoting his satisfaction with his success. However, his opinion and feelings towards the results produced by the Manhattan Project seems to be conflicted and quite possibly foreshadowing his future stance on nuclear weapons and nuclear policy. Ten years after the test, Oppenheimer reflected on that day:

It was a success. I believe that in the eyes of the War Department, and other knowledgeable people, it was as early a success as they had thought possible, given all the circumstances, and rather a greater one. There were many indications from the secretary of war and General Groves, and many others, that official opinion was one of satisfaction with what had been accomplished. At the time, it was hard for us in Los Alamos not to share that satisfaction, and hard for me not to accept the conclusion that I had managed the enterprise well and played a key part in its success (Pais, 2006:44).

Oppenheimer does not particularly state that he was satisfied with the production of nuclear weapons, but that it was hard not to feel satisfied, given the sense of accomplishment and overall satisfaction of other parties, such as General Leslie Groves. After the war, noticing the natural course of events, Oppenheimer became an advocate of a form of international arms control. Oppenheimer's opposition of an expansion of US nuclear program after the war raised flags within the US Government, which grew suspicious of him. Due to his political stance on

nuclear policy, fears of Oppenheimer defecting to Russia grew and the FBI wiretapped his house, followed, and monitored him for some time. Nevertheless, Oppenheimer was still appointed to several positions in the Atomic Energy Commission, always fighting US urges to expand its nuclear monopoly and develop hydrogen bombs. His advice was often ignored due to President Truman's desire and predisposition to advance US nuclear development. In the end, Oppenheimer's term as Chairman of the General Advisory Committee of the Atomic Energy Commission expired in 1952, a position to which he was not reappointed, considering his friction with President Truman and the pro-nuclear establishment (Bird and Sherwin, 2005; Young and Schilling, 2019).

The story of Oppenheimer illustrates the many facets and consequences of nuclear development and how the nuclear age fundamentally changed the world. The technical and material aspect of the nuclear revolution was quite clear: nuclear weapons were, in terms of destructive power, on a class of their own. Nothing came close to their power, and this remains true more than 75 years later. Yet, the nuclear revolution also fundamentally changed strategy, statecraft, and warcraft. States could not continue to think of security in the same way (Brodie, 1946; Mandelbaum, 1981; Jervis, 1986; 1989).

After the Trinity Test, when the bombs were ready, US concern turned to matters of publicity and how this new device would be perceived. Alex Wellerstein (2021) discusses precisely how important the discussions on how to relay the information of the existence, power, and significance of the bomb were within US government. As US Secretary of War Henry Stimson argued, the bomb represented not only a new military weapon, but "a new relationship of man to the universe" (Wellerstein, 2021:117). The key message they wished to convey was precisely the magnitude of the nuclear revolution and what it meant for the future of international relations:

[...] the only sane answer to the question posed by nuclear weapons was a radical reconsideration of state sovereignty. Such things would not even be imaginable unless people understood the revolutionary nature of nuclear warfare, and so much stood to be gained and lost from the weapon's first impressions (Wellerstein, 2021:118).

In that sense, the bomb's main impact was political, and the first impressions of the bomb were carefully influenced and crafted by the US. Information management was crucial to fabricate the form in which the bomb was perceived, particularly given its secrecy. Until the actual use of these weapons in Hiroshima and the first statements, in the form of the official White House

statement, the Secretary of War release, and the Smyth Report¹⁶, there was no public information on the bomb (Wellerstein, 2021). The only perceptions of nuclear weapons so far were its theoretical feasibility after the discovery of nuclear fission in 1938. These accounts, thus, were crucial in shaping the first symbolic perceptions of nuclear weapons, which would carry weight for the future of international relations, politics, and security.

This idea is reinforced by the number of discussions within the US Government when it came to the publicity of nuclear weapons. Prior to the bombing of Japan, preparations were made for “Publicity Day” (Wellerstein, 2021:118). In 1944, Vannevar Bush and James Conant discussed the idea of bringing a historian to the Manhattan Project to produce an account of the development of the enterprise. The Smyth Report served as a form of controlling what sort of information was made available and to inform the public regarding the nature of nuclear weapons and what they represented:

This dual purpose—half democratic idealism, half security statement—sat at the heart of all later “Publicity” efforts. For Conant, what mattered most from a security standpoint was the “knowledge of the design, construction and operation of these plants” for producing fissile material, which he considered “a military secret which is in a totally different class from anything the world has ever seen” (Wellerstein, 2021:99).

With the Trinity test a success, *Fat Man* and *Little Boy* ready, and the entire publicity plan settled, the stage was set for the decisions on the actual use of the bomb. President Roosevelt had died in April of that year and Harry Truman, his Vice-President, did not have full knowledge of the details of the Manhattan Project. However, after being briefed, Truman was onboard. The official authorisation to drop the bombs in Japan came on 25 July 1945, when Truman and Stimson approved the order drafted by Groves (Reed, 2019).

The decision to use the bomb is, in itself, shrouded in controversy. J. Samuel Walker (2004) and Gar Alperovitz (1995) write in depth about said controversy, questioning the widespread narrative that the use of the bomb was a difficult decision and that it was opted as a necessary way to end the war. Richard Rhodes (1986) argues that:

The bomb was to prove to the Japanese that the Potsdam Declaration meant business. It was to shock them to surrender. It was to put the Russians on notice and serve, in Stimson's words, as a "badly needed equalizer." It was to let the world know what was coming (Rhodes, 1986:697).

¹⁶ The Smyth Report was a historical account of the Manhattan Project written by Henry DeWolf Smyth, commissioned by Vannevar Bush. For more on the Smyth Report, see Smyth, 1945.

The ‘myth’ that Walker (2004) alludes to is that the only viable option to end the war other than the atomic bombing was an invasion, which would be prolong the war further than needed and it would also cost a significant number of US lives. This notion, however, has stark contrasts with reality. As Walker (2004) argues:

In fact, however, Truman never faced a categorical choice between the bomb and an invasion that would cost hundreds of thousands of American lives. The prevailing perception about the alternatives available to the president, which has become an article of faith among so many Americans, vastly oversimplifies the situation in the summer of 1945 as the Truman administration weighed its options for bringing the Pacific war to an end. The historical evidence makes clear that the popular view about the use of the bomb is a mythological construct for the following reasons: (1) there were other options available for ending the war within a reasonably short time without the bomb and without an invasion; (2) Truman and his key advisers believed that Japan was so weak that the war could end before an invasion began, that is, they did not regard an invasion as inevitable; and (3) even in the worst case, if an invasion of Japan proved to be necessary, military planners in the summer of 1945 projected the number of American lives lost at far fewer than the hundreds of thousands that Truman and his advisers claimed after the war (Walker, 2004:5-6).

Alperovitz (1995) examines personal documents and papers from President Truman and his close allies to contribute to the idea that the main objective for the bombing of Japan was not to end the war, but to create political and security leverage against Stalin. In a journal entry during the Potsdam Conference, Truman wrote:

“I told Stalin that I am no diplomat but usually said yes & no to questions after hearing all the argument. It pleased him. I asked if he had the agenda for the meeting. He said he had and that he had some more questions to present. I told him to fire away. He did and it is dynamite— but I have some dynamite too which I’m not exploding now” (Alperovitz, 1995:240).

Controversies aside, on August 5, 1945, General Curtis LeMay authorised the mission, following reports of a possible weather improvement. The following morning, *Little Boy* was dropped in Hiroshima. Three days later, *Fat Man* was dropped in Nagasaki. The impact of these two weapons was immense. John Hersey (1946) reported the consequences of the bombing of Hiroshima in detail. Less than 24 hours later came the first part of the “Publicity Day”. Truman’s statement “was light on the details of the bombing, but emphasized the spectacular nature of the weapon (Wellerstein, 2021:119)”. Little attention was paid to the humanitarian consequences of nuclear weapons. Instead, as an attempt to control the first impressions and symbolic perceptions of nuclear weapons, the focus was on the scientific gamble and the entire success of the Manhattan Project.

Even prior to Truman's statement and the bombing itself, however, the existence and instrumentalization of nuclear weapons was already dividing opinions. Within the scientific community, some believed that the end product of the Manhattan Project should not be used: "Leo Szilard had dallied with that rationale in 1944 before concluding in 1945 on moral grounds that the bomb should not be used and on political grounds that it should be kept secret" (Rhodes, 1986:697).

Leo Szilard was a key figure in the development of nuclear weapons, one without whom the entire project would, perhaps, never had existed. Apart from Oppenheimer's appeal for international nuclear arms control, Albert Einstein, who alerted President Roosevelt of the possibility of nuclear weapons and urged him to start a nuclear weapons program was another figure whose opinion on the bomb changed. In 1946, Einstein and a several other renowned scientists, including Szilard, created the Emergency Committee of Atomic Scientists, with the purpose of promoting public understanding of atomic energy and its consequences for society. In a telegram dated May 22, 1946, Einstein stated that:

Our world faces a crisis as yet unperceived by those possessing power to make great decisions for good or evil. The unleashed power of the atom has changed everything save our modes of thinking and we thus drift toward unparalleled catastrophe. We scientists who released this immense power have an overwhelming responsibility in this world life-and-death struggle to harness the atom for the benefit of mankind and not for humanity's destruction (Emergency Committee of Atomic Scientists, 1946).

The significance of nuclear weapons was readily accompanied by official discourse with defined goals in mind. These goals involved the portrayal of nuclear weapons in specific ways, for specific purposes. Even the decision to use the bomb – unlike the myth of the categorical decision states – was motivated by subjective reasons other than security and survival. How, then, were nuclear weapons portrayed, and why? Why did the US opt for the bombing of Japan, if this course of action was not strictly and categorically necessary? Nuclear symbolism and the creation and diffusion of symbolic perceptions can help shed light on these issues.

3.3. Of Nuclear Decisions and Nuclear Myths

The decisions to first pursue and then use nuclear weapons, as well as to portray nuclear weapons as the necessary and decisive winning weapons of World War II had different motivating reasons behind them. The difference between this reasoning behind the two major decisions on nuclear policy reveal the first cycles of the evolution of nuclear symbolism – from the fears of a German nuclear weapons programme fomenting the need for the Manhattan

Project to the decision to use nuclear weapons at a stage where said threat was no longer present and the war was all but won. The entry and first years of the nuclear age reveal how the US nuclear identity is first constructed, drawing from wartime and post-war elements.

When nuclear fission was discovered in 1938, nuclear weapons left the fictional plane and moved towards the realm of theoretical possibility. As the Second World War progressed and Germany, displaying its military success, advanced, so did the prospects and fears of a German nuclear weapon – particularly considering that nuclear fission was discovered in Germany. From that moment on, nuclear weapons went from theoretical possibility to a necessary survival tool.

Against the backdrop of a scenario of war, this possibility of the development of such powerful weapons was rational. Nuclear weapons are still, to this day, a source of insurmountable destruction; at that time, the magnitude of the power of nuclear weapons was, perhaps even more glaring. Nevertheless, considering the major driving force of humankind – survival – the morality or disproportionality of such weapons was not a priority. Otto Frisch later discussed the reasons why he chose not to abandon the project of developing nuclear weapons:

““I have often been asked,” Otto Frisch wrote many years afterward of the moment when he understood that a bomb might be possible after all, before he and Peierls carried the news to Mark Oliphant, “why I didn't abandon the project there and then, saying nothing to anybody. Why start on a project which, if it was successful, would end with the production of a weapon of unparalleled violence, a weapon of mass destruction such as the world had never seen? The answer was very simple. We were at war, and the idea was reasonably obvious; very probably some German scientists had had the same idea and were working on it.” (Rhodes, 1986:235).

There were, at the time, plausible reasons to believe Germany was developing their own nuclear project in secrecy. Had that been the case, if successful, it could have changed the outcome of the war. Therefore, the only perceived hope for the Allies was to fast-track their own nuclear weapons project. Nuclear weapons had just been deemed ‘theoretically possible’ yet their reality was already a requirement and their materialisation was not needed for them to be perceived as a symbol of survival. As a result, the first set of ideas regarding nuclear weapons starts to take shape. Under the shadow of fear, these ‘science fiction weapons’ became a solution, and slowly started to be perceived as tools of security and, consequently, survival.

Einstein, Szilard, Teller, and Wigner’s concerns over a potential German nuclear weapons programme planted the seeds not only of the Manhattan Project, but also of the construction of meaning of nuclear weapons, prior to their existence. When Szilard and Einstein learnt from

émigré physical chemist Peter Debye that the Kaiser Wilhelm Institute had been conducting research on uranium, their efforts to emphasise the necessity for a US nuclear weapons programme became accentuated (Rhodes, 1986).

Corroborating to the urgency of the situation and, consequently, to the consolidation of nuclear weapons' symbolism around survival, Niels Bohr met with Werner Heisenberg in Denmark in 1941 and both physicists discussed the "uranium problem" (Rhodes, 1986:384). While both Bohr and Heisenberg were renowned physicists and Nobel laureates, the first was strongly against the Nazi regime, while Heisenberg was in charge of the German nuclear weapons programme. Despite the lack of decisive claims, Bohr left the meeting under the impression that Germany had made significant progress in the development of nuclear weapons (Rhodes, 1986). Two years later, Bohr fled occupied Denmark and joined the British delegation of the Manhattan Project.

The Manhattan Project pushed the limits of scientific development, particularly considering that it was undertaken in wartime. It was precisely because of this fact and the factor of fear that the Manhattan Project managed to achieve the highest levels of success. Richard Rhodes's (1986) account of the development of nuclear weapons show how Szilard was extremely anxious about the thought of a German nuclear weapon. Vannevar Bush's conviction played an important role in fast-tracking the project. Lyman Briggs, who was appointed by Roosevelt in 1939 to direct the Advisory Committee on Uranium – the first effort to investigate nuclear weapons development – did not seem to share Bush and Szilard's sense of urgency on the matter. In 1941, Bush managed to take control of the Committee from Briggs and from that point on, the project advanced at a faster pace (Wellerstein, 2021).

In truth, despite the fact that the Manhattan Project was a fruit of security and survival concerns, scientists enjoyed the opportunity to come together and work on their own theories and research:

"[...] progress went forward, in large part because of the presumed threat posed by Germany's atomic energy program, but for other reasons as well. For one thing, the Manhattan Project presented these same scientists with an extraordinary opportunity to test their theories and to develop new ones while working side-by-side with the top people in their fields. "It was a heroic period of our lives, full of the most exciting problems and achievements," recalled one participant. "We worked within an international community of the best and most productive scientists of the world, facing a stupendous task fraught with many unknown ramifications" (Williamson and Rearden, 1993:6-7).

At this point, there was a trade-off between the freedom of academic research and investment. On the one hand, the scientific community, who was accustomed to a certain degree of freedom to conduct their work and pursue their research interests, was now bound to a joint task and taking orders from the military (Williamson and Rearden, 1993). On the other hand, considering the dire situation, the US government was sparing not expenses in regards to nuclear weapons research and development (Gosling, 2005).

Up until this point, the perceived symbolism of nuclear weapons was centred on their military value and material capability. They were seen as the ultimate weapons of war which, should they be developed by the enemy, the consequences would be catastrophic. It was this fear that ultimately led the US to start the Manhattan Project. The development of nuclear weapons was considered crucial. However, with the magnitude and (posteriorly acknowledged) prestige of the Manhattan Project, its product – nuclear weapons – absorbed the status that was associated with the scientific endeavour. Nuclear weapons were no longer merely a tool of security, essential for US (and the Allies’) survival in the war; nuclear symbolism started to incorporate ideas of prestige from the Manhattan Project, morphing into a status-based symbolism and the shaping of a strong first nuclear identity.

The Manhattan Project was an extraordinary venture for several reasons. First and foremost, for its final product. Developing a nuclear weapon in so little time after it was deemed possible is a remarkable accomplishment. However, it was more than that. It was the creation of a new class of weapon, one so powerful that trumps the discovery of gunpowder and the invention of firearms in terms of its revolutionary potential. When the Emergency Committee of Atomic Scientists (1946) declared that “the unleashed power of the atom has changed everything” it was no exaggeration. The destructive power of nuclear weapons is so immense and the humanitarian consequences so grotesque that they turn Hersey’s (1946) account of the effects a genuinely difficult read.

Second, and perhaps more impressive, was how long it took to accomplish that. Before the creation of the Manhattan Engineer District, the assumption was that even though nuclear weapons were viable, it was improbable that they would be ready for the war: “[Arthur] Compton’s group thought that increased uranium funding could produce radioactive material that could be dropped on an enemy by 1943, a pile that could power naval vessels in [1944 or 1945], and a bomb of enormous power at an indeterminate point, but certainly not before 1945” (Gosling, 2005:8). The Advisory Committee on Uranium was created in August 1939 and the

initial research to discuss construction of the industrial sites and the costs was authorised by Roosevelt in October 1941. The Manhattan Project officially started on 13 August 1942 and less than three years later, on 16 July 1945, the Trinity Test – the first successful nuclear weapon test – was conducted. The Manhattan Project is still the fastest nuclear weapons programme in history, despite having no prior blueprint or role models to follow.

Third, the project was a prime example of international cooperation. The turning point of US decision to pursue nuclear weapons came after a report from the British MAUD Committee of 1941 and the Manhattan Project was, after all, an international project, pulling resources from many countries, mainly the United Kingdom and Canada (Rhodes, 1986; Gosling, 2005). Fourth, it was all to be done in secrecy. As Wellerstein states:

They were trying to keep the secret not merely from the Axis powers, but also from all US allies except the United Kingdom, as well as the national and international presses, the American Congress, and, to various degrees, nearly every- one who was working on the project itself, whose “need to know” extended only as far as necessary to do their direct jobs (Wellerstein, 2021:51).

There are multiple facets of ‘greatness’ in the Manhattan Project, and the massive work and coordination of people in different lines of work, from different countries – most of them not knowing the purpose of their work – resulted in the first nuclear weapon in history. Nuclear weapons were already conceived in ‘greatness’, not only material, but also symbolic. That it outclassed any other type of weapon or military technology was obvious, but the outcome of the Manhattan Project was more than that. Nuclear weapons symbolised the impressive achievement of the project, a demonstration of clear-cut intellectual and scientific superiority.

In the first official statement from the White House after the bombing of Japan, in 1945, President Truman stated that the US had won the “battle of the laboratories” and the achievements of the Manhattan Project were likened to military victories: “The battle of the laboratories held fateful risks for us as well as the battles of the air, land and sea, and we have now won the battle of the laboratories as we have won the other battles” (White House, 1945).

The significance of the symbolic value of nuclear weapons became even more visible considering the latter portion of the war. The spark that ignited the entire enterprise of the US nuclear weapons programme was fear. Nuclear fission had been discovered in Germany before the war and it was precisely the fear that Germany was not only developing their own nuclear weapons, but also had the upper hand that contributed to the Manhattan Project. However, Germany seemed to have abandoned any nuclear ambitions for the war even before the creation

of the Manhattan Project. Albert Speer met with Heisenberg to discuss the possibility of a German nuclear weapon and the result was not promising:

“He declared, to be sure, that the scientific solution had already been found [...] But the technical prerequisites for production would take years to develop, two years at the earliest, even provided that the program was given maximum support” (Rhodes, 1986:404).

Speer offered to provide all materials and resources necessary to advance nuclear research, but considering Heisenberg’s response, Speer became convinced that nuclear weapons were not feasible for the war. Speer revealed that although he spoke often with Hitler, nuclear weapons was not a frequent subject and that he did not seem to believe in their feasibility or utility for the war:

Hitler had sometimes spoken to me about the possibility of an atom bomb, but the idea quite obviously strained his intellectual capacity. He was also unable to grasp the revolutionary nature of nuclear physics. In the twenty-two hundred recorded points of my conferences with Hitler, nuclear fission comes up only once, and then is mentioned with extreme brevity. Hitler did sometimes comment on its prospects, but what I told him of my conferences with the physicists confirmed his view that there was not much profit in the matter (Speer, 1970:227)

It is clear that the US had no idea of the state of German nuclear research and projects. In 1944, however, the Anglo-American *Alsos Mission*, created to gather intelligence on the state of German nuclear research and development, reported that Germany did not intend to, or at the very least, was not close to developing nuclear weapons:

Based on interviews, records of production at the recently liberated Union Minière plant in Belgium, and files from the physics labs at the University of Strasbourg, the investigation concluded that the German program had remained research-oriented since 1940, and that it would be months, if not years, before Germany had a bomb (Williamson and Rearden, 1993:10).

At this point, the US had the intelligence that Germany was not actively pursuing a nuclear weapon. Samuel Williamson and Steven Rearden (1993) argue that many high echelon scientists (who were aware of goal of the Manhattan Project) felt that there was no need to continue, particularly those who had moral issues with the work being done. Many scientists were Jewish or European émigrés, seeing in the possibility of a Nazi German nuclear weapon the main motivation to support the Manhattan Project.

Furthermore, by the time the Trinity Test was conducted, Germany had already surrendered. The official German instrument of surrender was signed two months prior, on May 8, 1945. At that point, only Japan remained, but the war was all but over. For decades after the war, the consensus was that nuclear weapons were not only decisive factors for Japan’s surrender, but

also that they were necessary to accomplish that (Wilson, 2007). However, a revisionist approach would argue against both widespread, crystalised assumptions.

Alperovitz (1995) conducted a thorough study of the US decision to use nuclear weapons in Hiroshima and Nagasaki, arguing that the bomb was by no means necessary for Japan's surrender and to end the war. Admiral William Leahy, Truman's Chief of Staff, broke the traditional silent conduct and voiced his opinion on the nuclear bombing: "It is my opinion that the use of this barbarous weapon at Hiroshima and Nagasaki was of no material assistance in our war against Japan. The Japanese were already defeated and ready to surrender" (Leahy, 1950:441). Leahy was not the only official to condone the US decision. Dwight Eisenhower – the Supreme Commander of the Allied Expeditionary Force during the war and who would be elected US President in 1952 – also spoke against the use of nuclear weapons, voicing his concerns directly to Secretary of War Henry Stimson:

[...] I had been conscious of a feeling of depression and so I voiced to [Stimson] my grave misgivings, first on the basis of my belief that Japan was already defeated and that dropping the bomb was completely unnecessary, and secondly because I thought that our country should avoid shocking world opinion by the use of a weapon whose employment was, I thought, no longer mandatory as a measure to save American lives. It was my belief that Japan was, at that very moment, seeking some way to surrender with a minimum loss of "face" (Eisenhower, 1962:312-313).

It is important to highlight a few aspects of these passages. Leahy (1950) called nuclear weapons "barbarous". In contrast, the Manhattan Project is often regarded – and actively portrayed through official discourse, such as Truman's post-Hiroshima statement – as a "marvel" (White House, 1945). This disparity is even more significant considering Leahy's position as Truman's close friend and Chief of Staff (Alperovitz, 1995). When it became known that Germany was not on the brink of producing a nuclear weapon, many Manhattan Project scientists believed that there was no longer a need for their pressing work. However, Leahy's and Eisenhower's statements show that not even inside the *petit comité* of US decisionmakers and the military there was no consensus on both the morality of nuclear weapons and their necessity. Labelling the product of a scientific "marvel" as "barbarous" is notable. Barbarous alludes to primitiveness, while the Manhattan Project was portrayed as heroic.

Secondly, Eisenhower's conversation with Stimson shows that the question of necessity of the bomb was also not consensual. Alperovitz (1995:4) argues that the idea that the bomb was essential for the end of the war became even more fragile when a study published by the US

Strategic Bombing Survey concluded that “Japan would likely have surrendered in 1945 without atomic bombing”. It was not solely Eisenhower’s beliefs anymore. There were scientific indications corroborating with an assumption that many seemed to share: there was no military need to drop nuclear weapons on Hiroshima and Nagasaki.

Based on this first-hand evidence and the official non-confidential statements from government officials, one should expect a stream of criticism regarding the use of nuclear weapons in Japan. Once established that there were alternatives and that the country’s surrender was already being discussed in Japan, why did the majority of the US public believed – and continues to do so – that the nuclear weapons were necessary and their use justified? Probing into this question, Alperovitz (1995) concludes that the main reason is the creation of – and quasi-blind belief in – a myth of necessity, reinforced by the discourse and endorsement of “highly respected public figure[s]” (Alperovitz, 1995:447), such as Secretary of War Henry Stimson, James Conant, and President Truman himself.

Despite its limited reach and adherence, criticism of the US decision to bomb Japan existed. Most of it revolved around the same issues: nuclear weapons were immoral, unnecessary, unwarranted, and should not have been used. At most, there should have been a public demonstration of their power to allow Japan to surrender in time. Many public personalities, including radio commentators, magazine editors, and religious organisations launched attacks on the US decision. David Lawrence, owner of the *United States News* wrote that “the United States should be the first to condemn the atomic bomb and apologize for its use against Japan” (Alperovitz, 1995:439), while the Federal Council of Churches issued a report stating that:

[T]he surprise bombings of Hiroshima and Nagasaki are morally indefensible [...] Nagasaki was bombed [...] without specific warning, after the power of the bomb had been proved but before the Japanese government and high command had been given reasonable time to reach a decision to surrender (Alperovitz, 1995:441).

James Conant, chair of the National Defense Research Committee and deputy director of the Office of Scientific Research and Development – and a key figure for the Manhattan Project – became increasingly worried about not only the criticism but also the flow of evidence suggesting the lack of necessity to use nuclear weapons, such as the publication of the US Strategic Bombing Survey. As a response, Conant decided to strike back, employing authority figures to reinforce the argument that nuclear weapons were indeed crucial to end the war. As a result, Stimson – with the help of McGeorge Bundy and Conant – published an article in 1947 defending the use of nuclear weapons in Japan, stating that its use prevented “over a million

[American] casualties” (Stimson, 1947). From that point on, the myth of the role of nuclear weapons in World War II – what Alperovitz (1995:515) calls the “Hiroshima Myth” – was created.

The article was a success, and its core arguments were hardly contested. The justification that nuclear weapons were necessary to save more than one million lives became widely accepted, striking a chord with the US population. An entire generation of soldiers – and their families and friends – were dogmatically told that their lives were spared because of nuclear weapons (Alperovitz, 1995). Furthermore, the Hiroshima Myth was convenient. It was easy to accept a narrative that does not portray you as a villain – or as Leahy would say, as a ‘barbarian’. The Hiroshima Myth became widely accepted, despite the fact that there was no factual or scientific evidence of the most important piece of information upon which the entire myth stands: “over a million casualties”.

In one of Truman’s first public statements regarding nuclear weapons, his figures greatly deviated from the ones given by Stimson – and accepted by the mass media and the population. In his statement, dated August 9, 1945 and addressed to the contributors of the Manhattan Project, Truman (1945d) mentions that “this new weapon will result in the saving of thousands of American lives”. In the following years, this number fluctuated considerably.

In December 1945, Truman said that the bomb saved “a quarter of a million of the flower of our young manhood” (Truman, 1945c); four years later in April 1949, Truman stated: “I thought 200,000 of our young men would be saved by making that decision, and some 3[00,000] or 400,000 of the enemy would be saved by making that decision” (Truman, 1949b). That same year, Truman said that he asked his military advisors about the casualties of a US invasion – an alternative to the nuclear bombing. To that question, his advisors replied that “it would take a million men for the landing and a million to hold it and that he thought such a landing would involve half a million casualties” (Truman, 1949a).

Most striking, however, is the exchange between Truman and Professor James Cate in 1953. Truman was asked by Cate about the decision to authorise the nuclear attack. Truman’s draft response, dated December 31, 1952, stated that regarding the casualties of an invasion, “1/4 million casualties would be the minimum cost as well as an equal number of the enemy” (Truman, 1952). Before the reply was sent, a White House aide noticed an inconsistency that could harm Stimson’s narrative and brought it to Truman’s attention in January 1953:

In your draft, you state that General Marshall told you that a landing in Japan would cost a quarter of a million casualties to the United States, and an equal number of the enemy. Mr. Stimson, in his book written by McGeorge Bundy, says that Marshall's estimate was over a million casualties. Your recollection sounds more reasonable than Stimson's, but in order to avoid a conflict, I have changed the wording to read that General Marshall expected a minimum of a quarter of a million casualties and possibly a much greater number—as much as a million (Lloyd, 1953).

As a result, Truman simply adjusted the figures to validate Stimson's arguments, with no thorough regards to historical accuracy. As Alperovitz (1995:518) argues,

Although neither Hechler nor Lloyd seems to have checked any actual records of casualty estimates [...] and although Stimson's estimate appears to have had no documentary basis whatsoever [...] Truman approved Lloyd's revision as if it were historical fact. A photostatic copy of the final version of the president's letter was reproduced and published as an authoritative source in the official U.S. Army Air Forces history (Alperovitz, 1995:518).

It is important to note that these figures are all far from being facts. Truman and his military advisers could have their opinion and guesses regarding the number of casualties, but to treat them as undisputed facts is inaccurate. Barton Bernstein, for instance, states that the casualties of a US invasion would be fewer than 20,000 (Bernstein, 1986). Nevertheless, this led not only to a more significant impact on the public's acceptance of the bomb, but also the coordinated figures gave the Hiroshima Myth an increased sense of veracity and reliability.

In the end, not only did the Manhattan Project was deliberately portrayed as a scientific marvel and unparalleled show of technological prowess, but so did the decision to use nuclear weapons in Japan with no prior public 'warning' test was portrayed as a heroic act to save more than one million American lives. Although less consensual, the Hiroshima Myth still stands, and its reach extends beyond US territory.

These two policies had far-reaching consequences, casting long shadows on the future of US nuclear policy. The attribution of a symbolic meaning related to the laurels of the Manhattan Project, as well as the victory in the war to nuclear weapons set the stage for the construction of a status-based nuclear identity, differing from the tenets that led to the decision to develop nuclear weapons.

3.4. From Symbols of Hope to Symbols of Power

The factors that culminated in the development of nuclear weapons had a direct influence in the first symbolic perceptions of nuclear weapons. Security concerns and fear of an enemy nuclear weapons which would indubitably threaten US survival shaped what nuclear weapons

first came to represent. Because of this necessity to acquire nuclear weapons (first) to guarantee a significant advantage in the war, these weapons symbolised the most crucial path towards survival. Without them, the US – and the Allies’ – chances of winning the war would, it was believed, would drastically decrease.

The anxiety of Szilard, Einstein, and the rest of the prominent scientists that urged Roosevelt to consider nuclear research showcases this perception. Rhodes’s (1986) work on the history of the US nuclear weapons programme depicts these notions quite clearly. It must also be taken into account that the war scenario pushed these notions further. When existential threats are identified, measures to remedy such threats do not operate within the boundaries of traditional politics; rather, they are elevated to an arena above politics (Buzan *et al.*, 1998). In the case at hand, the existential threat of potential German nuclear weapons contributed to these symbolic perceptions and fuelled the Manhattan Project:

From the outset of the Manhattan Project, the chief motivating factor of all involved, from Roosevelt on down, was the status of nuclear research in Nazi Germany. With as much as an IS-month lead, the Germans were presumably well ahead of the United States in the "race" for the atomic bomb and would pose an unthinkable threat to Western civilization if they succeeded in developing it first (Williamson and Rearden, 1993:10).

Until then, despite nuclear weapons being attributed the meaning of the war’s saving grace, they retained the prominence of their material capabilities: nuclear weapons were the salvation because of their destructive power and capacity to significantly turn the tide of the war. The main driver of the Manhattan Project and the entire US nuclear weapons programme, however, lost traction when intelligence showed that such a threat did not exist or, at the very least, was largely overestimated. When the reports from the *Alsos Mission* showed the current stage of a German nuclear weapons programme was “still on an academic scale” (Goudsmit, 1947:70), questions over the necessity to continue the work of the Manhattan Project started to arise, particularly amongst those with previous moral qualms with nuclear weapons. When Germany surrendered – more than one month prior to the Trinity test – the reasons for the decisions to develop nuclear weapons became more fragile and arguably no longer justifiable. From that point on, the meaning of nuclear weapons shifted and the initial signs of the construction of a US nuclear identity start to take shape.

After the Trinity Test, at a stage where Germany had surrendered and Japan was on the verge of following suit, there was arguably no military need for nuclear weapons any longer (Williamson and Rearden, 1993; Alperovitz, 1995; Wilson, 2007). However, the US had just

spent billions of dollars to produce a weapon which just missed the correct timing to be used as it was designed. The methods and the accomplishments of the Manhattan Project did not go unnoticed after the war. In fact, in Truman's first statement after the bombing of Hiroshima focuses almost entirely on the scientific achievement that had just been concluded in secrecy, despite the severe impacts that nuclear weapons brought to Japanese civilians and other humanitarian and environmental consequences. Even at first glance, it is already possible to see clearly in what light nuclear weapons are being presented:

[...] That bomb had more power than 20,000 tons of T.N.T. It had more than two thousand times the blast power of the British "Grand Slam" which is the largest bomb ever yet used in the history of warfare [...] With this bomb we have now added a new and revolutionary increase in destruction to supplement the growing power of our armed forces [...] It is an atomic bomb. It is a harnessing of the basic power of the universe. The force from which the sun draws its power has been loosed against those who brought war to the Far East. Before 1939, it was the accepted belief of scientists that it was theoretically possible to release atomic energy. But no one knew any practical method of doing it. By 1942, however, we knew that the Germans were working feverishly to find a way to add atomic energy to the other engines of war with which they hoped to enslave the world. But they failed [...] The battle of the laboratories held fateful risks for us as well as the battles of the air, land and sea, and we have now won the battle of the laboratories as we have won the other battles [...] The United States had available the large number of scientists of distinction in the many needed areas of knowledge. It had the tremendous industrial and financial resources necessary for the project and they could be devoted to it without undue impairment of other vital war work [...] We have spent two billion dollars on the greatest scientific gamble in history – and won. But the greatest marvel is not the size of the enterprise, its secrecy, nor its cost, but the achievement of scientific brains in putting together infinitely complex pieces of knowledge held by many men in different fields of science into a workable plan. And hardly less marvelous has been the capacity of industry to design, and of labor to operate, the machines and methods to do things never done before so that the brain child of many minds came forth in physical shape and performed as it was supposed to do. Both science and industry worked under the direction of the United States Army, which achieved a unique success in managing so diverse a problem in the advancement of knowledge in an amazingly short time. It is doubtful if such another combination could be got together in the world. What has been done is the greatest achievement of organized science in history. It was done under high pressure and without failure [...] The fact that we can release atomic energy ushers in a new era in man's understanding of nature's forces [...] I shall give further consideration and make further recommendations to the Congress as to how atomic power can become a powerful and forceful influence towards the maintenance of world peace (White House, 1945).

There is no official number of Hiroshima casualties. The Chief Medical Officer of the Manhattan Project, Colonel Stafford Warren, even stated that he was “embarrassed by the fact [...] that we could not come back with any definitive figures that I would be able to say were more than a guess” (United States Special Committee on Atomic Energy, 1946). Despite the lack of consensus, an estimate 100,000 (out of a 255,000 population) died as a result of *Little*

Boy (Wellerstein, 2020). Hersey's (1946) accounts of the on-the-ground effects of the nuclear bombing reveal the true reality of nuclear weapons. Yet, Truman's statement makes no mention, let alone any acknowledgement of the gruesome humanitarian consequences of his decision. Instead, the discourse sculpts and imprints the desired symbolic perceptions of nuclear weapons. In the same fashion the US crafted a discourse to guarantee popular support of its nuclear policy and to steer the population clear of crucial data that threatened said discourse (through Stimson's article on the necessity of nuclear weapons), Truman's statement was a significant step in this direction, but also geared towards the international community.

US official discourse on nuclear weapons portrayed them as symbols of power. Not only power in the material sense, but on the symbolic sense. The material aspects of nuclear weapons were clearly showcased in Japan, instantly elevating them to a class of their own. However, this notion was already established during the research stage of the Manhattan Project, when the fears of a German weapon of such magnitude was the driving force of the US nuclear weapons programme. The novelty comes from the symbolic facet of nuclear weapons and what they represented.

Truman's statement heavily emphasises the scientific achievements of the Manhattan Project, but more importantly, the achievements of the US. To be able to achieve something that not so long ago was not even deemed possible is a clear sign of US scientific and technological superiority. The US had won the "greatest scientific gamble in history". In successfully developing nuclear weapons, the US attained new levels of military power, but also symbolic power. Nuclear weapons became the symbol of US clear-cut superiority both in terms of military prowess, but also intellectual capacity. After all, the US had "had available the large number of scientists of distinction in the many needed areas of knowledge. It had the tremendous industrial and financial resources necessary for the project" while the Germans "failed" to do so, despite having an early start with their pioneering research on nuclear fission back in 1938.

The bomb granted the US a special status, which was claimed through the discourse on and portrayal of the bomb. Nuclear weapons and the Manhattan Project were the proof that the US perceived itself as "the strongest country in the world" (Truman IN: Alperovitz, 1995:252), capable of using such a weapon "towards the maintenance of world peace" instead of a means to "enslave the world", as Truman mentioned the Germans would. Nuclear weapons became

justifiable if in ‘righteous’ hands.¹⁷ For that effort, Truman’s statement was crucial, being the first discourse on a novelty that would completely change international relations and international politics.

When Japan was bombed, most of the world had no idea what nuclear weapons were. There were no preconceived notions of what they represented, whether they were ‘good’ or ‘bad’, or how relevant they were. Apart from a few mentions in works of science fiction, the semiotic spectrum of nuclear weapons was uncharted territory, a *tabula rasa*. It was up to those who created them to sculpt it, imprinting the first notions of what these objects were and how one should feel about them. The beginning of Truman’s statement addresses that, with vivid descriptions of what nuclear weapons were and how they compared to other known weapons:

[...] That bomb had more power than 20,000 tons of T.N.T. It had more than two thousand times the blast power of the British "Grand Slam" which is the largest bomb ever yet used in the history of warfare [...] It is an atomic bomb. It is a harnessing of the basic power of the universe. The force from which the sun draws its power (White House, 1945).

More important, however, is how Truman describes the path towards achieving such a weapon. The Manhattan Project is relentlessly praised, described as “the greatest achievement of organized science in history”, and as “the greatest scientific gamble in history”. It invariably granted nuclear weapons the same sense of greatness, creating something that it was only deemed possible a few years prior, but “no one knew any practical method of doing it”. In a period of little over three minutes – the duration of Truman’s broadcasted speech – the world was told what nuclear weapons were, how powerful they were, how impressive the entire process of creating them – in wartime and in secrecy – was, and how they were responsible for winning the war.

It is hard to create a negative image of nuclear weapons when key facts were omitted, such as their humanitarian impact, the debate on the state of Japan’s war efforts, questioning the necessity and the role of the bomb in changing the tides of the war. If most of the world is still sold on the Hiroshima Myth more than 75 years later, it is no surprise that, at that time, Truman’s discourse successfully managed to attribute to nuclear weapons this idea of power, not only military, but also symbolic. The symbolic perceptions of nuclear weapons that drove the US towards the Manhattan Project – nuclear weapons as a necessity and as symbols of survival, in fear of a German bomb – evolved into a general symbol of power. The idea of

¹⁷ In 1959, when asked about the bomb, Truman said that it was a “powerful weapon in the arsenal of righteousness” (Alperovitz, 1995:514).

necessity and survival was still present in the new constructed symbolism, and they were explicitly mentioned, yet the new layers of nuclear symbolism – that of status and scientific greatness – were implicitly introduced. Based on this shift in symbolic perception of nuclear weapons and their sculpted meaning, a nuclear identity was constructed.

3.5. The Construction of US Nuclear Identity

The shift in the US symbolic role of nuclear weapons walks alongside the construction of the US nuclear identity. In 1945, the US became the first state to successfully develop nuclear weapons. In doing so, it was in a unique position to shape the discourse around these weapons and, consequently, their symbolic perceptions. Nuclear weapons became symbols of power, not only military, but also technological, scientific, and intellectual. The semiotic construction of nuclear weapons granted the US the status of being the first nation to accomplish what no other could, and whose feat won the war. Until 1949, the US was the only nation to possess these esteemed weapons. This period of ‘nuclear monopoly’, combined with the constructed symbolic perceptions of nuclear weapons became the two pillars of what eventually became the first iteration of US nuclear identity.

As discussed in Chapter 2, the concept of identity in IR scholarship is subject of latent debate. Lebow (2016) argues that it is difficult to establish causal relationship between identity and behaviour since identity is multifaceted. Indeed, identity is a plural concept and a single actor – be it an individual or a state – develops and cultivates multiple identities. For this reason, I do not talk about identity in the broad sense; rather, I focus on one of these facets of an actor’s identity. In this case, I analyse what I call nuclear identity.

Based on Lebow’s (2016) criticism of the analytical pitfalls of the concept of identity in IR, I limit my application to the nuclear arena. Nuclear identities, as explained in more detail in Chapter 2, encompass a set of understandings an actor has and portrays of itself regarding in relation to others within the nuclear architecture. The focus is on its role on said domestic and international structures regarding nuclear policy and strategy; how it understands its part within these overarching structures, and how it conveys this understanding to others. Identities, thus, serve to establish and consolidate ideas an actor wants attributed to them.

When Truman presented nuclear weapons to the world and acted to take control of what they would represent, he made sure to convey the idea that these weapons were: 1) the most powerful devices ever created; 2) the most impressive feat of science; and 3) a vital factor for

the maintenance of peace in the future. These messages are explicitly mentioned. What was not so explicitly mentioned was the fact that these weapons were only made possible by the technological and intellectual might of the US. The sculpted nuclear symbolism based on notions of status and (symbolic) power served as a bridge to a nuanced spread and consolidation of the desired self-perceived role the US wished to instil in the world: the US was the most developed nation, had the most powerful military industry, and the most advanced technoscientific capability. In short, the US was “the strongest country in the world” (Truman IN: Alperovitz, 1995:252).

Another important factor that encompasses these new ideas around nuclear weapons is that they were only made possible under stern US leadership. Despite the fact that the Manhattan Project pulled resources from many States and it actually started because of British research, the US came out as the first nuclear power, able to shape the discourse around nuclear weapons – constructing their initial symbolic perceptions – and to establish for itself the role of major winning power of World War II and guarantor of peace.

One of the first factors that led to the creation of the US nuclear identity was the overall result of the Trinity Test. The Groves Report of 18 July provided a detailed account of the success “beyond the most optimistic expectations of anyone” (Groves, 1945). Groves included in the report the description of Brigadier General Thomas Farrell, which mentioned that the explosion:

[...] warned of doomsday and made us feel that we puny things were blasphemous to dare tamper with the forces heretofore reserved to The Almighty. Words are inadequate tools for the job of acquainting those not present with the physical, mental and psychological effects. It had to be witnessed to be realised (Groves, 1945).

General Farrell’s religious language to describe the test stands out, particularly considering Truman’s own words comparing the magnitude of the bomb to Noah’s Ark: “It may be the fire destruction prophesied in the Euphrates Valley Era, after Noah and his fabulous Ark” (Truman, 1945a). In the original statement after the bombing of Hiroshima, Truman makes a clear distinction between nuclear weapons in US possession – to be used to “influence world peace” – and under German control, which would be used to ‘enslave the world’. Years later, in 1959, Truman would again evoke the notion of religious righteousness by affirming that the bomb was a “powerful weapon in the arsenal of righteousness” (Alperovitz, 1995:514). Religion would eventually play a significant role in the Cold War, creating a further separation of ideological values between the emerging superpowers.

The choice of words and the discourse around them help establish the idea that nuclear weapons are not evil – when in the hands of a righteous nation. It contributes the consolidation of US identity, shaped around Christian values and notions of ‘good’. Seyla Benhabib (1996:3) wrote that “identity politics is always and necessarily a politics of the creation of difference”. One defines what oneself is by affirming what it is not. This dichotomy reinforces the ideas one wishes to portray in its identity. To this end, Truman’s statement creates a clear separation between what nuclear weapons represent in the hands of those who are righteous and those who are not.

Nuclear weapons became tools of identity affirmation. Within the concept of US nuclear identity, the US presents itself as the lead: not only was the US the only possible nation to have achieved this outstanding scientific endeavour, but also the US was the ‘right’ nation to harness its power to influence and enforce world peace. The idea stemming from Truman’s speech that nuclear weapons maintain peace was founded upon a lie¹⁸ – or a gross exaggeration, to say the least; yet its reach extends to and dominate current scholarship on nuclear security to this day, demonstrating the degree of influence a first discourse on a novel, unknown idea or object has on shaping symbolic perceptions of it, as well as the level of success the US achieved in consolidating its role as a legitimate and responsible nuclear power.

The Groves Report was the confirmation that the US needed to end any and all doubts regarding their power and status aspirations and interests which served as the foundation for their nuclear identity. Nuclear weapons were the means to an end, just not the one it was portrayed to be. The US had just broken new scientific and military grounds. Rather than end the war, nuclear weapons were the ultimate means to power – symbolic and material – and prestige.

As a result, US nuclear identity was built to reflect these interests; as Wendt (1992:398) argues, “identities are the basis of interests”. It was in the US’s best interest to create and maintain the role of major power in the post-war context, and the formation of a nuclear identity of sole nuclear power as a branch of US national identity was vital. There would be little room to challenge this notion considering the symbolic meaning and power of nuclear weapons and US nuclear monopoly. It was important for the US to consolidate its identity as a legitimate superpower and nuclear weapons were a symbol of that power.

¹⁸ That nuclear weapons were necessary to win the war and save ‘millions’ of lives.

These ideas are illustrated by the US approach to the USSR entering the war. Prior to the successful Trinity Test, Truman's goal in Potsdam was to pressure Staling to declare war on Japan. However, with the news of the successful nuclear test, Truman – heavily influenced by James Byrnes, Truman's Secretary of State and one of the fiercest advocates for the bomb – became less and less inclined to force a Russian war declaration.

The day the Groves Report reached Truman, Byrnes and Stimson, the Secretary of War wrote that the success of the Trinity Test gave Truman “an entirely new feeling of confidence” (Stimson, 1945). Truman's primary goal at Potsdam – to get Soviet assurances of their entry into the war – did not immediately change following the initial news of the Trinity Test on 18 July. However, throughout the conference, particularly after the Groves Report, the US delegation actively tried to postpone, rather than push for it. Alperovitz's (1995) research on Potsdam and the decision to use the bomb reveal that:

[...] the United States actively attempted to delay a Russian declaration of war – even though this could only have helped speed a surrender (and thereby save lives). While every effort was made to rush the atomic test, Byrnes was “hoping for time,” so that “Russia will not get in so much on the kill...” (Alperovitz, 1995:465).

In doing so, the US plan was to leverage its position – soon to be revealed of a nuclear power – to gain advantages in the post-war negotiations, particularly referring to the USSR's position in Europe and Asia. After the bombing, this plan became evident even to those outside the political inner circles. When discussing the decision to drop the bombs in Japan, Einstein said: “I suspect that the affair was precipitated by a desire to end [the] war in the Pacific by any means before Russia's participation” (Einstein, 1946). These plans, however, were no secret. Manhattan Project scientist Joseph Rotblat recalls speaking with General Groves about the bomb and being “as early as March 1944 that the main purpose of the bomb was “to subdue the Russians”” (Rees, 2003:38).

At the end of the Potsdam Conference, Truman briefly and vaguely mentioned to Stalin that the US had developed “a new weapon of unusual destructive force” (Alperovitz, 1995:386) to which Truman recalled Stalin paying no interest. However, after the demonstration of these weapons in Hiroshima and Nagasaki, Stalin ordered a crash programme to develop nuclear weapons (Sagan, 1996). Stimson's fears, that “Such a condition will almost certainly stimulate [...] what will in effect be a secret armament race” (Alperovitz, 1995:432), had become true.

In the immediate post-war period, the US seemingly reaped the benefits of its discursive manoeuvre to consolidate its identity as the major victorious superpower of the war. More importantly, however, it boasted its status as the sole nuclear power. US nuclear identity was crystalised and the US was recognised as such.

After the end of the war, there was significant discussion regarding the future of nuclear weapons and its control, much of it coming from the US itself. In his 6 August 1945 statement, Truman had mentioned his concerns over regulations, an idea reaffirmed in his message to US Congress on 3 October 1945:

In international relations, as in domestic affairs, the release of atomic energy constitutes a new force too revolutionary to consider in the framework of old ideas. We can no longer rely on the slow progress of time to develop a program of control among nations. Civilization demands that we shall reach at the earliest possible date a satisfactory arrangement for the control of this discovery, in order that it may become a powerful and forceful influence toward the maintenance of world peace instead of an instrument of destruction (Truman, 1945b)

It is important to highlight here how Truman reinforces the idea that nuclear weapons can become a “powerful and forceful influence toward the maintenance of world peace”. At that time, the US was the only nuclear power in the world. To maintain world peace in regulatory negotiations without relinquishing its own nuclear arsenal suggests that the US (and its nuclear weapons) would be responsible for maintaining world peace. Not only does it represent the preservation of US nuclear monopoly, but also it attributes to the US a significant role of hegemon and guarantor of order of the International System through its status as sole nuclear power. This has been part of the harsher criticisms and the major obstacle to the international control attempts, namely the Baruch Plan of 1946.

Two contrasting paths of action regarding the future of international control of nuclear weapons and research arose. The first, backed by Byrnes, saw US nuclear monopoly as extremely beneficial, and something that could be used to leverage international negotiations towards US views. The other, backed by Stimson, anticipated the dangers of keeping the ‘secrets’ of nuclear research and instead wished to collaborate with the USSR (Hewlett and Anderson, 1962). When Stimson spoke about his proposal in September 1945, he was met with resistance. James Forrestal, Secretary of the US Navy, stated that the payoff of the Manhattan Project, the bomb, and all its associated fruits were “the property of the American people” (Hewlett and Anderson, 1962:420), hinting not only at a rejection of cooperation and knowledge sharing with other

States – particularly the USSR – as well as at a suggestive nod to the maintenance of US nuclear monopoly.

In a memorandum of 2 January 1946, General Groves clearly stated his views on nuclear weapons, international control, and US nuclear policy. Regarding proposals of international control, Groves held the view that any agreement would have to be thoroughly enforced:

Such agreements must provide for complete information at all times as to the activities of all nations in the atomic field. To get that information, it will be essential that *our* representatives have the right to travel freely anywhere, at any time, to observe and raise questions about any activity which they may suspect is related to the use of atomic energy (Groves, 1946).

Groves mentions that the inspection rights and duties should be granted to “our” representatives, indicating that the US should maintain leadership in any nuclear activities worldwide. Furthermore, Groves was sceptical of any agreements, suggesting that the US should capitalise on its position of sole nuclear possessor to dictate the rules and shape the nuclear regime as it sees fit:

If we were truly [...] we would not permit any foreign power with which we are not firmly allied, and in which we do not have absolute confidence to make or possess atomic weapons [...] Either we must have a hard-boiled, realistic, enforceable, world-agreement ensuring the outlawing of atomic weapons or we and our dependable allies must have an exclusive supremacy in the field, which means that no other nation can be permitted to have atomic weapons. The United States is in a position now to get and enforce one of those alternates – five years from now will be too late to initiate the agreements (Groves, 1946).

Groves’s message is that either the US prescribe the rules of the nuclear era, with itself playing the role of enforcer and peacekeeper – which fits within the conceptualised role at the basis of US nuclear identity – or the US must maintain its monopoly – also consolidating the tenets of US nuclear identity. In either case, it is the US who is in the position to choose, despite the newly created United Nations and its mandate. More emblematic, however, is Groves’s emphatic views on US nuclear arsenal and the necessary superiority and monopoly, arguing that:

Any commission [...] must have as its primary concern the military security of the United States. To accomplish that end the Army and Navy must have a major part in determining how atomic energy will be applied to national defense. If there are to be atomic weapons in the world, we must have the best, the biggest and the most [...] the United States must for all time maintain absolute supremacy in atomic weapons, including number, size and power, efficiency (Groves, 1946).

The overall message conveyed by Groves illustrates not only how US symbolic perceptions of nuclear weapons evolved, retaining its previous iteration while incorporating new meanings, but also how these perceptions were fed into US notions of its own prominent role in the nuclear era, that is, its nuclear identity.

Truman was torn between the two approaches, yet he was reluctant to relinquish US nuclear weapons. Truman appointed Dean Acheson as head of a committee to inform and advise on US nuclear policy. The Acheson-Lilienthal report of 16 March 1946 concluded that international control enforced by inspections would fail; instead, a firm control of all fissile materials by an international, impartial agency would be the best course of action. Furthermore, the report also proposed an abandonment of the US nuclear monopoly – favouring Stimson’s course of action – and collaboration with the USSR (Hewlett and Anderson, 1962).

The US solution to the issue of nuclear control came at the hands of Bernard Baruch, whom Truman appointed as the US representative to the United Nations Atomic Energy Commission. It was no secret that Truman was worried about the nuclear issue and wanted to propose forms of international control. In June 1946, at the first meeting of the newly established commission, Baruch unveiled to the other delegations the official US proposal – the Baruch Plan.

Drawing from the debate on US nuclear policy, particularly from the aspect of relinquishing or capitalising on US nuclear monopoly and superiority, the Baruch Plan proposed the creation of an international body to regulate all stages of nuclear energy – from the mining and possession of raw materials to the use of nuclear energy. The Baruch Plan also took into consideration how it would be received by others, considering that the US was the sole current possessor of nuclear weapons and the technology to produce them:

When an adequate system for control of atomic energy, including the renunciation of the bomb as a weapon, has been agreed upon and put into effective operation and condign punishments set up for violations of the rules of control which are to be stigmatized as international crimes, we propose that: 1) Manufacture of atomic bombs shall stop; 2) Existing bombs shall be disposed of pursuant to the terms of the treaty; and 3) The Authority shall be in possession of full information as to the know-how for the production of atomic energy (Baruch, 1946).

Baruch tries to emphasise this position:

Let me repeat, so as to avoid misunderstanding: My country is ready to make its full contribution toward the end we seek, subject of course to our constitutional processes and to an adequate system of control becoming fully effective, as we finally work it out (Baruch, 1946).

On the surface, the Baruch Plan proposes a universal agreement towards the end of abolishing nuclear weapons and preventing their development, whilst promoting cooperation on the peaceful uses of nuclear technology. However, Baruch's discourse reveals US not only how the US perceives itself and its role in the new nuclear era – its nuclear identity – but also how said identity conditioned US policy – behaviour. US commitment towards disarmament and nuclear abolition is conditioned to “an adequate system for control of atomic energy” (Baruch, 1946). At the highest level of international negotiations, to employ a subjective qualifier such as ‘adequate’ when describing a condition to be met so that the discursive actor is required to act cannot be overlooked. Baruch's words disclose US reluctance to equalise the nuclear landscape and a US attempt to solidify its constructed position of hegemon in the post-war, nuclear era.

As it was expected, the USSR promptly vetoed the Baruch Plan, arguing that the proposal was a way for the US to legitimately maintain its nuclear monopoly (Holloway, 2020). The USSR also defended that any negotiations on international control of nuclear energy should only take place after the abolition of nuclear weapons while the US argued that a system of international control should precede US disarmament. This impasse led to the demise of the Baruch Plan and early attempts to establish an international organ to regulate nuclear energy. In rejecting the Baruch Plan, the USSR essentially tried to challenge US leadership in nuclear matters as well as weaken US nuclear identity.

In the following years, the Cold War started to take shape. In spite of that, and the fact that attempts to control nuclear energy had failed, the US still believed that “the confidence engendered by unilateral possession of the bomb remained, for the time being, sufficient” (Williamson and Rearden, 1993:86). Nevertheless, official memoranda of the National Security Council from 1949 reveal US plans to expand both its status-based advantage as well as their military edge and invest in building more powerful weapons. A 1949 declassified document from the Working Group of the Special Committee of the National Security Council details the group's discussion on the development of alternative, more powerful ways to upgrade the potency of the currently available nuclear weapons. The document states that:

[...] it is within the capabilities of the United States from the standpoint of money, materials and industrial effort to develop for test of feasibility a prototype thermonuclear weapon. If the thermonuclear reaction of light elements were proved feasible of attainment, that it would be within the capabilities of the United States to produce these weapons in limited quantities (United States Department of State, 2015:597).

The discussion develops, stating that through this new method of manufacture, the United States could produce a much more powerful weapon (a thermonuclear weapon – in contrast to the *Little Boy* and *Fat Man*'s fission reaction), under the pretence that “no practical factors are known to exist which conclusively eliminate the possibility or probability of Soviet development of a thermonuclear weapon in minimum quantities” (United States Department of State, 2015:597). The report goes on to conclude that:

The United States military position with respect to the development of the thermonuclear weapon should be: Possession of a thermonuclear weapon by the USSR without such possession by the United States would be intolerable. [...] If a thermonuclear weapon is determined to be feasible, the following additional considerations pertaining to military requirements are currently evident: (1) Possession of such weapons by the United States may act as a possible deterrent to war. (2) Possession of such weapon by the United States will provide an offensive weapon of the greatest known power possibilities thereby adding flexibility to our planning and to our operations in the event of hostilities. It is reasonable to anticipate, and in some cases it is known, that a number of thermonuclear weapons can substitute for a greater number of fission bombs. Further, the thermonuclear weapon promises in the high ranges of energy release to be more efficient in utilization of available ore and production capacity per unit area of damage. The foregoing considerations decisively outweigh the possible social, psychological and moral objections which may be considered to argue against research and development leading to a thermonuclear weapon by the United (United States Department of State, 2015:597).

This passage illustrates the evolution of US nuclear symbolism. It depicts both the initial perceptions of nuclear weapons: firstly, that they are tools of security necessary for State survival. This perception was now adapted to Cold War dynamics, replacing fear of a German nuclear weapons programme in 1939 with fear of a Soviet nuclear weapons programme. US-USSR relations were gradually becoming more strained, and the development of a Soviet nuclear weapon would pose a significant threat to US security and survival. With no system of international control of nuclear energy in place, the US sees an expansion of its current arsenal – with the development of “the super”, as the thermonuclear weapon was called – a necessity:

Accordingly it must be anticipated that the development of a thermonuclear weapon by the USSR [...] is strikingly parallel to that of a few years ago when this nation was engaged in a desperate race to develop a fission bomb before Germany (United States Department of State, 2015:598).

Secondly, that nuclear weapons are symbols of status and prestige. Building upon the scientific prestige of not only being the first nation to develop nuclear weapons but also being the sole nuclear power and upon the position of part of US officials – such as General Groves and his January 1946 memorandum – the US could now expand its prestige and break new scientific ground by winning the thermonuclear weapon race. Even in the eventuality of a Soviet nuclear

weapon – ending the US nuclear monopoly – the US would still maintain the status lead by possessing thermonuclear weapons.

At this stage, the symbolic perceptions of nuclear weapons have already demonstrated its morphogenetic cyclical nature, influencing the construction of a nuclear identity which, in turn, conditioned behaviour. In this first analysed period, the first symbolic perceptions of nuclear weapons stemmed from the fears of a German nuclear weapons programme during the war. Should that be the case, US survival would certainly be threatened. That perception of nuclear weapons fomented the creation of the Manhattan Project. At the later stages of the war, with the original threat no longer relevant, nuclear symbolism shifted towards a status-based meaning. Nuclear weapons – as well as the entire enterprise of the Manhattan Project – were shaped to symbolise scientific, technological, and intellectual power and prestige.

The US portrayed itself as the major winner of World War II through the possession and (fabricated) necessity of nuclear weapons. These semiotic constructions influenced the creation of the first iteration of US nuclear identity, where the US prescribed role was that of the sole possessor and main actor in the nuclear era. This set of roles, under the constructed nuclear identity, conditioned US policy: refusing to relinquish its nuclear weapons and expanding its nuclear edge by planning the development of thermonuclear weapons. However, the documents reveal that the first symbolic meanings attributed to nuclear weapons were not abandoned; rather, the new meanings were added. **Figure 9** illustrates how nuclear symbolism, nuclear identity, and behaviour are intertwined during this first period of US nuclear history.

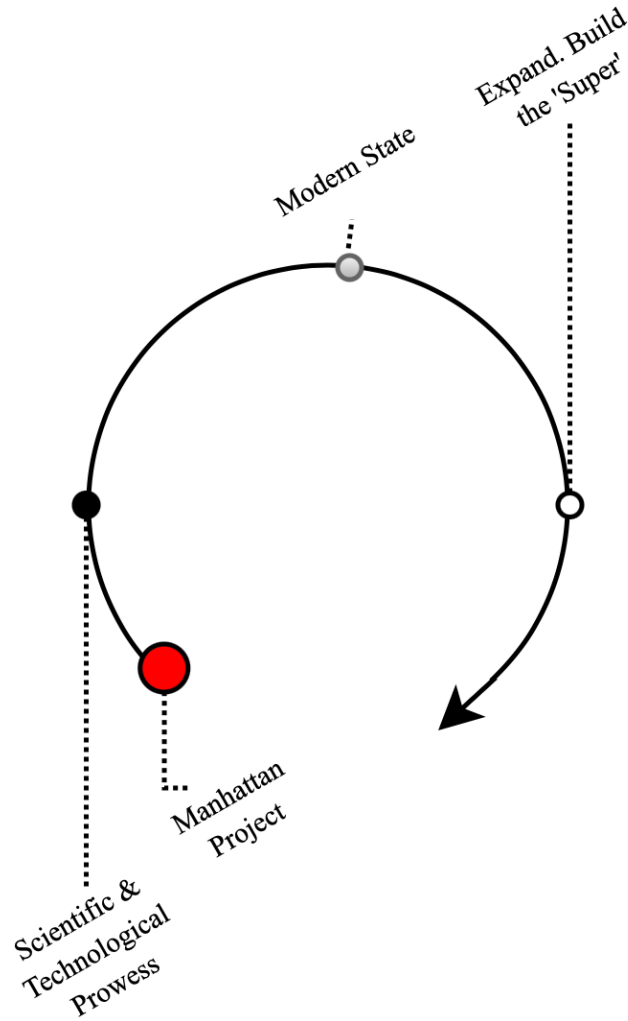


Figure 9: Nuclear Symbolism in the First Period. Elaborated by the author.

The symbolic meaning of building bigger, more modern bombs was beginning to deepen its roots in US nuclear identity, strengthening the US perceived role of most powerful nation in the world – which would later contribute to the creation of the so-called *Pax Americana*. The logic of expansion, accruing symbolic value in the form of military power and international status, was instrumental for the development and enforcement of a nuclear identity anchored on the positive ideas attributed to nuclear weapons and, consequently nuclear possession. Nuclear weapons – and nuclear possession, particularly *sole* possession – granted this special status to the US. However, in August 1949, the USSR tested its first nuclear weapon, ending US nuclear monopoly, causing a re-signifying the meaning and perceptions of nuclear weapons which in turn triggered a new symbolic shift.

4. 1949-1962: The Years of the Gap

After the Second World War and the use of the atomic bombs in Japan, the Cold War scenario of multilevel competition between the two standing superpowers set in swiftly. Early in the Cold War, as the more feverous anti-Communists in the United States predicted, the USSR conducted its first atomic bomb test (codename First Lightning) in Kazakhstan, in August 1949 (Diehl and Moltz, 2008). Although expected, the Soviet bomb came much earlier than anticipated (Williamson and Rearden, 1993).

The Soviet accession to the status of nuclear power was a game changer for nuclear symbolism in the United States – and, consequently, US nuclear strategy. From this moment on, the US lost its nuclear monopoly, hindering the reliance on the status of sole possession. The USSR achieving the same scientific and intellectual feat previously exclusive to the US triggered a nuclear arms race which so many – such as Stimson and even Truman himself – feared.

Truman’s public speech announcing the Soviet test was short but revealing of the implications of US nuclear identity – one of starring and dominant role in the nuclear age – in its behaviour. The speech, less than half a page in length, quickly mentioned the recent findings, but assuring the audience that “this probability has always been taken into account by us” (White House, 1949). The remainder of the speech highlights how the US had foreseen the situation – indicating no surprise and that things were under control – while also emphasising the need for regulation and control of nuclear research and applications, that is, the US-proposed Baruch Plan of 1946:

Nearly four years ago I pointed out that "Scientific opinion appears to be practically unanimous that the essential theoretical knowledge upon which the discovery is based is already widely known. There is also substantial agreement that foreign research can come abreast of our present theoretical knowledge in time." And, in the Three-Nation Declaration of the President of the United States and the Prime Ministers of the United Kingdom and of Canada, dated November 15, 1945, it was emphasized that no single nation could in fact have a monopoly of atomic weapons. This recent development emphasizes once again, if indeed such emphasis were needed, the necessity for that truly effective enforceable international control of atomic energy which this Government and the large majority of the members of the United Nations support (White House, 1949).

With the end of US nuclear monopoly, also came a shift in symbolic perceptions of nuclear weapons. What once symbolised the absolute triumph and clear-cut superiority of US military and intellectual might over all other nations became the subject of a quantitative competition between the two emerging superpowers of World War II which, in turn, came as the result of

an attempt to normalise nuclear weapons in light of the now-established nuclear rivalry and the financial benefits of a more significant reliance on nuclear weapons.

It must not be neglected the fact that the Cold War competition between the US and the USSR was not reduced to the nuclear arms race. The two superpowers competed in virtually all arenas, from conventional proxy wars to the space race. The nuclear arms race, however, was one of the most notorious, due to the special status and destructive capacity of nuclear weapons. Now that nuclear weapons were part of the Cold War, their symbolic meaning shifted. The scientific status of nuclear weapons – although still present – was no longer their main role. Now that the ‘enemy’ reached the same level, the *zeitgeist* of the Cold War influenced how nuclear weapons were perceived. Rather than playing the role of symbolic trophies of ultimate scientific status and prestige – which was potentialized by the US nuclear monopoly – they now symbolised the quantitative criteria to establish overall superiority and, consequently, the ‘winner’ of the Cold War. Throughout the 1950s and 1960s, the focus began to shift from having “the best” or “the biggest”, to having “the most” (Groves, 1946).

4.1. From Weapons of Last Resort to Conventional Status

The levelling of the nuclear playing field came in terms of overall possession. In the early 1950s, the US still maintained a significantly larger nuclear arsenal in comparison to the USSR, and the discussions over developing the ‘super’ – as the thermonuclear weapon (or hydrogen bomb) was called – advanced. Lawrence Freedman and Jeffrey Michaels (2019) argue that against the backdrop of the Soviet bomb, Truman had no choice but to fully commit to the nuclear arms race. In January 1950, Truman approved the plan to develop the hydrogen bomb. Within the few selected people included in the decision-making, there were dissident voices – such as Oppenheimer and Lilienthal – that argued that the hydrogen bomb was not only morally wrong, but also strategically irrelevant (Freedman and Michaels, 2019). However, the other side prevailed:

[...] because such a weapon was feasible, and because the Soviets were not believed to eschew weapons for ethical reasons, the issue was seen to be one of whether the United States could allow the Soviet Union to proceed with H-bomb development while it exercised restraint [...] When making his decision Truman asked one simple question: ‘Can the Russians do it?’ When told that they could he responded: ‘In that case, we have no choice. We’ll go ahead’. The Soviet atom bomb had introduced a sense of an arms race in a way that it had not been felt before. It was now felt imperative to stay ahead (Freedman and Michaels, 2019:90).

Two years later, in 1952, the US successfully tested its first thermonuclear weapon, still valuing the scientific and technological edge of breaking new ground in weapon development, while following the logic of expansion that permeated US policy from the US nuclear monopoly days. Due to the relevance of the US in the post-war international scenario – as well as the self-prescribed roles in the nuclear arena as part of US nuclear identity, the symbolic perceptions of nuclear weapons constructed were not contained to the US. In 1946, the UK Foreign Secretary Ernest Bevin said in a Cabinet Meeting that the UK must pursue the bomb, adding that “we’ve got to have the bloody Union Jack on top of it” (Hennessy, 2007:48), while historian Margaret Gowing (1974) argued that the UK decision to develop nuclear weapons was based on:

[...] a feeling that Britain as a great power must acquire all major new weapons, a feeling that atomic weapons were a manifestation of the scientific and technological superiority on which Britain’s strength, so deficient if measured in sheer numbers of men, must depend (Gowing, 1974:184).

The symbolic power of nuclear weapons was not restricted to their military capability and destructive power; it also encompassed the status and the prestige bestowed on the nations who possessed them. These perceptions influenced Truman’s decision to approve the development of the ‘super’. If the Soviets had acquired nuclear weapons, the US must assert its dominance and superiority both quantitatively – maintaining a nuclear arsenal larger than the nascent USSR’s – and qualitatively – developing thermonuclear weapons.

Despite the power and status attributed to them, nuclear weapons remained unutilised. There was an unspoken taboo on their use, despite their clear superiority in comparison to conventional weapons. When the Korean War broke out, the USSR dictated the rules of the game by opting for conventional, rather than nuclear forces (Freedman and Michaels, 2019). The need to match Soviet conventional mode of combat put significant strain on US economy and brought conservative criticism due to the belief that the nuclear programme offered “a bigger bang for a buck” (Freedman and Michaels, 2019:104). For this reason, nuclear alternatives were encouraged over conventional ones, especially considering recent US nuclear weapons developments both on the strategic as well as on the tactical front – producing large weapons designed to be used against cities and small weapons for battlefield use. This movement towards the normalisation of nuclear weapons, trying to break the tacit taboo on their use, culminated in Eisenhower’s flagship nuclear policy of massive retaliation.

Dwight Eisenhower, the wartime Supreme Commander of the Allied Forces in Europe, won the 1952 US Presidential elections by a landslide. In his farewell address, Truman reminisced about his time in office during the war and the beginning of the Cold War. Even now, at his final speech as president, Truman reinforced the tenets of the identity he fought to build. His words explicitly created a division between good and evil, right and wrong, and evoked the desired and portrayed leading role in the post-war world that the US played:

I have had hardly a day in office that has not been dominated by this all-embracing struggle—this conflict between those who love freedom and those who would lead the world back into slavery and darkness. And always in the background there has been the atomic bomb. But when history says that my term of office saw the beginning of the cold war, it will also say that in those 8 years we have set the course that can win it. We have succeeded in carving out a new set of policies to attain peace – positive policies, policies of world leadership (Truman, 1953).

Truman’s clear, dichotomic separation of the freedom-loving West and the dark, enslaving East is glaring. More importantly, however, is how he mentions that, with the atomic bomb in the background, the US set a course to win the Cold War through successful positive, world-leading policies. The atomic bomb “always in the background” is acknowledged as a vital factor in which US identity of world leader was anchored. The discursive construction of a nation breaking scientific grounds to produce the greatest technological and intellectual achievement the world has ever seen and unleashing this ultimate weapon in a merciful, necessary act to end the war and save “hundreds of thousands of lives – Japanese as well as American” (Truman, 1953) bore fruit. It resulted in a crystallised identity of a world leader, the ‘good’ nuclear power, and the “strongest country in the world” (Truman IN: Alperovitz, 1995:252).

When Eisenhower took office, the situation was different. There was no longer a US nuclear monopoly. In its place, there was the initial – though rapidly accelerating – stages of a nuclear arms race against the backdrop of more practical confrontations of the Cold War, such as the Korean War. Instead of the outright benefits of being the only nuclear power, the US now faced a situation in which the status of nuclear weapons decreased – due to nuclear proliferation, amongst friends (the UK, in 1952) and foes alike – and even though nuclear possession was still valued, the US was conditioned to face the Soviets using conventional weapons. Nuclear weapons were being transformed from the revolutionary weapons that could keep the peace to a neglected military option which forced the US to spend significant amounts of resources on

inferior armaments. In response, Eisenhower's policy of massive retaliation sought to solve this issue.

In January 1954, Secretary of State John Foster Dulles laid out the basis of the policy of massive retaliation. It highlighted the importance of collective, cheaper, and more effective paths to security as a clear reference to nuclear over conventional weapons. In his speech, Dulles stated that:

We need allies and collective security. Our purpose is to make these relations more effective, less costly. This can be done by placing more reliance on deterrent power and less dependence on local defensive power [...] Local defense will always be important. But there is no local defense which alone will contain the mighty land power of the Communist world. Local defenses must be reinforced by the further deterrent of massive retaliatory power (Dulles, 1954).

The term 'massive retaliation' is extremely common in the literature, yet it must be noted that Dulles never used the term. To coin defensive policy "massive retaliation" conjures strong, aggressive connotations which deviate from the message it wants to convey. Dulles's speech argues for the use of (more cost-effective) nuclear weapons in response to any aggression, since conventional weapons will not "contain the mighty land power of the Communist world". In other words, conventional weapons were not a deterrent, rendering them ineffective to defend the West against the superior Soviet conventional capability.

The alternative was a nuclear deterrent "of massive retaliatory power". Its goal is to disincentivise any aggression at all, creating a credible threat of unacceptable losses over an aggression of any magnitude. Eisenhower was not interested in engaging in a nuclear arms race *and* a conventional arms race at the same time. The massive retaliation policy solved both issues. It kept the US on the 'important' race of the Cold War while avoiding unnecessary expenditure and keeping the USSR in check. To this end, it was imperative to normalise the use of nuclear weapons.

US development of smaller, TNWs with intended battlefield applications blurred the lines of acceptability of nuclear attacks. Due to their lower yield, TNWs were portrayed as acceptable, as much as other conventional weapons. This discursive work is observable, for example, in 1955 press conference, when Eisenhower stated that he saw "no reason why [nuclear weapons] shouldn't be used just exactly as you would use a bullet or anything else" (Freedman and Michaels, 2019:105). Two years earlier, during his famous 'Atoms for Peace' speech,

Eisenhower stated before the United Nations General Assembly that nuclear weapons have “virtually achieved conventional status within our armed services” (Eisenhower, 1953).

In order to accomplish his goal of relying solely on nuclear weapons – thus avoiding expenses on conventional forces – Eisenhower had to adapt the symbolic meaning of nuclear weapons. Prior to his administration, nuclear weapons were seen as disruptors of traditional warfare and statecraft. The term ‘nuclear revolution’ refers to the massive changes in politics and war ushered by the development of nuclear weapons. The result was the attribution of a status-based symbolic meaning of nuclear weapons explored in the previous chapter at length. Along with that symbolic meaning, nuclear weapons were weapons on their own class. Those were not weapons to be used nonchalantly. In his farewell address, Truman suggests he opted for the nuclear option exclusively to save lives – something also debunked in the previous chapter. Furthermore, Truman indicated his perceptions regarding nuclear weapons use, stating that Americans were moral to understand the consequences of nuclear use, in contrast to ‘evil’ others: “Now, once in a while, I get a letter from some impatient person asking, why don't we get it over with? [...] drop the atomic bomb? For most Americans, the answer is quite simple: We are not made that way. We are a moral people” (Truman, 1953).

However, Eisenhower’s views clashed with Truman’s. The former president portrayed nuclear weapons as weapons of last resort. Eisenhower now sought to steer them towards conventional weapons. Now that the USSR developed nuclear weapons and the US lost their status of sole possessor, there was no use in keeping these weapons secluded to status-gaining purposes. In other words, the scientific status of nuclear weapons lost strength with the end of US nuclear monopoly; however, the status of possessing nuclear weapons did not disappear, as that idea – and symbolic perception – had already spread. With the continuing development of TNWs, status was to be gained by ‘winning’ the Cold War whilst maintaining a nuclear identity reflecting the image of a ‘good’, responsible, peaceful, and leading nuclear power. Eisenhower’s ‘Atoms for Peace’ address at the United Nations in December 1953 reveals US plans to strengthen this image so vital to US nuclear identity, carefully cultivated since 1945, evoking ideas of peace and responsibility related to US nuclear leadership, while emphasising US military power and nuclear superiority:

Today, the United States' stockpile of atomic weapons, which, of course, increases daily, exceeds by many times the explosive equivalent of the total of all bombs and all shells that came from every plane and every gun in every theatre of war in all of the years of World War II. A single air group, whether afloat or land-based, can now deliver to any reachable target a destructive

cargo exceeding in power all the bombs that fell on Britain in all of World War II. In size and variety, the development of atomic weapons has been no less remarkable [...] Should an atomic attack be launched against the United States, our reactions would be swift and resolute. But for me to say that the defense capabilities of the United States are such that they could inflict terrible losses upon an aggressor – for me to say that the retaliation capabilities of the United States are so great that such an aggressor's land would be laid waste – all this, while fact, is not the true expression of the purpose and the hope of the United States [...] Occasional pages of history do record the faces of the "Great Destroyers" but the whole book of history reveals mankind's never-ending quest for peace, and mankind's God-given capacity to build. It is with the book of history, and not with isolated pages, that the United States will ever wish to be identified. My country wants to be constructive, not destructive. It wants agreements, not wars, among nations. It wants itself to live in freedom, and in the confidence that the people of every other nation enjoy equally the right of choosing their own way of life. So my country's purpose is to help us move out of the dark chamber of horrors into the light, to find a way by which the minds of men, the hopes of men, the souls of men everywhere, can move forward toward peace and happiness and well being [...] To the making of these fateful decisions, the United States pledges before you – and therefore before the world – its determination to help solve the fearful atomic dilemma – to devote its entire heart and mind to find the way by which the miraculous inventiveness of man shall not be dedicated to his death, but consecrated to his life (Eisenhower, 1953).

Eisenhower emphasises US desire for peace in the nuclear age. In a polarised world, the US wishes to consolidate its position of a benevolent leader, one that seeks positive and peaceful applications of the same technology that created the “dark chamber of horrors”. It proposes a plan to disseminate the knowledge of nuclear research which would allow all countries to capitalise on their peaceful uses. At the same time, it mentions the magnitude of US nuclear arsenal, anticipating US reaction to a nuclear attack. However, the fact that the ‘Atoms for Peace’ speech took place one month prior to Dulles’s speech on the policy of massive retaliation is notable: on the one hand, the US describes a quasi-idyllic world under its nuclear leadership, where all nations come together to promote scientific development and peaceful uses of nuclear energy, promoting the idea of a ‘good’ nuclear power striving for peace. On the other, the US establishes an aggressive policy of retaliation with no regards to scales of proportionality, while investing in TNWs to associate them with conventional weapons and increase their usability in response to any threat.

Eisenhower’s policy of massive retaliation served as a remedy to fix the US budgetary deficit, avoiding expenditure on conventional forces to match the Soviets, and to dispel beliefs in the tacit nuclear taboo – although no nuclear weapons, tactical or otherwise, were ever used post-1945. However, disturbing reports were coming in, revealing immediate threats to US security and requiring immediate attention. So begin the years of the gap.

4.2. *The Missile Gap and the Quantitative Shift*

In 1957, the US Air Force and the Gaither Committee¹⁹ released reports revealing a supposed discrepancy in US and Soviet nuclear capabilities. They deemed Eisenhower's policy of reliance on lower cost nuclear weapons rather than investment in conventional forces ineffective, recommending significantly higher military spending. The US Air Force was arguing that the USSR was not merely interested in achieving a nuclear parity with the US; rather, they were pushing for clear-cut superiority, an effort to produce the means to 'win' nuclear war (Freedman, 1977; Freedman and Michaels, 2019).

One month prior to the Gaither report, the USSR put in orbit Sputnik 1, the first artificial satellite. As a result, the West now feared a technological gap between the USSR and the US (Freedman and Michaels, 2019). Much akin to what the US had done with nuclear weapons in 1945, the Soviets were displaying their intellectual and scientific might, and 'winning' decisive battles of the Cold War:

Sputnik exhibited the relevant technology in an exciting and visible fashion. As important was the general shock it provided to American self-confidence. The Russians had shown that they could match – indeed exceed – the Americans in technological sophistication (Freedman and Michaels, 2019:173).

The USSR also had the upper hand in Intercontinental Ballistic Missile (ICBM) technology, due to their head start. The development of ICBMs as delivery vehicles, in detriment of conventional bombers, meant that targeting the US became exponentially easier. ICBMs could reach virtually anywhere in the world at great speeds, invalidating air defence systems (Freedman and Michaels, 2019). The state of panic and shock which shook the US not only grew with the findings from the US Air Force and the Gaither Committee, but also pushed for a reaction. The US was 'losing' the space race, and now it was widely believed that it had also fallen behind on the nuclear arms race.

After the fall of US nuclear monopoly, nuclear weapons were not regarded in the same prestigious light as before. However, that is not to say that they became regular weapons, or that nuclear possession had no longer a symbolic meaning of status. As explained in Chapter 2, the cyclical nature of nuclear symbolism dictates that the constructed and attributed meanings of nuclear weapons are not completely abandoned; rather, they simply incorporate

¹⁹ The Gaither Committee, named after its first chairman, Horace Rowan Gaither, was a group created by Eisenhower and tasked to evaluate US defence systems in the eventuality of a nuclear attack.

new meanings. The symbolic perception of nuclear weapons linked to ideas of scientific progress and achievement so prominent of the nuclear monopoly days was still part of how nuclear weapons were seen, and technology and science were important factors in the Cold War. The technological race played a significant part in the Cold War, encompassing the Soviet lead in the space race with Sputnik 1 and their ICBM technology edge, which deeply affected the course of the war. A more prominent concern, however, was one related to the quantitative angle of the nuclear arms race: the so-called nuclear ‘missile gap’.

A leading figure and stark advocate for immediate reaction to close the missile gap was US Senator John F. Kennedy. In 1958, Kennedy made public the anxieties that permeated not only his thoughts, but also those of the population:

Our retaliatory power, said the President in his 1958 state of the Union message, is "the most powerful deterrent to war in the world today," offering any potential aggressor "the prospect of virtual annihilation of his own country." Possession of similar striking power by the Soviet Union has not altered this basic premise – it is instead described now as the result of a "nuclear stalemate", a point of mutual "saturation" or a "balance of terror". The hard facts of the matter are that this premise will soon no longer be correct. We are rapidly approaching that dangerous period which General Gavin and others have called the "gap" or the "missile-lag period" – a period, in the words of General Gavin, "in which our own offensive and defensive missile capabilities will lag so far behind those of the Soviets as to place us in a position of great peril" (Kennedy, 1958).

Kennedy voiced the concerns related to the missile gap: the belief that the Soviet nuclear arsenal surpassed US stockpiles and that the disparity was growing. The fact that the USSR had recently made significant progress on the space race – through Sputnik 1 – and on delivery technology – through their work on ICBMs – corroborated to the views that the situation was dire. In Kennedy’s views, the US could not afford to sit idly while the USSR continually showed their strength in the Cold War.

Years later, it would be proved that the estimates of the Soviet nuclear arsenal were grossly exaggerated, and, consequently, the missile gap never existed. In November 1960, the high-resolution images from the US photoreconnaissance satellite Discoverer provided compelling evidence of the myth of the gap. US Air Force intelligence had estimated that the USSR had around 200 ICBMs. Much more modest estimates from the US Army and Navy showed a figure of 50 ICBMs. However, the photographic evidence of the Discoverer, which completely scanned Soviet territory revealed that the USSR had, in fact, four long-range missiles (Kaplan, 2020).

As of 1958, however, this information was unknown. What was believed, particularly by the opposition and the US population, was that the US was lagging behind. The Eisenhower administration constantly downplayed and outright denied the rumours of the missile gap (Drew, 1989; Preble, 2003). Instead, the focus was on the preparedness of US defences, stating that: “our total defense capabilities – including [...] nuclear weapons of all kinds – had a superiority overwhelming enough to deter the Soviet leaders from aggression” (Eisenhower, 1965:389). Eisenhower’s efforts proved to be ineffective. Despite significant advances in military technology in the months following the launch of Sputnik 1 (Roman, 1995), the fear of the gap had quickly spread throughout the US and the critics were capitalising on it, pressuring the president to increase the defence budget in an attempt to close the imaginary gap. In January 1960, Kennedy announced his intention to seek the Democratic Party nomination for the upcoming US elections, and the missile gap played a major role in his campaign.

During his campaign, Kennedy embodied US public opinion of outrage in light of the losing ‘battles’ of the Cold War – such as the space race and the missile gap. More importantly, the candidate very publicly positioned his views in stark contrast to Eisenhower’s (and, by extension, vice-president Richard Nixon’s, the Republican presidential candidate) posture regarding the lack of immediate action and countermeasures to remedy the growing gap. It was Kennedy’s understanding that the US idleness in the Cold War resulted in a significant loss of prestige. Kennedy defended a substantial increase in the national defence budget and a rapid nuclear build-up to match the estimated Soviet arsenal in response. On 26 September, during the second Kennedy-Nixon presidential debate, Kennedy sustained his concerns:

We have not maintained our position and our prestige. A Gallup Poll taken in February of this year asking the – in eight out of nine countries – they asked the people, who do they think would be ahead by 1970 militarily and scientifically, and a majority in eight of the nine countries said the Soviet Union would be by 1970 [...] The Rockefeller Brothers report, General Ridgway, General Gavin, the Gaither Report, various reports of Congressional committees all indicate that the relative strength of the United States both militarily, politically, psychologically, and scientifically and industrially – the relative strength of the United States compared to that of the Soviet Union and the Chinese Communists together – has deteriorated in the last eight years and we should know it, and the American people should be told the facts (Kennedy, 1960a).

Prestige here is vitally linked to performance in the Cold War – amongst other things, the nuclear arms race. The US lagging behind the USSR in light of the Soviet’s development in the space race and ICBM technology, paired with the reports suggesting the missile gap

indicated its inability to keep up with Soviet military and scientific development – two major criteria to measure prestige. Nuclear weapons were the paramount symbol of scientific and intellectual development, and that symbolic meaning still compose the semiotic construction of nuclear weapons. However, as nuclear symbolism advanced – the USSR developed the bomb, US nuclear monopoly ended, the Cold War progressed – the prestige imprinted on nuclear weapons was now perceived and measured in quantitative terms.

The status-based scientific component of prestige in nuclear weapons still existed; new weapons and delivery vehicles were developed, and the Soviet superiority in ICBM technology illustrated that. However, the quantitative aspect – the missile gap – captured the essence of this period and of a new shift in symbolic perceptions, from the scientific pole (developing nuclear weapons, establishing a nuclear monopoly, developing the ‘super’) to quantitative superiority (the missile gap and the emblematic nuclear arms race). **Figure 10** illustrates the new shift within the symbolic framework laid out in Chapter 2.

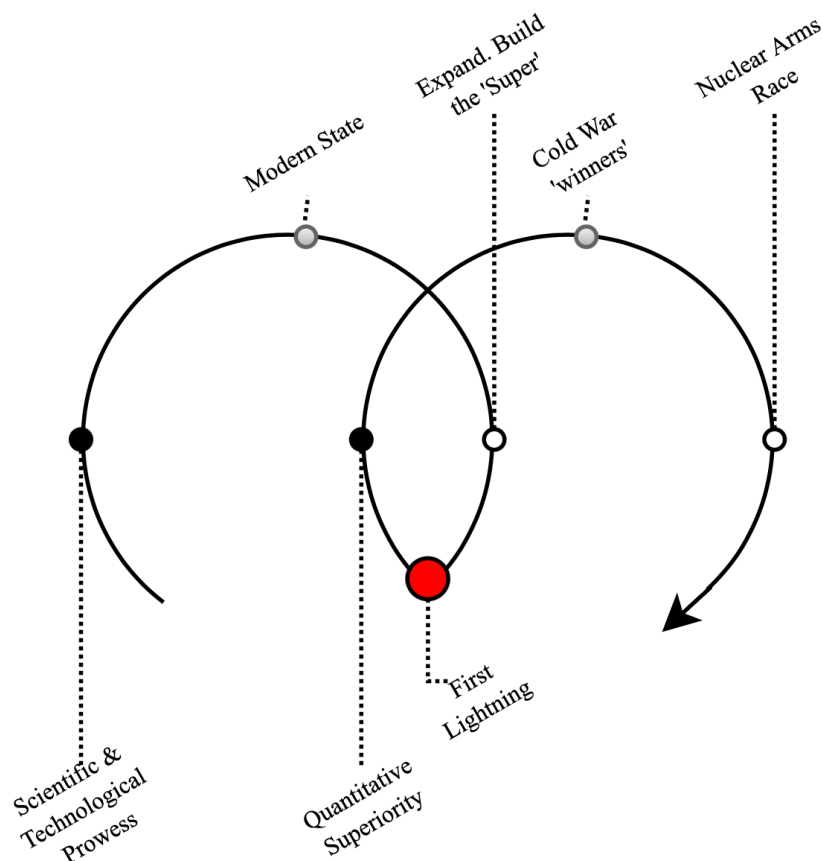


Figure 10: Nuclear Symbolism in the Second Period. Elaborated by the author.

The role of prestige attributed to scientific is now observed in other arenas of the Cold War, particularly the space race. The Soviet launch of Sputnik 1 left deep scars in US prestige, not only perceived by others, but also by the *self*. The novelty of nuclear weapons that dominated their symbolic meaning and perceptions in the late 1940s lost strength. Nuclear weapons were now possessed by two other nations. Outer space, on the other hand, was uncharted territory, just as nuclear weapons once were in the late 1930s and early 1940s. However, nuclear weapons still retained their status. Instead of simple possession, status was now granted based on quantitative superiority – a ‘win’ in the multi-layered Cold War. Sputnik 1 was evidence of US failure, and so was the believed missile gap. To have less nuclear weapons meant to relinquish increasingly larger shares of international status and prestige.

The constructed, self-perceived identity of a responsible nuclear leader, however, remained virtually intact. Despite Kennedy’s push for immediate action to close the gap, increasing military spending and investing heavily on nuclear development, he also noted his concern regarding the lack of international regulation and control. In third presidential debate, Kennedy spoke about the dangers of nuclear proliferation and the need for international control:

Now on the question of disarmament, particularly nuclear disarmament, I must say that I feel that another effort should be made by a new Administration in January of 1961, to renew negotiations with the Soviet Union [...] and also lessen the chances that other powers will begin to possess a nuclear capacity. There are indications, because of new inventions, that ten, fifteen, or twenty nations will have a nuclear capacity – including Red China – by the end of the presidential office in 1964. This is extremely serious [...] One of my disagreements with the present Administration has been that I don’t feel a real effort has been made on this very sensitive subject, not only of nuclear controls, but also of general disarmament [...] I hope the next Administration – and if I have anything to do with it, the next Administration will – make one last great effort to provide for control of nuclear testing, control of nuclear weapons, if possible, control of outer space, free from weapons, and also to begin again the subject of general disarmament levels. These must be done. If we cannot succeed, then we must strengthen ourselves. But I would make the effort because I think the fate not only of our own civilization, but I think the fate of the world and the future of the human race is involved in preventing a nuclear war (Kennedy, 1960b).

Kennedy employs a similar discursive strategy to Eisenhower’s. The latter relied on a nuclear policy centred on massive retaliation while delivering idyllic speeches in international fora about joint action towards the goal of nuclear knowledge sharing and the peaceful uses of nuclear energy. Kennedy, in turn, presents heavy criticism of Eisenhower’s tight defence budget and stating the vital need for US nuclear build-up, stressing how the US was in an unfavourable position due to “complacent miscalculations, penny-pinching, budget cutbacks, incredibly confused mismanagement, and wasteful rivalries and jealousies” (Kennedy IN:

Preble, 2003:804). At the same time, Kennedy cultivated the tenets of US nuclear identity, presenting an image of a legitimate, benevolent, peaceful, and responsible nuclear leader, advocating for international control and regulation of nuclear weapons and nuclear proliferation, while adding new elements by setting the criteria through which nuclear superiority would be measured. In order to maintain the identity of leadership in the nuclear age, a quantitative edge was paramount.

Based on the two intertwined pillars of his presidential campaign – the reclamation of US prestige and the closure of the missile gap – Kennedy was elected the 35th US president. In Eisenhower’s farewell address, the outgoing president issued a solemn warning about the dangers of an impulsive arms race, caused by the influence of the military-industrial complex (Eisenhower, 1961) – a direct response to the criticism his administration received regarding defence budgets. On the other hand, Kennedy’s inaugural address, the president issued a warning in a plea’s clothing:

[...] to those nations who would make themselves our adversary, we offer not a pledge but a request: that both sides begin anew the quest for peace, before the dark powers of destruction unleashed by science engulf all humanity in planned or accidental self-destruction [...] We dare not tempt them with weakness. For only when our arms are sufficient beyond doubt can we be certain beyond doubt that they will never be employed (Kennedy, 1961a).

Maintaining his stern position on the Cold War and the missile gap, Kennedy makes it clear that only when the United States achieves a clear-cut superiority, when its arms are “sufficient beyond doubt”, there will be certainty that these arms will not be used. This idea strengthens the notions imbued in US identity of leadership, accompanied by new elements incorporated in US nuclear identity, such as the need for superiority and dominance of the nuclear race. There will be peace because the US wants it. US Nuclear superiority is the guarantee of world peace, but a peace achieved on unilateral, US terms. The belief in plummeting international prestige triggered by US idleness in the “satellite-missile race” carried Kennedy to the presidency. Addressing the missile gap, achieving arms “sufficient beyond doubt” was a priority. Nuclear weapons became the quantitative criteria to determine the winner of the Cold War – and the status and prestige attached to that. Yet, the platform that led Kennedy to the White House, the belief upon which his mission rested would soon be revealed to be a lie. Furthermore, the nuclear crises of the early 1960s had a monumental impact on how nuclear weapons were perceived and valued.

4.3. *A Decade of Crises*

Kennedy's time in the US presidency was short; yet it coincided with one of the most crucial and emblematic periods of the nuclear age. The 1960s was a decade of nuclear crises. Within the first week of Kennedy's term, the president was briefed on the facts regarding the missile gap which he so feared. Satellite images collected from the Discoverer revealed that "there was a missile gap – but, they said, the gap was very much in *America's* favor" (Kaplan, 2020:44). However, Kennedy barely had time to digest this information; tensions in Berlin were rising. Fred Kaplan (2020) argues that the Berlin Crisis started before the new president was sworn in, when Soviet Premier Nikita Khrushchev delivered a speech in Moscow in which the possible annexation of West Berlin was discussed.

After World War II, Germany was divided, and its territory contained the border that separated the capitalist western Europe and Soviet-controlled eastern Europe. The city of Berlin was located within East Germany, yet the city itself was also divided, with West Berlin remaining an isolated area deep within Soviet territory, but under Western protection. Eisenhower stated to Khrushchev that West Berlin "stood as a beacon of freedom, and a home to two million people, which the United States was committed to defend at all cost" (Eisenhower IN Kaplan, 2020:49).

At the Vienna summit in June, Khrushchev demanded that the allied powers – the US, the UK, and France – withdraw from Berlin. On 25 July, Kennedy issued a televised response to Khrushchev's threats, stating that "We cannot and will not permit the communists to drive us out of Berlin, either gradually or by force" (Kennedy, 1961b). In his speech, Kennedy also announced a significant increase in military spending, something that caused negative reactions in the Kremlin. While dealing with the crisis, Kennedy also considered his options, contemplating the possibility of conflict escalation up to 'general nuclear war'.

The official White House memos show that the Kennedy administration was divided between gradual escalation, in the event of conflict, and a surprise, all-out nuclear attack: "the civilians wanted to delay action for as long as possible, while the military officers wanted to use force right away" (Kaplan, 2020:63). Despite being a fierce advocate of a US nuclear build-up to close the missile gap, Kennedy's reaction to the multiple briefings he had on varied themes, such as the Single Integrated Operational Plan (SIOP-62) – the official US nuclear war plan – and studies on the outcome of an eventual nuclear conflict revealed his moral standing on and resistance to nuclear weapons. Following a presentation on the consequences of nuclear war in

July, which anticipated massive casualties and the ruin of the political, military, and economic structure of the US, Kennedy broke the silence by saying: “and we call ourselves the human race” (Kennedy IN Kaplan, 2020:57).

In response to the presentation of the SIOP-62, Kennedy drafted a list of questions he wished his generals to respond. Amongst them, the president asked whether there were alternatives to nuclear war, whether non-military targets could be excluded from targeting, and whether a nuclear strike, once ordered, could be stopped. This last question revealed Kennedy’s lack of basic knowledge of sensitive themes of nuclear policy. Despite that, the ‘military wing’ was pushing Kennedy towards nuclear action (Kaplan, 2020).

The 25 July speech reveals that the diplomatic strategy adopted by Kennedy focused on “declarations of military strength that provided symbolic assurance that the United States had the will to contain the Soviets, but shorn of the level of confrontation suggested by his more hawkish advisors” (Cameron, 2018:25-26). The Soviet response came swiftly, with the construction of the Berlin Wall, in August 1961, to consolidate the division of Europe for decades to come.

The ‘beginning of the end’ came on 17 October, when Khrushchev delivered a speech to the congress of the Communist Party in which he clearly claimed that Soviet forces were superior to the US and that “while declaring that he would rescind his December 31 deadline [...] the speech implied that the West would bend to the Soviet Union’s superior power (Cameron, 2018:26). In face of this discursive war, Kennedy decided to publicly debunk the myth of the missile gap. On 21 October, Roswell Gilpatric – the Deputy Secretary of Defence – delivered a speech at a convention of the Business Council informing US public that the US boasted a nuclear superiority and that this edge would grow, given the acceleration of nuclear programmes, such as the Minuteman and the Polaris:

Our confidence in our ability to deter Communist action, or resist Communist blackmail, is based upon a *sober* appreciation of the military power of the two sides. We doubt that the Soviet leadership has in fact any less realistic views, although this may not be always apparent from their extravagant claims. [...] While the Soviets use rigid security as a military weapon, their Iron Curtain is not so impenetrable as to force us to accept at face value the Kremlin's boasts [...] The Soviet's bluster and threats of rocket attacks against the free world – aimed particularly at the European members of the NATO alliance – must be evaluated against the hard facts of United States nuclear superiority which I discussed earlier. Although we are confident that we would ultimately prevail in a test of strength no matter at what level conflict might be initiated by the Soviet Union, this does not alter our determination to seek a peaceful solution to the world's problems [...] The United States does not seek to

resolve disputes by violence. But if forceful interference with our rights and obligations should lead to violent conflict – as it well might – the United States does not intend to be defeated. As the President reminded the world at the UN last month, our country has both the will and the weapons to join free men in standing up to their responsibilities. We in the Defense Department believe that the proper exercise of our will and the development and management of our weapons will eventually force the Soviet Union to participate with us in a step-by-step program to guarantee the peace which so many nations earnestly desire (Gilpatric, 1961).

Soviet response came swiftly, with a test of a 30-megaton thermonuclear weapon the very next day – curiously something covered by the speech the day before. Over the next few days, the conflict escalated; the climax came one week after Gilpatric’s address, when dozens of Soviet and US tanks faced each other in Berlin for sixteen hours. The resolution came through backchannel diplomacy, and the crisis ended. However, the outcome of the Berlin Crisis had dire consequences.

After October 1961, Khrushchev saw that he needed real military leverage if he was to make another play for Berlin. American military forces surrounded the soviet Union, and now he knew that Kennedy knew that the Kremlin had very few – really, next to no – weapons with the range to hit US territory in response to an American first strike [...] But Khrushchev did have a fair number of medium-range missiles, and the idea struck him that placing some of those missiles in Cuba – the revolutionary island nation that had recently declared itself a Soviet ally and that sat just ninety miles off American shores – would have the same effect as a crash build-up of ICBMs (Kaplan, 2020:65).

On 14 October 1962, Khrushchev’s reflections on the end of the Berlin Crisis were revealed to the US, when a series of Soviet ballistic missiles were spotted in Cuba – well within their range. The days that followed – the ‘Cuban Missile Crisis’ or the ‘Thirteen Days’ – are often regarded as one of the tensest periods of the Cold War, one in which the possibility of nuclear war was at an all-time high.

The discussions in the White House the following days seemed to revolve around Kennedy’s advisors pushing for military action and the president showing restraint. In multiple occasions throughout the 13 days, McNamara, General Maxwell Taylor – chairman of the Joint Chiefs of Staff – and LeMay tried to persuade the president in agreeing that an air strike to destroy the missiles followed by an invasion of the island was the only viable course of action. Kennedy’s responses to the pressure of his advisers focused on an eventual and uncontrollable escalation of the conflict, including Soviet retaliatory action in Berlin. Furthermore, Kennedy saw that the world would see a US invasion of Cuba as a “mad act” (Kaplan, 2020:66). The president’s reluctance to heed to the advice of the members of the executive committee of the National Security Council (ExComm) was not well received.

On 19 October, in one of the ExComm meetings, Kennedy stated that what he wanted to avoid is a “nuclear war by escalation” (Kaplan, 2020:68). Afterwards, the president left the room, but did not stop the tape recorder he kept concealed in his office. During his absence, LeMay – one of the fiercest advocates of a direct military incursion and all-out war – was recorded expressing strong dissident opinions:

He finally got around to the word *escalation* [...] That’s the only goddamn thing that’s in the whole trick [...] When he says *escalation*, that’s it. If somebody could keep them from doing the goddamn thing piecemeal – that’s our problem! You go in there, friggin’ around with the missiles – you’re *screwed* You’re *screwed*! *Screwed*! *Screwed*! [...] Goddamn it, if he wants to do it, you can’t diddle around with hitting the missile sites and then hitting the surface-to-air missile sites. You’ve got to go in and take out the goddamn thing that’s going to stop you from doing your job! (LeMay IN Kaplan, 2020:69).

Overall, Kennedy faced pressure not only from his advisors, but also from US Congress. On 22 October, the president announced to the world the entire situation of the Soviet missiles in Cuba on television, listing the actions underway by the US, most notably declaring a naval ‘quarantine’ on the island:

[...] this secret, swift, and extraordinary build-up of Communist missiles, this sudden, clandestine decision to station strategic weapons for the first time outside of Soviet soil - is a deliberately provocative and unjustified change in the status quo which cannot be accepted by this country if our courage and our commitments are ever to be trusted again by either friend or foe [...] Our policy has been one of patience and restraint, as befits a peaceful and powerful nation, which leads a worldwide alliance [...] We will not prematurely or unnecessarily risk the costs of worldwide nuclear war in which even the fruits of victory would be ashes in our mouth - but neither will we shrink from that risk at any time it must be faced [...] I have directed that the following initial steps be taken immediately [...] a strict quarantine on all offensive military equipment under shipment to Cuba is being initiated [...] the continued and increased close surveillance of Cuba and its military build-up [...] regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States, requiring a full retaliatory response upon the Soviet Union (Kennedy, 1962a).

A few hours before that, Kennedy exchanged words with US Senator Richard Russell, who strongly supported Kennedy’s advisors’ offensive plans. Russell stated that Kennedy’s response to the Cuban missiles would determine whether the US was a “first class power” (Russell IN Cameron, 2018:30). Meanwhile, US intelligence informed Kennedy of the quasi-operational status of the missiles in Cuba, which added even more pressure on Kennedy’s unwillingness to sanction military action. Even the president’s own brother (and US Attorney General) Robert seemed to favour an airstrike to debilitate the Soviet missiles rather than diplomatic efforts (Kaplan, 2020). On 26 October, Khrushchev sent a private telegram to Kennedy informing terms for a deal. The USSR would remove the missiles from Cuba if the

US pledged not to invade Cuba. The following morning, before the offer could be discussed or any response issued, the Soviet Premier changed the terms of the deal – this time publicly: the USSR would pull out their missiles in Cuba if the US reciprocated and withdrew their missiles in the Turkish border, within close range of the USSR:

[...] This is why I make this proposal: We agree to move those weapons from Cuba which you regard as offensive weapons. We agree to do this and to state this commitment in the United Nations. Your representatives will make a statement to the effect that the United States, on its part, bearing in mind the anxiety and concern of the Soviet state, will evacuate its analogous weapons from Turkey (Khrushchev, 1962b).

Ironically, this was the very same deal that Kennedy thought of since the first meetings of the ExComm. When Kennedy discussed the deals with his advisors, none seemed to appreciate the idea, despite the president calling the deal a “fair trade” (Kaplan, 2020:70). McNamara insisted that the US should keep the pressure, while Robert Kennedy suggested that his brother publicly accepted the first deal – a promise not to invade Cuba – ignoring the second demand. Kennedy was resolute, which led to McGeorge Bundy’s protest:

I think we should tell you the universal assessment of everyone in the government who’s connected with alliance problems. If we appear to be trading the defense of Turkey for the threat in Cuba, we will face a radical decline (Bundy IN Kaplan, 2020:71).

The president then asked his team what the Turkish opinion on the matter was. When Secretary of State Dean Rusk said that there had been no talks with Turkey, Kennedy was irate. The feeling grew when he asked how many missiles the US had in Turkey, and no one knew the figures. When an aide in the room mentioned that the number was 15 Jupiter missiles, Kennedy seemed to be incredulous that his advisors would risk nuclear war for so little – missiles that were, according to undersecretary of State George Ball, “obsolete anyways” (Kaplan, 2020:73). During this meeting, news arrived that a US reconnaissance aircraft had just been shot down by the Soviets. McNamara tried to capitalise on the situation, arguing that the Soviet surface-to-air missile sites ought to be attacked – paving the way for an invasion. On 22 October, four days prior, Kennedy had mentioned that should that come to pass, the Soviet sides should be attacked. However, now that it had happened, Kennedy decided against it.

After the meeting, Kennedy sent his brother with a message to the Soviet ambassador Anatoly Dobrynin. Kennedy would accept the deal, yet not publicly. To the world, a deal would be made involving a US pledge not to invade Cuba. This way, Khrushchev could still claim a ‘win’ and the US would not upset its allies in Europe regarding US alliances and commitment to European security. The next day, the Soviet Premier announced the withdrawal of Soviet

missiles from the island and within six months, the US had removed its missiles from Turkey and the crisis had been defused. The two nuclear crises had acute effects on Kennedy's views regarding nuclear weapons. Less than two years before, Kennedy was a stern advocate of higher defence budgets to close the imagined missile gap. Now, when faced with the actual dangers of escalation and nuclear war, Kennedy showed an opposite opinion despite the mounting pressure from seasoned generals and war planners. Only a handful of people knew about the secret deal Robert Kennedy offered Dobrynin. Lyndon Johnson, Kennedy's vice-president was not one of them, something that would have concrete repercussions during his term.

4.4. Superiority in the Face of War

The nuclear crises of the 1960s have significantly altered Kennedy's perceptions of nuclear weapons. Similarly, his successor had little interest in increasing military budget to keep up with the nuclear arms race. Nevertheless, US public opinion – including that of Congress – still claimed for what Kennedy had promised in his presidential campaign. To this end, a new deliberate shift in symbolic perception of nuclear weapons in the US was planned, displacing the focus on the more costly quantitative side of the arms race towards a qualitative approach, reshaping the concept of nuclear superiority.

The diminishing value of quantitative superiority in the evaluation of the US – Kennedy in particular – starts during the events of the Berlin Crisis of 1961, still in the beginning of his presidency. At the time, when tensions were high due to the 'ultimatum' Khrushchev had issued regarding Western presence and influence in Berlin, Roswell Gilpatric's speech in October 21 1961 served not only to soothe any public anxieties caused by the belief of a trailing US in the Cold War and the nuclear arms race in particular, but also to send a clear message to the USSR: the US now knew of the accurate situation regarding nuclear stockpiles, and it would not be intimidated by ultimatums or "threats of rocket attacks"; it was a "hard fact" that the US boasted a nuclear superiority, and that superiority was growing, given the announcements of advancement on missile technology and delivery systems. The occasion also marks Kennedy's public confrontation – a (casual) acknowledgment of the correct figures, after a 'sober' evaluation – with the misleading information he so fervently believed during his presidential campaign.

Furthermore, Gilpatric's speech does US nuclear identity great service, in not only portraying the US as the clear-cut superior nuclear power, but also one that prioritises a "peaceful solution to the world's problems"; nevertheless, US leadership in the nuclear arena is stern and shall not be threatened. The US possessed "both the will and the weapons" to defend the 'good', enabling them to "force the Soviet Union to participate with us in a step-by-step program to guarantee the peace". Peace would be achieved under the benevolent nuclear leadership of the US – a peace determined and shaped by them.

One of the pillars of Kennedy's presidential campaign was the loss of US prestige and Eisenhower's idleness in addressing the nation's nuclear development in face of a gap established by the Soviets. During the first year of his administration, Kennedy faced a major crisis that threatened US prestige and security – in the eventuality of a conflict escalation – but managed to defuse the threats with diplomacy, keeping appearances and maintaining the tenets of US nuclear identity. In successfully dealing with the Berlin Crisis while avoiding nuclear war and standing its ground, Kennedy left the first crisis with a feeling of confidence. Nevertheless, the Berlin Crisis also made the president confront the actual threat of nuclear war for the first time, should his diplomatic approach fail. As a consequence, the sense of security that quantitative superiority provided was beginning to fade.

It was only after the Cuban Missile Crisis of 1962, however, that Kennedy reached his conclusion regarding the nuclear arms race and quantitative superiority. When faced with the threat of nuclear war, Kennedy questioned whether a larger arsenal was useful or if it even mattered, nevertheless, the symbolic perception of nuclear weapons he helped shaped during his presidential campaign – one in which quantitative superiority was vital and a determining factor of the 'winner' of the Cold War – had taken roots in US rationality:

[...] when Kennedy attacked Eisenhower for the missile gap and propounded the logic of rational superiority, he was responding to a public craving security in the wake of Sputnik. Moving forward with [Anti-Ballistic Missiles] was part of this wider scheme of reassurance. After he found out that superiority did not give him the level of confidence he thought it would during the Berlin and Cuban crises, Kennedy began to question its utility. Yet Kennedy's advisors warned against changing course, for fear of the potential political consequences – particularly in view of the upcoming presidential election of 1964.

After the historical thirteen days in October 1962, Kennedy revealed his anxieties towards nuclear warfare and the 'uselessness' of quantitative superiority in the nuclear age. Recently de-classified recordings of private meetings show Kennedy's personal feelings and beliefs. In

a private meeting with McNamara and Taylor, Kennedy stated his doubts over the usefulness of a quantitative superiority:

If our point really then is to deter [the USSR], it seems to me that we are getting an awful lot of – I mean, with the Polaris submarines, with the planes we have, the navy’s strategic force, and with the missiles we have, we have an awful lot of megatonnage to put on the Soviets sufficient to deter them from ever using nuclear weapons. [...] Otherwise what good are they? I don’t – you can’t use them as a first weapon yourself, so they’re only good for deterring [...] I don’t see quite why we’re building as many as we’re building [...] What is it that will deter them? [...] even what [the USSR] had in Cuba would have been a substantial deterrent to me (Kennedy, 1962b).

In a meeting of the National Security Council of 12 September 1963, Kennedy asked his advisors about the prospects of nuclear superiority, particularly regarding a possible nuclear stalemate. To that, General Harold Johnson, Chief of Staff of the Army, replied that not only the nuclear stalemate was in place, but also, achieving nuclear superiority was impossible:

The President asked whether, even if we attack the USSR first, the loss to the U.S. would be unacceptable to political leaders. General Johnson replied that it would be, i.e. even if we preempt, surviving Soviet capability is sufficient to produce an unacceptable loss in the U.S. The President asked whether then in fact we are in a period of nuclear stalemate. General Johnson replied that we are [...] the President asked how we could obtain nuclear superiority as recommended by the Air Force Association. General Johnson said this was a very difficult question to answer. He acknowledged that there is no way, no matter what we do, to avoid unacceptable damage in the U.S. if nuclear war breaks out. He later acknowledged that it would be impossible for us to achieve nuclear superiority (United States Department of State, 2018:1584).

The exchange with his advisors – some of whom actively advocated for nuclear action and increased defence budgets – served only to strengthen Kennedy’s shifting perceptions of nuclear weapons. Despite this turning point, the president’s policy regarding US nuclear strategy remained unchanged. Instead of matching his policies with his new set of understandings regarding nuclear weapons, Kennedy maintained them aligned with this campaign rhetoric, showing a contrasting disparity between his private and public opinions despite the existence of structural reasons hindering a change in policy:

Kennedy had lost confidence in nuclear superiority as anything but a way to give him political cover for necessary concessions [...] Yet other considerations played a role. “Sentiment for more missiles and more nuclear weapons” in Congress was still “pretty strong,” the memo argued, although it was difficult to see how “this sentiment could be rationally defended.” [...] nuclear superiority was more important for instilling confidence in external audiences than giving the same assurance to the commander-in-chief (Cameron, 2018:28).

This ‘sentiment’, added to the politics of re-election, led Kennedy to stay the course and use quantitative superiority as a platform and sign of the success of his administration. The day of

his assassination, Kennedy was scheduled to deliver a speech in which he would state that he kept his words “to build a national defense which was second to none [...] not ‘first, but,’ not ‘first, if,’ not ‘first, when,’ but first—period” (John F. Kennedy Presidential Library and Museum, 2022).

The ideas Kennedy defended during his 1960 presidential campaign were heavily imprinted on US public. Kennedy was the president that led the nation through two nuclear crises, the president who restored US prestige by debunking the myth of the missile gap – one which he helped inflate on his way to the presidency – and declaring US nuclear superiority. The need for said superiority was very much alive in the nation’s imaginary. It would require an elaborate plan to overwrite the symbolic meaning of nuclear weapons pushed by Kennedy.

After it was beyond doubt that the USSR had nuclear weapons and it was believed to be in the lead in terms of numbers – creating the so-called “missile gap” – the symbolic value of nuclear weapon as a sign of power, modernity, and prestige became embedded in the Cold War *zeitgeist* of superpower competition, a notion strengthened by Kennedy’s claims of US loss of prestige in the face of the USSR widening the perceived gap. Kennedy helped shape this new phase of nuclear symbolism – the quantitative race – and Kennedy himself was powerless to overwrite it after realising quantitative superiority did not amount to the significant edge in the nuclear game as he thought. The symbolism at play during this time – particularly after the Cuban missile crisis – was of amounting power in the form of nuclear arsenals against the backdrop of the USSR’s own nuclear weapons development and testing. Despite his recent change of heart regarding nuclear quantitative superiority, Kennedy was advised against and unwilling to shift US nuclear policy, denoting how the symbolic understanding of nuclear weapons impacted behaviour.

With the Cold War in full swing and the securitisation of Communism – and, consequentially, the USSR – bolstered by McCarthyism in the late 1950s (See, e.g., Reeves, 1978), a logic of power and superiority, particularly in comparison to the USSR, was deeply rooted in US identity. As nuclear weapons took the centre stage of the Cold War, they also played a major role in the shaping of a US nuclear identity of power, prestige, and dominance (Van Wyk *et al.*, 2007).

After heightened tensions in the nuclear crises of the 1960s, the following period is marked by the initial steps towards arms control agreements and a relative stability in nuclear tensions between the two superpowers. The infamous 13 days in October 1962 significantly changed

the way in which part of the US administration – Kennedy, in particular – perceived nuclear weapons. Nonetheless, during his presidential campaign, Kennedy helped build a symbolic value of nuclear weapons rooted in quantitative superiority that was now crystallised within US notions of these weapons. To reroute US nuclear policy was no easy task. Only in the next years, through the Johnson-McNamara partnership, would practical steps to deliberately shift US nuclear perceptions take place.

Meanwhile, after the scare of nuclear war in Cuba, the topic of arms control was revitalised. The next decade saw the birth of a regime on nuclear nonproliferation and disarmament. The signing and entry into force of the NPT, as well as a number of bilateral agreements between the US and the USSR led to the gradual, but effective decrease of US stockpiles. The focus now was on qualitative superiority.

5. 1963-1991: The Golden Era of Arms Control

Lyndon Johnson was sworn in hours after Kennedy's assassination, on 22 November 1963. Much like Kennedy post-Cuba, Johnson had no desire to maintain the US in a costly nuclear arms race. To this end, it was in his best interest to deconstruct the current symbolic perceptions of nuclear weapons – quantitative superiority. With the help of his Secretary of Defence Robert McNamara, Johnson managed to alter the criteria of nuclear superiority, thus creating justified reasons for a halt in the quantitative nuclear build-up.

His time in the oval office (1963-1969) coincided with the birth of nuclear arms control, particularly the NPT which is often regarded as the 'crown jewel' of the nuclear nonproliferation regime. Johnson's views on nuclear issues were close to those Kennedy developed after the Cuban Missile Crisis. The new president had no interest in spending resources on the nuclear arms race, not so much due to the belief that nuclear superiority was futile, but because Johnson had other interests to pursue. These interests revolved around the creation of a 'Great Society', requiring resources allocated to social rather than military issues.

Nevertheless, military issues are what marked Johnson's term in office. As I mentioned in the previous chapter, Kennedy's secret deal with Khrushchev to end the Cuban Missile Crisis was only revealed to very few people – and Johnson, despite being the vice-president, was not one of them. Therefore, Johnson believed that Kennedy achieved success in dealing with the Soviets by maintaining a tough stance on the matter. Johnson, as Kaplan (2020:75) argues, "followed the false lesson of the Cuban missile crisis – stand firm, never negotiate – in his decision to escalate the war in Vietnam".

The 1970s saw the first movements towards the creation of a nuclear nonproliferation regime with the NPT, but also bilateral arms control negotiations between the two superpowers, through Strategic Arms Limitation Talks (SALT) I and II, as well as the Anti-Ballistic Missile (ABM) Treaty. The acceptance of MAD as a fact rendered quantitative superiority – and, in tandem, the quantitative arms race – ineffective in US imaginary. The global nuclear stockpiles reached a threshold where more nuclear weapons would not make a significant difference and 'win' the Cold War; the quantitative arms race had reached the point of diminishing returns.

As a consequence, other facets of the Cold War were in the spotlight, such as the space race – reinforcing technological and scientific values. These values spilt over to the perceptions of nuclear weapons. Science and technology became the proxies for the status and prestige nuclear

possession had in the mid-late 1940s and quantitative superiority had in the 1950s and 1960s. Research and development in the nuclear weapons department was active, developing cutting-edge technology to be applied to the weapons and delivery systems. The nonproliferation and arms control initiatives did not hinder modernisation, thus, they could thrive.

In the 1980s, Cold War tensions rose once again. The Soviet invasion of Afghanistan in 1979 and the election of Ronald Reagan contributed to the increased hostilities between the US and the USSR. In 1985, however, Reagan and Soviet Premier Mikhail Gorbachev released the famous statement that “a nuclear war cannot be won and must never be fought”. In 1991, with the fall of the USSR and the end of the Cold War, tensions also dissolved. Consequently, nuclear weapons suffered another shift in their symbolic perceptions.

5.1. Nuclear Weapons in Vietnam

US involvement in the Vietnam War had everything to escalate to nuclear war, but it did not. Operation *Rolling Thunder* dropped a larger bomb load on Vietnam than all the bombs dropped on Europe during World War II, yet nuclear weapons remain unused, with no serious consideration. Even at the threat of a humiliating defeat, let alone a significant number of US casualties and resources, “nuclear weapons remained on the shelf” (Tannenwald, 2006:675).

Between 1964 and 1965 several memos circulated the White House regarding the Vietnam War and possible nuclear options. As usual, the majority of the military advisors pushed for the use of nuclear weapons, particularly low-yield TNWs. Even in the Senate, those in the most hawkish end of the spectrum attempted to revive Eisenhower and Dulles’ plan to blur the lines between nuclear and conventional weapons, arguing for their use in Vietnam. Eisenhower was even consulted, and his response was that the US should fully utilise the wide range of its available arsenal – a view shared by South Vietnamese leader Nguyen Khanh (Tannenwald, 2006; 2007).

There are several factors that contribute to US restraint. Tannenwald (2006; 2007) argues that although the fears of a possible escalation were considered, the perceived likelihood of a Soviet retaliation to US nuclear use in Vietnam was negligible. Similarly, the chances of Johnson authorising a nuclear strike were also negligible. Undersecretary of State George Ball released a memo in 1964 discussing all scenarios. Most striking is his predominant focus on the political costs of first use rather than the security consequences, such as retaliation of escalation. In the memo, Ball (1972) argued that if the US crossed the line of first use,

The Communists would certainly point out that we were the only nation that had ever employed nuclear weapons in anger. And the Soviet Union would emphasize its position of relative virtue in having a nuclear arsenal which it had never used. At the same time, our action would liberate the Soviet Union from inhibitions that world sentiment has imposed on it [...] Whether or not the Soviet Union actually used nuclear weapons against other nations, the very fact that we had provided a justification for their use would create a new wave of fear. The consequences of all this cannot be overstated. For the past four years we have been making slow but perceptible progress toward a new era of relations between the two centers of power in this midtwentieth-century world. But the first use of the bomb by the United States would destroy all this [...] Moreover, we would feel the effects deeply at home. The first firing of a nuclear weapon (whether tactical or strategic, it makes no difference) would revive a real but latent guilt sense in many Americans. It would create discouragement and a profound sense of disquiet. It would generate resentment against a Government that had gotten America in a position where we had again been forced to use nuclear power to our own world discredit (Ball, 1972).

Therefore, the fear of retaliation or eventual escalation was not the most important factor that kept the US from resorting to nuclear weapons in Vietnam. Rather, as Tannenwald (2006; 2007) argues, it was the taboo of their use. The nuclear taboo, as developed by Tannenwald (2007), represents a normative force that hinders the use of nuclear weapons even in case where adverse objective factors are marginal. Such taboo was even mentioned in a Central Intelligence Agency (CIA) memo regarding US use of nuclear weapons in Vietnam, which concluded that:

Use of nuclear weapons by the US in the Vietnam War would be one of the most important events of modern history. World reactions would be affected to some extent by the circumstances in which the US resorted to their use, and the targets attacked. But almost independent of these factors would be a widespread and fundamental revulsion that the US had broken the 20-year taboo on the use of nuclear weapons (Central Intelligence Agency, 1966).

The costs of using nuclear weapons first – in terms of status and prestige – significantly outweighs any potential military benefits these weapons might secure. In fact, there was little evidence of such military advantages of using TNWs in Vietnam. In 1966, scientists from the JASON group – scientists that advise the US government in matters of science and technology – carried out a study on the military benefits of TNWs in Vietnam. The results showed that there were none. The JASON report, published in 1967, concluded that for nuclear weapons to have a meaningful benefit, an estimate of 3,000 weapons would have to be dropped per year. Despite the focus on the military aspects of nuclear weapons use, the report included a section on the political costs which, much like Ball's 1964 memo, pointed to the fact that the political costs would be far greater than any potential military advantage:

So long as the U.S. force is numerically inferior, with or without [tactical nuclear weapons], the stalemate will not be broken. The use of [tactical nuclear weapons] for an Interdiction of lines of communication in [North Vietnam], similar to the *ROLLING THUNDER* operation, could be highly effective, but it would require a huge number of weapons. A RAND targeting study indicates that, In such a mixed interdiction campaign, one [tactical nuclear weapons] is, on the average, equivalent to about 12 nonnuclear attack sorties. This means that a completely nuclear *ROLLING THUNDER* campaign would require about 3000 [tactical nuclear weapons] per year [...] The use of [tactical nuclear weapons] in Southeast Asia would be highly damaging to the U.S. whether or not the use remains unilateral. The overall result of our study is to confirm the generally held opinion that the use of [tactical nuclear weapons] in Southeast Asia would offer the U.S no decisive military advantage if the use remained unilateral, and it would have strongly adverse military effects if the enemy were able to use [tactical nuclear weapons] in reply. The military advantages of unilateral use are not overwhelming enough to ensure termination of the war, and they are therefore heavily outweighed by the disadvantages of eventual bilateral use (Dyson *et al.*, 1967:5-8).

Despite the mounting evidence of not only the severe political and reputational costs, but also the military inefficiency of TNWs in Vietnam, the hawkish wing of the White House still pressed for nuclear options to avoid a humiliating defeat and prevent US casualties – the same argument used by Truman to justify the bombing of Japan in 1945. At this time, however, nuclear weapons had a widespread notoriety already attributed to them, unlike in 1945, which led to the creation and consolidation of a taboo that lasts to this day. President Johnson barely considered using nuclear weapons in Vietnam. His successor Richard Nixon – advised by Henry Kissinger – was far more open to nuclear weapons. Tannenwald (2006) argues that it is likely that Nixon did not share the nuclear taboo, believing that the use of nuclear weapons was not ‘wrong’, yet he was still constrained by it due to the belief of those around him. Nonetheless, despite occasional threats of massive use of force to the North Vietnamese, Nixon too held back on nuclear use in Vietnam.

The Vietnam War is a flagship case of the strength of the nuclear taboo. The case illustrates not only the existence, but also the importance of the symbolic aspects of nuclear weapons in spite of their astounding material capabilities. The staggering defeat of the US in Vietnam with nuclear weapons ‘on the shelf’ shows how significant the role of status and prestige are in nuclear identity and policy. Despite the status and prestige costs of a defeat in Vietnam, in not breaking the taboo, the US struck a balance of nuclear status: nuclear weapons were still status symbols, yet their use would be met with clear opprobrium – both domestically and abroad. In exercising restraint, the US maintained kept their identity of a responsible nuclear leader while avoiding the widespread political and symbolic toll of nuclear use.

5.2. *Nuclear Superiority and the ‘Grim Fact of MAD’*

Despite learning and following the “false lesson” (Kaplan, 2020:75) of Cuba, Johnson did share Kennedy’s unwillingness to designate a significant budget to the nuclear arms race. The discussions of nuclear use during the Vietnam War revealed a recurrent theme: a supposedly ‘self-imposed’ limitation on the use of nuclear weapons, despite their availability – the nuclear taboo. McNamara tried to dismiss the existence of such limitations by arguing that the US was “NOT following a strategy that recognizes any sanctuary or any weapons restrictions [...] We’d use whatever weapons we felt necessary to achieve our objective” (Tannenwald, 2006:688), yet the taboo proved to be strong enough to dissuade nuclear use in a scenario that had favourable elements to that end.

Therefore, Johnson’s interest in pursuing the goals set by Kennedy during his presidential campaign – namely a relentless effort to keep up with the nuclear arms race – was marginal. However, he did understand that the maintenance of such policies was key for him to achieve his actual goals of creating the ‘Great Society’, tackling social, economic, and racial injustice in the United States. As Cameron (2018:50-51) argues:

Only by maintaining confidence in the United States’ ability to pursue militarized containment of the Soviet Union would Johnson be able to achieve his domestic legislative agenda [...] Johnson did not want to spend more on defense than was absolutely necessary because it cut into what he could devote to the Great Society. To this end he and McNamara worked together to limit the growth in the US nuclear arsenal (Cameron, 2018:50-51).

Johnson understood the need to ‘keep appearances’ regarding the importance of superiority yet had no interest in maintaining the nuclear arms race. When Johnson takes office, the challenge was to juggle the maintenance of nuclear quantitative superiority to soothe any public Cold War anxieties and to keep the budget in check, in order to work on his broader domestic agenda, such as the Great Society programme (Cameron, 2018). Johnson, as Kennedy before him, wanted to cap US resources on prolonging the nuclear arms race, yet, due to the strong underlying symbolism nuclear weapons retained, he was unable to easily do so.

Despite the president’s interest in maintaining a proactive policy to feed the nuclear arms race, promised by Kennedy in the late 1950s, US population was still in need of reassurance regarding US nuclear superiority. The Johnson-McNamara partnership was vital to provide such reassurances while steering away from the budgetary weight of a continuing nuclear arms build-up. The chosen path was to tamper with the fundamental criteria of the competition that

dictated what it meant to be ‘winning’ and, more importantly, what ‘winning’ the Cold War meant at a stage with exorbitant nuclear arsenals.

In the mid-late 1960s, the “fact” of MAD was fully consolidated. After the realisation of the futility of quantitative superiority in nuclear weapons, Johnson and McNamara worked to initiate the deconstruction of this quantitative-centric symbolism, while still not showing sign of weakness in the nuclear arena. The result was a shift towards a third phase of nuclear symbolism and strategy in the United States: the era of weapon modernisation.

Only when McNamara stated that MAD was “not a policy at all [but] a grim fact” (Cameron, 2018:77) – corroborating to the idea of uselessness of quantitative superiority – a new shift in nuclear symbolism and, consequentially, behaviour is observed. By declaring that MAD was not a policy – that is, a deliberate choice – but an irrefutable fact, McNamara argued that the nuclear stalemate was real: both superpowers reached a point where their current arsenals were already capable of dealing unacceptable losses to the other, regardless of the power of a first strike. The ‘grim fact of MAD’ served as a platform to deconstruct the symbolic value of quantitative superiority. In that sense, the movement towards a new – deliberate and calculated – shift in the symbolic meaning of nuclear weapons was starting.

It was in 1967 that this shift is publicly revealed. During a speech directed towards the editors of the United Press International in San Francisco, McNamara talks in openly about the situation of the nuclear stalemate involving the US and the USSR. While soothing any possible anxieties from his audience regarding the possibility of the USSR gaining the upper hand and launching a nuclear attack against the US with a first-strike capability²⁰, the US Secretary of Defence makes the first mention of the edge of qualitative superiority – that is, more effective, accurate weapons displaying a higher technological level – over quantitative superiority – raw numbers – while reiterating the superiority of the United States, the lack of weakness signs and being very cautious as not to reveal an attempt to shift away from the intrinsically consolidated symbolism of quantitative praise:

Many commentators on the matter tend to define nuclear superiority in terms of gross megatonnage, or in terms of the number of missile launchers available. Now, by both these two standards of measurement, the United States does have a substantial superiority over the Soviet Union in the weapons targeted against each other. But it is precisely these two standards of measurement that are themselves misleading. For the most meaningful and Realistic measurement of nuclear capability is neither gross megatonnage, nor

²⁰ The notion of first-strike capability entails a nation’s capability of destroying the enemy’s retaliatory forces, denying them the capability to strike back. See, e.g., McNamara, 1967; Cameron, 2018.

the number of available missile launchers; but rather the number of separate warheads that are capable of being delivered with accuracy on individual high priority targets with sufficient power to destroy them. Gross megatonnage in itself is an inadequate indicator of assured destruction capability, since it is unrelated to survivability, accuracy, or penetrability, and poorly related to effective elimination of multiple high-priority targets [...] Further, the number of missile launchers available is also an inadequate indicator of assured destruction capability, since the fact is that many of our launchers will carry multiple warheads. But by using the Realistic measurement of the number of warheads available, capable of being reliably delivered with accuracy and effectiveness on the appropriate targets in the United States or Soviet Union, I can tell you that the United States currently possesses a superiority over the Soviet Union of at least three or four to one. Furthermore, we will maintain a superiority – by these same Realistic criteria – over the Soviet Union for as far ahead in the future as we can Realistically plan. I want, however, to make on point patently clear: our current numerical superiority over the Soviet Union in reliable, accurate, and effective warheads is both greater than we had originally planned, and is in fact more than we require. Moreover, in the larger equation of security, our “superiority” is of limited significance – since even with our current superiority, or indeed with any numerical superiority Realistically attainable, the blunt inescapable fact remains that the Soviet Union could still – with its present forces – effectively destroy the United States, even after absorbing the full weight of an American first strike (McNamara, 1967).

The speech attempts to reshape the concept of superiority by changing the criteria from a quantitative standpoint – that is, the sheer size of arsenals determine superiority – from a qualitative one, focusing on the technology of nuclear weapons, much like the symbolic value of nuclear weapons that were created in the aftermath of World War II. In doing so, McNamara attempts to relieve the US of the weight of keeping up with the costly nuclear arms race that the public desired and deemed necessary – a notion that Kennedy helped consolidate during his 1960 campaign. To achieve this, McNamara states that the traditional (quantitative) standards to measure superiority are “misleading”, particular in a time where MAD is a fact. The number of nuclear weapons has long surpassed the point of diminishing returns, since first strike capabilities are no longer viable.

Instead, McNamara advocates for a new standard. Despite the fact that the notion of achieving nuclear superiority was deemed impossible (United States Department of State, 2018), McNamara argues that superiority should be measured by qualitative standards, thus providing a reason for the US not to engage in the costly arms race that Johnson wanted to avoid. Nevertheless, given the crystallised meaning and symbolic value of nuclear weapons, The Secretary of Defence made sure to repeatedly state that “by both these two standards of measurement, the United States does have a substantial superiority over the Soviet Union”.

With the acceptance of MAD as a fact, it became the logical option to discard the symbolic value of a quantitative nuclear superiority and the quantitative arms race, and focus on a more

strategic facet, related to accuracy and effectiveness – that is, the qualitative aspects of nuclear weapons. Since these weapons were not to be used first unless either superpower possessed a first-strike capability, a scenario ruled out by McNamara, the focus should be on building accurate and effective weapons capable of inflicting dextrous damage, requiring a more advanced level of technology. The fact of MAD helped deconstruct the symbolism of quantitative prowess in favour of a qualitative-focused symbolic perception, which merged the techno-scientific focus of nuclear weapons from the mid-late 1940s with the competitive aspect of the Cold War which was imbued in the symbolic value of nuclear weapons in the 1950s and 1960s. **Figure 11** illustrates this new shift in symbolic perception in the US.

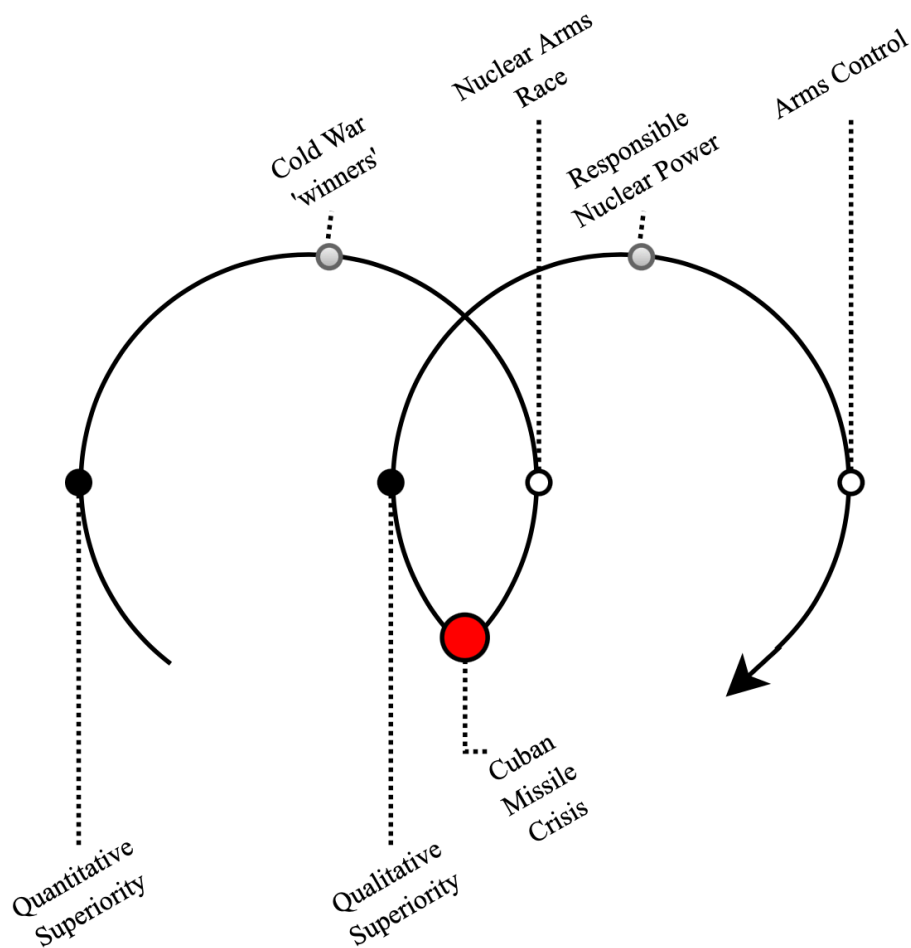


Figure 11: Nuclear Symbolism in the Third Period. Elaborated by the author.

As a result of the diminishing value of and emphasis on quantitative superiority, a regime of nuclear arms control began to take shape. The 1970s became a crucial year for arms control, particularly due to the NPT; yet, the decade also witnessed the first steps towards bilateral

agreements between the two superpowers regarding the size of nuclear stockpiles and a renewed interest in quantitative disarmament efforts.

5.3. *The NPT and the Birth of Arms Control*

From the onset of the nuclear age, the prospect of international forms of control of nuclear weapons was already present. Truman's statement after the bombing of Japan mentioned his desire to see a regime of nuclear arms control in place. Eisenhower and Kennedy also mentioned their goals of international arms control, yet no fundamental steps were taken. Only after the nuclear crises of the 1960s did States moved more effectively towards that goal. Following the events in Cuba, Khrushchev sent a private letter to Kennedy in which the Soviet Premier discussed the possibility of a treaty banning nuclear tests in the atmosphere, in outer space, and under water:

Mr. President, we have now conditions ripe for finalizing the agreement on signing a treaty on cessation of tests of thermonuclear weapons. We fully agree with regard to three types of tests or, so to say, tests in three environments. This is banning of tests in atmosphere, in outer space and under water. In this respect we are of the same opinion and we are ready to sign an agreement [...] It would be very useful to agree on ending tests after such strain when people lived through great anxiety. It would be a great reward for the nervous strain suffered by the peoples of all countries. I think that your people felt as much anxiety as all other peoples expecting that thermonuclear war would break out any moment. And we were very close to such war indeed. That is why it would be good to give satisfaction to the public opinion. This would contribute to easing the tension [...] More efforts should be made already now to solve the problem of disarmament. To do it with regard not to one stage but to a real solution of the whole problem (Khrushchev, 1962a).

The treaty in question came to fruition the following year, in 1963. The Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water – commonly known as the Limited Test Ban Treaty (LTBT) – was signed in August 1963 and came into force (under the condition of ratification by the US, the USSR and the UK) in October 1963. In June, during an address at the American University, Kennedy mentions how grave the dangers of an uncontrolled arms race is and how important it is to put measures to check it – the LTBT being the main measure (Kennedy, 1963a). The following month, in his public announcement of the treaty, Kennedy emphasises the dangers of nuclear proliferation, particularly in the hands of 'irresponsible' actors. Corroborating with his post-Cuba beliefs regarding nuclear superiority, Kennedy also mentioned how a nation's security is not always contingent on the number of weapons it has:

This treaty can be a step toward preventing the spread of nuclear weapons to nations not now possessing them [...] I ask you to stop and think for a moment

what it would mean to have nuclear weapons in so many hands, in the hands of countries large and small, stable and unstable, responsible and irresponsible, scattered throughout the world. There would be no rest for anyone then, no stability, no real security, and no chance of effective disarmament. There would only be the increased chance of accidental war, and an increased necessity for the great powers to involve themselves in what otherwise would be local conflicts [...] This treaty can limit the nuclear arms race in ways which, on balance, will strengthen our Nation's security far more than the continuation of unrestricted testing. For in today's world, a nation's security does not always increase as its arms increase (Kennedy, 1963b).

At the time, four States had developed and possessed nuclear weapons. Besides the two superpowers, the UK and France tested their first weapons in 1952 and 1960, respectively, and in October 1964, China became the fifth nuclear weapon State. Against the backdrop of the rate of nuclear proliferation and the two recent nuclear crises, negotiations for an international treaty to regulate nuclear weapons – nuclear proliferation, in particular – began the following year, in 1965. The spread of nuclear weapons was increasingly becoming a concern for the US. The UK and France developing nuclear weapons was not perceived as a threat, due to their alliance with the US; however, the Chinese bomb was a different matter, and according to Bertrand Goldschmidt (1980), it was one of the triggers that accelerated the negotiations of the NPT.

As expected, there were areas of contest. Drafts from each of the superpowers show the different positions from the US and the USSR regarding their nuanced text preferences. The US draft submitted to the Eighteen-Nation Disarmament Committee on 17 August 1965, for example, states that “Each of the nuclear States Party to this Treaty undertakes not to transfer any nuclear weapons into the *national* control of any non- nuclear State” (United States Arms Control and Disarmament Agency, 1966:347). The way in which the article is worded allows for the stationing of US nuclear weapons (under US control) in the territory of allied States. The Soviet draft, in response, closed any loopholes regarding nuclear control/ownership by allied States:

Parties to the treaty possessing nuclear weapons undertake not to transfer such weapons in any form, directly or indirectly, through third states or group of states to the ownership or control of states or groups of states not possessing nuclear weapons and not to accord to such states or group of states the right to participate in the ownership, control or use of nuclear weapons (Bourantonis, 1997:349).

Despite each block trying to mould the treaty to its advantage, the shadow of the Cuban Missile Crisis also contributed to a desire to cooperate to avoid future risks of escalation. Furthermore, the main goal of the treaty in question – halting the spread of nuclear weapons to other States outside the five that had already concluded successful tests by 1965 (the US, the USSR, the

UK, France, and China, henceforth the P5) – was in both States’ interest. After track two negotiations and compromises on both sides, there was agreement on the final text (Goldschmidt, 1980). After three years of negotiations, the NPT opened for signature in 1968 and entered into force in 1970.

The final text of the NPT embodied the goals envisioned by the superpowers. Despite theoretically resting on three pillars – nonproliferation, disarmament, and the peaceful uses of nuclear energy – there is far more emphasis on the first of those pillars. The first two articles, which covers nonproliferation, are extensive and cover all grounds, with specific language of what is and is not allowed under the treaty. In comparison, Article VI, which covers disarmament, presents vague language which is exploited by the recognised NWSs. The result is a treaty that legitimises nuclear possession by the P5, segregating its members between the ‘haves’ and the ‘have nots’ (Biswas, 2012), and consolidating the status-based symbolic values of nuclear weapons (Noda, 2022). In short, the NPT served to build the walls around the ‘nuclear club’, ensuring that no other State developed them.

The NPT was a major development in nuclear nonproliferation and arms control and remains to this day one of the most adhered to arms control treaties in history. In essence, the NPT became a legal instrument mainly tasked with thwarting the spread of nuclear weapons to other NNWSs. Despite the number of total NWSs (five), the vast majority of them belonged to the US and the USSR – just as it is today. In line with the trend of easing the tensions between the two, bilateral talks and agreements were needed. The late 1960s and 1970s also witnessed the first major efforts in this regard, starting with the SALTs.

From the mid-1960s, Johnson was keen on proposing a freeze on nuclear weapons developments to the Soviets. The logic was that in doing so, the US could maintain its nuclear superiority and spend its resources elsewhere. The proposal’s appeal came from reports from the CIA detailing the fragility of the Soviet economy and their likely inability to maintain a costly arms race and provide public resources to the population. Johnson and McNamara invited Soviet Premier Alexei Kosygin to discuss nuclear arms control and lay out the facts (at least according to US logic): 1) a nuclear arms race is costly and undesirable; 2) there is a mounting pressure from the US to build an ABM system; 3) unless there is an agreement to freeze both offensive and defensive developments, the US would be compelled to develop its ABM system; and 4) an ABM system would upset the balance, triggering a new iteration of the costly (and undesirable) arms race (Cameron, 2018).

It is important to note that ABM systems' effectiveness was highly questionable, especially when their costs are considered – approximately “three to ten times” (Cameron, 2018:88) the equivalent costs of offensive capabilities required to overwhelm them. Still, the Soviets initially rejected any agreements, arguing that ABM systems were defensive in nature, thus, they posed no threats to the US. As Cameron (2018) argues, Soviet understanding of the political side of the nuclear arms race was limited, since the Soviet nuclear programme remained under tight military control. Furthermore, since Khrushchev's ousting, achieving nuclear parity with the US became a priority, despite the struggling Soviet economy.

In June 1968, the Soviets agreed to talk in order to set an example to compel NNWSs to sign the NPT. Despite that, Johnson left office without any negotiations with the Soviets. The first meeting of SALT was on 17 November 1969, already under Richard Nixon, but the first meetings were unsuccessful, as negotiations quickly reached a stalemate. On 20 May 1971, however, Nixon announced publicly that negotiations were now moving forward and a formal agreement on ABM system limitations – as well as offensive weapons limitations – was in sight:

The Governments of the United States and the Soviet Union, after reviewing the course of their talks on the limitation of strategic armaments, have agreed to concentrate this year on working out an agreement for the limitation of the deployment of anti-ballistic missile systems (ABMs). They have also agreed that, together with concluding an agreement to limit ABMs, they will agree on certain measures with respect to the limitation of offensive strategic weapons [...] Intensive negotiations, however, will be required to translate this understanding into a concrete agreement (Nixon, 1971).

The ‘concrete agreements’ came the following year. On 26 May 1972, Nixon and Leonid Brezhnev signed the ABM Treaty and the Interim Agreement on the Limitation of Strategic Offensive Arms. The first set the number of ABM launchers to 200 a side (a number that would be halved in 1974) over two sites, for an indefinite duration. The latter froze the number of offensive missile launchers at 1,054 ICBMs and 656 Submarine-Launched Ballistic Missiles (SLBMs) for the US, and 1,409 ICBMs and 950 SLBMs for the USSR for five years (Cameron, 2018; Freedman and Michaels, 2019).

The most notable thing from the outcome of SALT I in terms of nuclear symbolism, however, is the fact that, as Freedman and Michaels (2019:436) argue, “Implicit in the agreement was a trade of Soviet numerical superiority in missiles for US superiority in technology”. Since the shift in symbolic perception towards qualitative superiority to the detriment of raw numbers, which was publicised in McNamara's 1967 speech in San Francisco, the size of US stockpiles

decreased, yet new developments – such as multiple independently targetable reentry vehicles (MIRVs) – were in full swing (Cameron, 2018; Freedman and Michaels, 2019).

The second round of SALT ranged from 1972 to 1979 and aimed to further limit strategic nuclear weapons. The goal was to set a threshold of 2,250 total delivery vehicles and ban any new weapons development. The new round of negotiations ran into a few issues, particularly due to the categorisation of more modern types of weapons, such as the US cruise missiles (Bertram, 1979). Still, a new agreement was signed on 18 June 1979 by President Carter and Secretary Brezhnev, denoting the positive prospect of arms control and of US-Soviet détente. After the turbulent Cuban Missile Crisis, in 1962, US-Soviet relations were stable, and the advancement of nuclear arms control talks were a prominent sign.

However, SALT II support was dwindling domestically and, as Freedman and Michaels (2019) argue, the chances of a two-thirds majority in the Senate for the ratification of the treaty were slim. When the USSR invaded Afghanistan on 24 December 1979, the situation drastically changed. President Carter withdrew the treaty from ratification consideration in the Senate and the period of stability in US-Soviet relations seemed to be over (Freedman and Michaels, 2019).

5.4. Cold War Swan Song

In November 1979, one month prior to the Soviet invasion of Afghanistan, Ronald Reagan announced his presidential campaign. Reagan was a stark critic of the Soviet Union and of all policies that included aspects of negotiation, which he often and readily labelled as appeasement. William Knoblauch (2017) argues that Reagan believed the majority of world issues stemmed from the USSR, while Beth Fischer (2000) labelled Reagan's administration the most anti-communist in US history. In his announcement, Reagan stated that:

During a time when the Soviet Union may enjoy nuclear superiority over this country, we must never waiver in our commitment to our allies nor accept any negotiation which is not clearly in the national interest [...] Negotiations with the Soviet Union must never become appeasement (Reagan, 1979).

The events of geopolitical events of 1979 reignited a feeling of strong nationalism in the US. Regarding the attempts to prioritise détente since the mid 1960s, Reagan believed it benefitted the Soviet Union far more than the US. In a radio commentary, Reagan remarked: “Détente – isn't that what a farmer has with his turkey – until thanksgiving day?” (Pach Jr., 2003 IN

Brownlee and Graham, 2003:89-90). In another analogy, he compared détente to the feeding of an alligator, evoking ideas of appeasement:

To those who think 'détente' is working because things seem to be quiet right now, it's always quiet when you are feeding the alligator – when you throw him an arm or leg every now and then [...] Under those circumstances [...] things are bound to be quiet – except for the munching and crunching (Pach Jr. IN Brownlee and Graham, 2003:90).

Reagan's anti-communist rhetoric – the “harshest rhetoric ever heard from a US President” (Gaddis, 2005:356) – resonated with the US public, leading him to a landslide victory in the 1980 elections. Reagan's election seemed to mark the end of détente. The new US president seemed to long for a ‘final showdown’ with the Soviet Union and his political goal was to roll back Soviet influence in the world.

In his first months in office, Reagan's Secretary of Defence Caspar Weinberger increased the country's military spending by 13 percent, revitalised all nuclear weapons programmes that Carter – who, as Kaplan (2020) states, abhorred nuclear weapons – had deactivated, and accelerated all other nuclear programmes. Most notably, however, was the use of language in Reagan's policies and documents.

In 1981, Reagan approved National Security Decision Directive (NSDD) 13, which presented guidance for the use of nuclear weapons and clearly stated that in case deterrence failed to avoid nuclear escalation, “the United States and its allies *must prevail*” (White House, 1981). Despite the fact that the Joint Chiefs of Staff held this notion since the 1950s, this was the first time the idea was accepted and reproduced by a US president. Nuclear war went from an unthinkable catastrophe under MAD to a ‘winnable’ strife, something that not even the most hawkish figures in US politics, such as Eisenhower and Henry Kissinger, believed.

Unsurprisingly, Reagan's administration was composed of likeminded people, that is, people who believed in the possibility of winning a nuclear war and that the US should consider this option. Reagan appointed Paul Nitze, a prominent figure of the conservative, anti-communist Committee on the Present Danger, as his chief arms negotiator. Richard Pipes, a historian who wrote a popularised essay called “Why the Soviet Union Thinks it Could Fight and Win a Nuclear War”, published in *Commentary* magazine, was the administration's Soviet affairs specialist. Furthermore, as an Arms Control and Disarmament Agency consultant, Reagan employed Keith Payne, who published an article called “Victory is Possible” (Kaplan, 2020).

Reagan's entourage clearly signals his thinking: although nuclear war should be avoided, considering the costs it would bring to the US, it was not 'unwinnable', let alone unthinkable.

As a result, Reagan was a stark critic of MAD, which he considered to be unreliable. In his views, the stabilising aspect of MAD was simply inexistent; in Reagan's own words, the prospect of peace was the closest when the US detained a monopoly on nuclear weapons, back in the mid-late 1940s:

Shouldn't it be obvious to even the staunchest believers in unilateral disarmament as the sure road to peace that peace was never more certain than in the years following W.W. II when we had the mightiest [military] force in the world and a monopoly on nuclear weapons? (Skinner *et al.*, 2002:481-482).

Similarly, the compromises of SALT were heavily criticised by Reagan, who considered a form of appeasement and something that granted asymmetrical advantages to the Soviets. Given the president's strong anti-communist views and, as a consequence, his belief that most of international political issues originated in or by the USSR, Reagan's scepticism went further, encompassing not only SALT, but any type of arms control agreement with the USSR:

At times Reagan directed his criticism specifically at this treaty; at times, he suggested that arms control agreements – especially with the Soviets – were a bad idea. “The Russians don't keep their word,” he stated categorically, and he cited former Secretary of Defense Melvin R. Laird, who wrote that the Soviets had “repeatedly, flagrantly, and... contemptuously violated the treaties to which we have adhered.” Whether or not the Soviets kept their word, historical experience, Reagan insisted, showed that arms control agreements neither brought nor maintained peace. “One thing stands out sharply,” he said in a radio broadcast in March 1978. “No nation which put it's faith in treaties but let it's [sic] military hardware deteriorate stayed around very long.” (Pach Jr. IN Brownlee and Graham, 2003:89).

Notwithstanding, some scholars argue that Reagan was a fierce advocate for nuclear abolition, in spite of his policies, political platform, and distrust of the Soviets and engaging in arms control efforts with them. Kaplan (2020:150), for instance, states that “At heart, though, and dating back several decades, Ronald Reagan detested nuclear weapons and, as passionately as Jimmy Carter, wanted to see them abolished”. Paul Lettow (2006) wrote extensively about Reagan's nuclear abolitionist aspirations, arguing that the reason behind the president's aggressive politics and nuclear build-up was to discourage the Soviet Union from competing in the first place. Similarly, these scholars argue that Reagan's flagship defence program – the Strategic Defense Initiative (SDI, commonly known as the Star Wars programme) – sought to undermine the effectiveness of nuclear weapons, facilitating disarmament efforts. Chester Pach Jr. also argues that despite Reagan's criticism of SALT and arms control with the Soviets,

Reagan also said that he favored a verifiable agreement that called for equality in U.S. and Soviet nuclear strength and that diminished “the effect of nuclear weapons on world politics.” Ultimately, he hoped for “a reduction of these nuclear weapons to the point that neither one of us represents a threat to the other.” (Pach Jr. IN Brownlee and Graham, 2003:89).

One thing that played a role in Reagan’s willingness to hold bilateral arms control talks with the Soviets was the growing anti-nuclear movement, not only in the US, but in Europe. Considering the death of détente and the rising tensions between the two superpowers, US allies in Europe were pushing for the removal of US missiles in Europe – the so-called Euro-missiles (Kaplan, 2020). Domestically, Reagan’s combative and aggressive stance provoked a massive nuclear scare. With the establishment of a pacifist movement after the Vietnam War, the anti-nuclear movement grew under the umbrella of the Nuclear Weapons Freeze Campaign (NWFC).²¹ At first, not much attention was paid to the NWFC, but by 1982, the movement grew to the point of requiring action from the White House. In response, Reagan created the Nuclear Arms Control Information Policy Group to check the influence the NWFC had on the population and to reshape the debate in favour of the administration (Knoblauch, 2017; Santese, 2017).

In a March 1983 speech, Reagan directly addressed the freeze movement, arguing that its goals hindered peace and that peace must be achieved through strength. Additionally, evoking religious ideals to present a clear divide between the West and the East – good and evil – Reagan fuelled US-Soviet animosity by explicitly labelling the Soviet Union as an ‘evil empire’ whose ‘last pages are being written’:

[...] we will never compromise our principles and standards. We will never give away our freedom. We will never abandon our belief in God. And we will never stop searching for a genuine peace. But we can assure none of these things America stands for through the so-called nuclear freeze solutions proposed by some. The truth is that a freeze now would be a very dangerous fraud, for that is merely the illusion of peace. The reality is that we must find peace through strength [...] I urge you to speak out against those who would place the United States in a position of military and moral inferiority [...] So, in your discussions of the nuclear freeze proposals, I urge you to beware the temptation of pride – the temptation of blithely declaring yourselves above it all and label both sides equally at fault, to ignore the facts of history and the aggressive impulses of an evil empire, to simply call the arms race a giant misunderstanding and thereby remove yourself from the struggle between right and wrong and good and evil. I ask you to resist the attempts of those who would have you withhold your support for our efforts, this administration's efforts, to keep America strong and free, while we negotiate real and verifiable reductions in the world's nuclear arsenals and one day, with God's help, their total elimination [...] I believe that communism is another

²¹ For more on the NWFC and its influence on nuclear policy, see Knoblauch, 2017 and Santese, 2017.

sad, bizarre chapter in human history whose last pages even now are being written (Reagan, 1983a).

In a way, Reagan was torn between his hawkish anti-communist sentiment and his dovish nuclear abolitionism. On 11 February 1983, Reagan met with the Joint Chiefs of Staff to discuss the MX missiles mobile basing scheme, and during the meeting, he had a ‘super idea’ which would bridge both his anti-communist and anti-nuclear sides. As he writes in his journal,

An almost 2 hr. lunch with Joint Chiefs of staff. Most of time spent on MX & the commission, etc. Out of it came a super idea. So far the only policy worldwide on nuclear weapons is to have a deterrent. What if we tell the world we want to protect our people, not avenge them; that we’re going to embark on a program of research to come up with a defensive weapon that could make nuclear weapons obsolete? (Reagan IN Brinkley, 2007:130).

The ‘super idea’ referred to the SDI, which was announced the following month. The SDI proposed an ABM defence system which would use outer space-based laser weapons to intercept any incoming missiles in US – and in Reagan’s utopic imaginary, Western – territory. The ‘Star Wars speech’, as it became known, was not circulated amongst high officials of the White House. The portion towards the end, where Reagan unveils his ‘super idea’ was kept a secret; Secretary of Defence Caspar Weinberger and Secretary of State George Schultz were kept in the dark, learning about Reagan’s views as Reagan was speaking. In his speech, Reagan called upon the same scientific community that gave the world nuclear weapons to also provide them with a way to render them obsolete:

Let me share with you a vision of the future which offers hope. It is that we embark on a program to counter the awesome Soviet missile threat with measures that are defensive. Let us turn to the very strengths in technology that spawned our great industrial base and that have given us the quality of life we enjoy today. What if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies? I know this is a formidable, technical task, one that may not be accomplished before the end of this century [...] But with these considerations firmly in mind, I call upon the scientific community in our country, those who gave us nuclear weapons, to turn their great talents now to the cause of mankind and world peace, to give us the means of rendering these nuclear weapons impotent and obsolete (Reagan, 1983b).

In reality, the possibility of such a programme was zero. ABM systems, as McNamara had discovered decades earlier, were largely ineffective and costly, a finding that prompted Nixon to negotiate an ABM treaty in the first place in 1972. Reagan’s scientific advisors blatantly told the president that SDI had no validity with current technology – something Reagan acknowledged in his speech. Reagan seemed to be the only person who believed in SDI, but

the rest of the administration, despite their complete lack of trust in it, reckoned that perhaps the Soviets would believe. After the announcement of SDI, US-Soviet relations became even more strained and in November 1983, the Soviets walked out of a bilateral nuclear arms control negotiations, shutting down communications between the two superpowers (Kaplan, 2020). The lack of communications was not well received by the public. As a result, Reagan decided to tone it down and, in January 1984, gave a speech promoting disarmament and ‘offering’ peace:

With regard to nuclear weapons, the simple truth is America's total nuclear stockpile has declined. Today we have far fewer nuclear weapons than we had 20 years ago, and in terms of its total destructive power, our nuclear stockpile is at the lowest level in 25 years [...] But this is not enough. We must accelerate our efforts to reach agreements that will greatly reduce nuclear arsenals, provide greater stability, and build confidence [...] In our approach to negotiations, reducing the risk of war, and especially nuclear war, is priority number one. A nuclear conflict could well be mankind's last. And that is why I proposed over 2 years ago the zero option for intermediate-range missiles. Our aim was and continues to be to eliminate an entire class of nuclear arms. Indeed, I support a zero option for all nuclear arms. As I've said before, my dream is to see the day when nuclear weapons will be banished from the face of the Earth [...] If the Soviet Government wants peace, then there will be peace (Reagan, 1984).

Due to a series of changes in the Soviet leadership – Yuri Andropov died in February, 1984 and Konstantin Chernenko in March, 1985 – the US had to wait for a response. Chernenko’s successor was the reformist Mikhail Gorbachev. The new Soviet Premier was well aware of the dire state of Soviet economy and more importantly, he knew that if the Soviet Union was to survive, the arms race had to end. For this reason, Reagan and Gorbachev met to negotiate on November 19-20, 1985, at the Geneva Summit.

Negotiations started tense, but after Reagan asked Gorbachev in private whether the Soviet Union would come to the US aid in case of an alien attack – to which Gorbachev replied positively – both leaders became more at ease and negotiations flowed better (Kaplan, 2020). Reagan was known to use stories to make a point and this case, when international security was at stake, illustrates that. At the end of the two-day summit, both leaders released a joint statement, declaring that “a nuclear war cannot be won and must never be fought” (White House, 1985). The statement is a stark contrast to Reagan’s previous views, particularly those expressed on the National Security Decision Directive 13, which dictated that the US must prevail in case of nuclear war. Negotiations advanced, but eventually stalled. In order to break the deadlock, Gorbachev asked to meet Reagan, and on 11-12 October 1986, at the Reykjavik Summit, both leaders met.

The Reykjavik Summit of 1986 is, perhaps, the closest humankind has ever been to an agreement on total nuclear disarmament. With a lighter mood and more relaxed and promising relations than at the start of the Geneva Summit, negotiations advanced quickly. From the start, Gorbachev proposed a comprehensive treaty, reducing strategic nuclear weapons by 50% and eliminating all intermediate-range missiles in Europe. Each side seemed to enjoy the other's willingness to strike a deal, and the proposals went back and forth, each time with further cuts. Negotiations reached a point when Gorbachev proposed cutting all legs of the nuclear arsenal – ICBMs, SLBMs and aircraft bombers, to which Reagan and Schultz agreed. The obstacle, however, was SDI. Both sides were ready to agree on a complete elimination of all strategic offensive weapons, yet neither would budge on the testing of missile defence in outer space. As Kaplan argues:

It was a tragicomic denouement to ten hours of substantive conversation, in which the leaders of the two superpowers came so close to ending the nuclear arms race, obstructed only by their fantasy and fears – Reagan's fantasies, Gorbachev's fears – about a high-tech super-dome that hadn't yet been conceived, much less developed, tested, built, or deployed (Kaplan, 2020:170).

After the failure to overcome the singular issue of SDI at the last moment, the Reykjavik Summit ended with no agreement. Nevertheless, one year later in December 1987, Gorbachev and Reagan signed the Intermediate-Range Nuclear Forces Treaty (INF), which followed part of the propositions of Reykjavik and banned all US and Soviet medium-range missiles in Europe – 2,600 in total (Kaplan, 2020). The nuclear scare of the early 1980s, fomented by Reagan's hawkish first term, was the swan song of the Cold War. What the second term, nuclear abolitionist Reagan and reformist Gorbachev attempted to do was beyond negotiating a new standard for the balance of terror; they were focused on ending the Cold War.

5.5. A Responsible Nuclear Leadership

The most important events regarding nuclear weapons arguably happened during the early 1960s. As a consequence, the decade of nuclear crises, particularly the close calls of the 13 days in October 1962, had a profound impact on the course of events of the nuclear age. Fortunately, these consequences were somewhat positive: the realisation that nuclear warfare was something to be avoided at all costs – something that was perhaps believed in theory but was now more palpable than ever – and the understanding that even a limited number of nuclear weapons was already more than sufficient to cause irreparable damage and unacceptable costs to any side.

This led to a shift in symbolic perceptions of nuclear weapons. Prior to the crises, they were seen as a quantitative proxy for prestige and ‘victory’ in the Cold War – that is, the larger the arsenal, the better. After Cuba, when Kennedy realised that the limited quantity of weapons the USSR had in Cuba was enough to deter him, quantitative superiority largely lost its importance. There were, however, political constraints tying the administration’s nuclear policy. The public was still sold on Kennedy’s campaign rhetoric arguing for more active participation and commitment to the arms race. The plan was then to reshape the concept of superiority towards qualitative aspects of nuclear weapons, still soothing public anxieties about the US position in the Cold War and the need for a US superiority, whilst steering away from a costly and dangerous quantitative build-up.

Khrushchev’s letter to Kennedy after Cuba reveals how the events of 1962 pushed arms control to the top of the agenda. An agreement for the LTBT, which had been under slow negotiations, was reached and the treaty opened for signature the following year, in 1963. In July, 1963, one month prior to the finalisation of the LTBT, Kennedy, who sought a way out of the arms race, seized the opportunity and delivered a speech linking the idea of arms control and disarmament to the strengthening of US nuclear identity of a responsible nuclear power, as well as making the clear distinction between countries “stable and unstable, responsible and irresponsible” (Kennedy, 1963b) establishing how dangerous it would be for the world if these unstable and irresponsible countries acquired nuclear weapons.

At the same time the speech postulated that the US was a responsible nuclear power pursuing noble goals of peace through arms control and disarmament, it also helped build the walls of what would soon be the ‘nuclear club’, legitimised by the NPT. The distinction between responsible and irresponsible countries also dialogues with Gusterson’s idea of ‘nuclear orientalism, in which ‘Third World’ countries acquiring nuclear weapons is perceived as catastrophic, whereas nuclear possession by ‘First World’ countries is perceived as a necessary condition to the maintenance of peace (Gusterson, 1999).

Regarding the emphasis on cultivating the US nuclear identity of a responsible and peaceful nuclear power, George Ball’s memo of 1964 during discussions of possible nuclear use in the Vietnam War also reveal the importance of maintaining a pristine image. Even with US victory at stake, Ball’s memo was almost entirely focused on the political consequences of nuclear use, concluding that it would bring about severe reputational costs to the US which, in turn, would jeopardise US nuclear identity. In that sense, it was better for US prestige and its US nuclear

identity to exercise restraint even at the cost of a humiliating military defeat than to use nuclear weapons. In doing so, the US managed to strike a balance between the prestige of possessing nuclear weapons and its non-use, avoiding the opprobrium attached to nuclear use.

With the symbolic focus of nuclear weapons now resting on qualitative rather than quantitative aspects, and the strong emphasis on maintaining a nuclear identity of responsible leadership, the moment was ripe for arms control and disarmament efforts and negotiations, contributing to a long period of *détente* in the Cold War. Johnson, like Kennedy, had no interest in fuelling the arms race, opening the door for negotiations of a comprehensive treaty of nuclear non-proliferation.

Negotiations for the NPT started in 1965 and, unlike the long and stalled bilateral negotiations attempt – such as the LTBT – three years later it opened for signature, and in 1970 it entered into force. The NPT served a plethora of purposes. It was portrayed as a necessary security measure to thwart the spread of these ‘dangerous’ weapons whilst legally allowing a select number of countries to possess them, despite UN charter principles of sovereign equality. Moreover, the NPT legitimised a segregation between the ‘nuclear haves’ and the nuclear have-nots’ (Biswas, 2014; Noda, 2022). In doing so, the NPT was instrumentalised to reproduce status-based symbolic values of nuclear weapons due to the exclusivity of nuclear possession. In other words, the NPT reinforced ideas that linked nuclear possession to international status and prestige. In arguing for the necessity to keep its nuclear weapons – despite its alleged desire to disarm – to maintain the peace, the US strengthens its nuclear identity of a responsible and peaceful nuclear power (Noda, 2022).

Nuclear arms control efforts marked the late 1960s and 1970s – a product of the shift of nuclear symbolism abandoning quantitative superiority for qualitative aspects. Even though Nixon did not believe in any normative taboo restricting the use of nuclear weapons (Tannenwald, 2006; 2007), he, too, showed restraint and prioritised *détente* instead of confrontation, and the SALT negotiations illustrate well not only his compromising stance towards the Soviets, but also the newly established symbolic focus on the qualitative side of nuclear weapons.

When negotiating the reduction of strategic weapons, for instance, the US development of MIRVs gave Nixon security to establish quantitative reductions of their stockpiles. The development of MIRVs, amongst other technological and qualitative advancements in the nuclear industry, had more value than raw numbers. After Reagan won the election, he increased military spending by an astonishing 13 percent (Kaplan, 2020) and Knoblauch

(2017:5) argues that Reagan was responsible for the “largest peacetime arms buildup in American history”. Nevertheless, the gross number of nuclear weapons was kept steady in the early 1980s (Kristensen *et al.*, 2022). With the focus now on qualitative superiority, a higher defence budget did not mean more weapons, but more advanced weapons.

Figures 10 and 11 contrast the data of US nuclear stockpiles and military spending from 1963 to 1991 and, more importantly, the impact of McNamara’s speech of 1967 reshaping the concept of nuclear superiority. Both the number of nuclear warheads in the US arsenal (31,255) and its military spending (9.4% of GDP) peaked in 1967. From that moment onwards, under a new guideline of superiority, the raw number of nuclear weapons decreased, allowing for SALT to set limits to the superpower arsenals in 1972. After the period of high tension in the early 1960s, military spending also decreased, with a spike in 1982 under Reagan. The budget, however, was destined not to the development of more weapons, but to their improvement and modernisation, as the data show. With the focus now on qualitative superiority, a higher defence budget did not mean more weapons, but more advanced weapons.

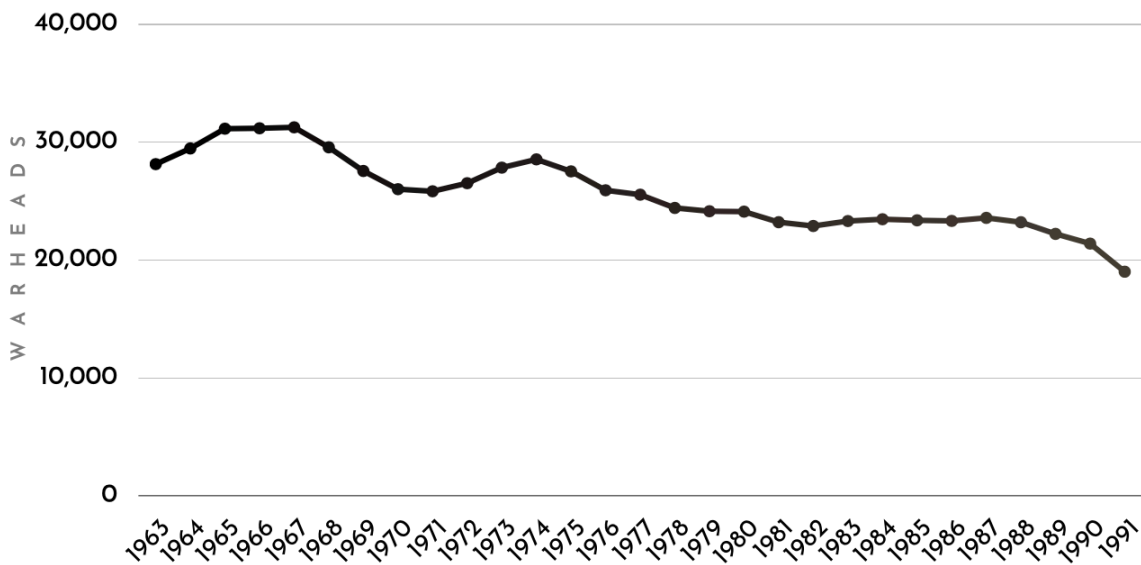


Figure 12: US Nuclear Stockpile, 1963-1991. Elaborated by the author with data from Kristensen *et al.*, 2022.

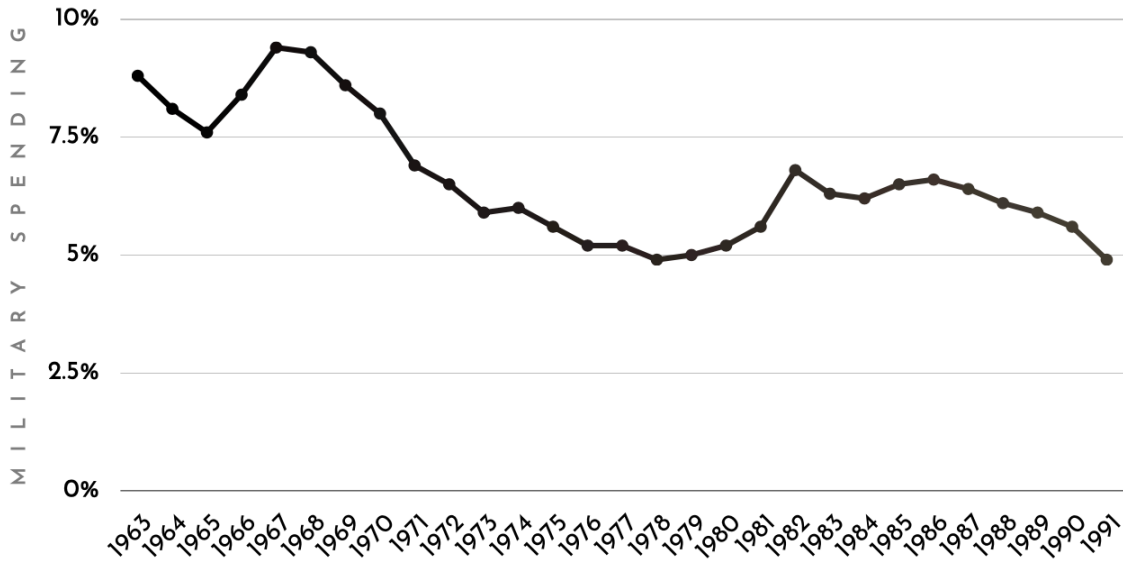


Figure 13: US Military Spending as Share of GDP, 1963-1991. Elaborated by the author with data from the Stockholm International Peace Research Institute, 2022.

With a lifting of the heavy domestic pressure to further the nuclear arms race and the way paved for arms control treaties, the tenets of US nuclear identity. The US was now not only still superior – a statement repeatedly reinforced by McNamara in his 1967 speech – but now there were actions and policies to prove the rhetoric of a benevolent, responsible nuclear power that only sought peace; the US was actively pursuing arms control negotiations, metaphorically suing for peace.

The late 1960s and 1970s were periods of relative stability, where détente was prioritised. The Nixon administration signed and ratified the first major bilateral nuclear arms control treaty (SALT I) and negotiations for SALT II were promising, with an agreement even being signed in 1979 by the Carter administration. However, the Soviet invasion of Afghanistan on 24 December 1979 and, consequently, the landslide victory of Ronald Reagan in 1980 cemented the end of détente.

In his final statement during the last presidential debate, in October, 1980, the hawkish Reagan, addressing the public posed the following questions: “Is America as respected throughout the world as it was? Do you feel that our security is as safe, that we’re as strong as we were 4 years ago?” (Reagan, 1980). One of the central differences between the two candidates was their views on the nuclear arms race. Whilst Carter seemed to believe that the SALT II agreement

was the best options available, Reagan strongly opposed it. In his view, SALT II harmed both areas of his final statement: US international prestige and security.

This is not the first time that a relationship is established between nuclear weapons and prestige throughout US history. In fact, I have extensively argued throughout this research that status-based symbolic values of nuclear weapons are, at the very least, equally as important as its material capabilities. Carter detested nuclear weapons, yet he just as Kennedy before him, understood their necessity and role, not only materially, but also symbolically. From the moment that Truman portrayed nuclear weapons as desirable symbols and, consequently, sources of power and status, nuclear weapons became central to US foreign policy. Despite his opposite approach, Reagan was also strongly against nuclear weapons (Lettow, 2005; Kaplan, 2020). In a way, the ‘double game’ Cameron (2018) argued both Kennedy and Johnson played can also be extended to Carter and, to some extent, Reagan.

The fact was that nuclear weapons were essential – not only due to their deterring power, as was officially argued, but also due to their symbolism. Richard Lebow (2016) argues that nuclear weapons became a ‘status marker’ in the second half of the 20th century. However, the form through which status is gained has changed. In the 1940s, the possession of nuclear weapons was the ultimate status symbol. When the US lost its nuclear monopoly, accruing a larger arsenal and ‘winning’ the nuclear arms race, consequently, the Cold War became the new standard. After the close calls of the 1960s – and the desire to mitigate the costs of the arms race – status was now achieved through the modernisation and other qualitative aspects of nuclear weapons, as well as through the country’s willingness to negotiate reductions and disarm ‘for the sake of peace’. Nuclear possession, non-use, and leadership in arms control and disarmament efforts all granted status and, consequently, strengthened US nuclear identity, which marked this period of US nuclear history.

6. 1991-2016: Nuclear Invisibility

On 9 November 1989, the Berlin Wall came down. Shortly after, on 25 December 1991, the Soviet Union collapsed, and its dissolution marked the end of the Cold War. The result was the US emerging as the sole superpower and, as a consequence, a wave of optimism regarding the balance of terror and the prospects of nuclear war gained strength (Cimbala, 2005). These views were not unfounded, considering key events that although important, are often overshadowed by the significance of the fall of the Soviet Union.

The Presidential Nuclear Initiatives (PNIs), which took place in September and October 1991, showcased how nuclear tension had decreased between the two superpowers. Reagan's successor, George H.W. Bush, announced a package of unilateral measures aimed at further reducing the number of nuclear weapons, this time focusing on TNWs. A month later, Gorbachev reciprocated, revealing the USSR's unilateral measures to reduce its nuclear forces. As the Cold War was drawing to a close and both Cold Warriors were implementing one-sided reductions, the role of nuclear weapon seemed to be diminishing, as humankind entered the post-nuclear era.

During the 1990s, US-Russia relations were promising, relegating the 'need' for nuclear weapons for deterrence to the background, as US military culture was shifting towards what Stephen Cimbala (2005:2) calls "information-based warfare". With the imminent threat of a 'hot' war virtually over, nuclear weapons were no longer on the spotlight and there were high expectations for radical changes in nuclear policy and forces. Bush, Sr.'s PNI still during the Cold War illustrated such disruptive changes. His successor, Bill Clinton, was expected to follow suit, particularly given the end of the Cold War and the USSR. The announcement of the first Nuclear Posture Review (NPR), in 1993, and the appointment of Les Aspin and Ash Carter to the Secretary of Defence signalled Clinton's willingness to not only make US nuclear policy more transparent, but also to change it. However, US nuclear policy remained largely the same (Sauer, 2005).

Four months into his presidency, George W. Bush announced that the US would "change the size, the composition, the character of our nuclear forces in a way that reflects the reality that the Cold War is over", whilst still maintaining that "Nuclear weapons still have a vital role to play in our security and that of our allies" (Bush, 2001). Four months later the situation

changed. The 11 September 2001 attacks in the US significantly changed the entire international security landscape, nourishing fears of nuclear terrorism.

Prior to 2001, nuclear proliferation was identified as an issue, yet almost exclusively centred on other States. Now, nuclear proliferation – particularly to non-State actors, such as Al Qaeda – was pushed to the top of the agenda of international security threats (Sauer, 2005). Although no longer protagonists, nuclear weapons retained their symbolic value and status, while nuclear policy remained stale ‘relics’ of the Cold War. The surge of fear of nuclear proliferation – a feeling that is still strong more than 20 years later – hindered the optimistic disarmament prospects of the 1990s, as part of the argument of the pro-nuclear establishment was that nuclear weapons were now needed for the new purpose of defending the nation – and the world – against terrorist organisations. Similarly, after the end of the Cold War – and the Warsaw Pact – NATO’s *raison d’être* was threatened. The organisation, centred around nuclear security assurances, became another argument under the guise of protecting allies and maintaining the peace, as to why nuclear weapons could not be relinquished.

In fact, the pro-nuclear establishment – heavily composed of and/or backed by the military-industrial complex – had an overwhelming influence on nuclear policy, just as Eisenhower had foretold in his farewell address in 1961. Tom Sauer (2005) lists the strength of this nuclear bureaucracy as one of the main reasons why US nuclear policy was inert after the end of the Cold War. Both Clinton and Bush were unable – or unwilling – to fight the nuclear establishment for meaningful nuclear policy change. Even Barack Obama, a stark advocate for nuclear disarmament and winner the 2009 Nobel Peace Prize for his speech in Prague about a nuclear weapons-free world, failed to overcome the obstacles set by nuclear bureaucracy and bring US nuclear policy to post-Cold War realities. Sauer (2005) labels US nuclear policy after the Cold War as ‘nuclear inertia’, insofar as official policy was still centred on high-alert, maximum deterrence, with no NFU declaratory policies, despite the radical changes in the geopolitical context. In the post-Cold War world, nuclear weapons were no longer protagonists, yet the pro-nuclear establishment still had a vested interest in maintaining the status quo – a latent issue to this day.

More recently, nuclear weapons returned to the centre stage. The election of Donald Trump, in 2016, prompted a plethora of questions regarding the role of nuclear weapons. Trump’s ‘Twitter Diplomacy’, making explicit threats of nuclear use against other countries was unprecedented. Presidential discourse seemed to break the historically maintained protocols of

the White House, leading to internal strife – such as debates whether presidential sole authority of nuclear use was constitutional. For this research, the timeframe I analysed goes as far as 2016. However, several events of importance have happened since, such as rising tensions between the US and Russia, North Korea, and Iran, the increasing erosion of nuclear arms control treaties, and signs of a potential new technological arms race amongst others. To this end, in the last section of this chapter, I address these issues, considering whether there are elements that suggest a new shift of symbolic perceptions of nuclear weapons.

6.1. After the Storm

The Reykjavik Summit of 1986 may not have foretold the end of the Cold War, but it certainly presented concrete elements of a future of a positive relationship between both superpowers after a period of renewed tensions. The fast-paced negotiations almost reached a crucial agreement that would see an overhaul in both countries' national defence with the elimination of nuclear weapons. Despite the missed opportunity, however, the summit served as evidence that there was a willingness to cooperate and to disarm – and the INF treaty, concluded the following year, illustrated that.

At the beginning of his first term, Reagan showed a stern stance regarding US-Soviet relations. His harsh criticism of SALT, labelling as appeasement, the 'Evil Empire' speech and the rollback nature of the Reagan Doctrine showed that he was determined to fight the Soviet union head-on. Throughout his presidency, however, Reagan's position began to soften. The Geneva Summit of 1985 was a turning point, and Reykjavik was an appendix of that. In 1988, Reagan visited Moscow for the first time and, in stark contrast to his strong opinions and moral judgments of the Soviets, he declared that his labelling of the USSR as an 'evil empire' referred to "a different time, a different era" (Meisler, 1988).

In fact, Reagan's views on Soviets had evolved throughout his presidency, partially due to his frequent meetings with Suzanne Massie, who played a role in introducing Reagan to elements of Soviet culture that resonated with him – such as debunking the idea that the Soviet Union was entirely atheist (Malinkin, 2023). This change of stance was an important contributing factor to ending the Cold War and establishing peaceful and fruitful relations between the two superpowers. Reagan's visit to Moscow – and the Moscow Summit of 1988 – was an important step in this direction. When speaking to a group of students from Moscow State University, Reagan emphasised the construction of a new chapter of US-Soviet relations based on

“friendship and closeness” and praised Soviet culture and the soviet people with a plethora of references to key elements of Soviet history and culture:

Let me say it's also a great pleasure to once again have this opportunity to speak directly to the people of the Soviet Union. Before I left Washington, I received many heartfelt letters and telegrams asking me to carry here a simple message [...] It is a message of peace and good will and hope for a growing friendship and closeness between our two peoples [...] America is a nation made up of hundreds of nationalities. Our ties to you are more than ones of good feeling; they're ties of kinship [...] But I hope you know I go on about these things not simply to extol the virtues of my own country but to speak to the true greatness of the heart and soul of your land. Who, after all, needs to tell the land of Dostoyevsky about the quest for truth, the home of Kandinsky and Scriabin about imagination, the rich and noble culture of the Uzbek man of letters Alisher Navoi about beauty and heart? The great culture of your diverse land speaks with a glowing passion to all humanity (Reagan, 1988).

After the Moscow Summit of 1988, the Joint Declaration of the US and the USSR materialised the existing optimism regarding not only the future of nuclear arms control and disarmament, but also the prospect of lasting peace. Reagan and Gorbachev both reaffirmed their famous statement from 1985 that a nuclear war cannot be won and must never be fought. Furthermore, they manifested their vow not to seek nuclear superiority – thus ending the nuclear arms race. The Joint Declaration also highlighted factual advancements in these areas, such as the successful conclusion of the INF treaty, as well as promising ongoing talks regarding the first Strategic Arms Reduction Treaty (START I). The Moscow Summit, although not as successful as what the Reykjavik Summit of 1986 could have been, represented an important step towards nuclear disarmament and ending the Cold War.

Continuing the trend towards reduction and disarmament efforts, Reagan’s successor, George H.W. Bush and Gorbachev signed the START I on 31 July 1991, a treaty that proposed massive reductions and limitations to the total number of nuclear warheads and ballistic missiles each superpower could deploy. Bush, however, was reportedly frustrated with the bureaucratic processes of arms control and decided to take action (Kaplan, 2020). Months before the dissolution of the USSR, Bush, Sr. announced a series of unilateral measures to reduce tensions towards the goal of contributing to peace – the PNIs. In a televised speech on 27 September 1991, Bush, Sr. talked about the (positive) changes happening worldwide. Specifically, he talked about the increasing liberties in the East and how the new scenario required new approaches to security, including nuclear policy:

Most recently, we've seen the peoples of the Soviet Union turn to democracy and freedom, and discard a system of government based on oppression and fear [...] Today, America must lead again, as it always has, as only it can.

And we will. We must also provide the inspiration for lasting peace [...] we can now take steps to make the world a less dangerous place than ever before in the nuclear age. A year ago, I described a new strategy for American defenses, reflecting the world's changing security environment. That strategy shifted our focus away from the fear that preoccupied us for 40 years, the prospect of a global confrontation [...] We are now moving to reshape the U.S. military to reflect that concept. The new base force will be smaller by half a million than today's military, with fewer Army divisions, Air Force wings, Navy ships, and strategic nuclear forces [...] As I just mentioned, the changes that allowed us to adjust our security strategy a year ago have greatly accelerated. The prospect of a Soviet invasion into Western Europe, launched with little or no warning, is no longer a realistic threat. The Warsaw Pact has crumbled [...] New leaders in the Kremlin and the Republics are now questioning the need for their huge nuclear arsenal. The Soviet nuclear stockpile now seems less an instrument of national security, and more of a burden. As a result, we now have an unparalleled opportunity to change the nuclear posture of both the United States and the Soviet Union. If we and the Soviet leaders take the right steps -- some on our own, some on their own, some together -- we can dramatically shrink the arsenal of the world's nuclear weapons. We can more effectively discourage the spread of nuclear weapons. We can rely more on defensive measures in our strategic relationship. We can enhance stability and actually reduce the risk of nuclear war. Now is the time to seize this opportunity [...] I am announcing today a series of sweeping initiatives affecting every aspect of our nuclear forces on land, on ships, and on aircraft (Bush, Sr., 1991).

The president proceeded to list a plethora of new guidelines for US military – and nuclear – policies, making radical changes aiming to adapt US policies to new realities, by removing all nuclear weapons from surface ships, conventional submarines, and tactical aircraft, for instance (Kaplan, 2020). With the lack of imminent threat of escalation towards thermonuclear war, there was seemingly no reason to maintain Cold War policies. In the same vein, changes were happening internally as well. After the election of Bush, Sr., Franklin Miller, a Deputy Assistant Secretary of Defence for Nuclear Forces and Arms Control Policy, reviewed US nuclear war plans, which was largely still based on SIOP-62 from the days of the nuclear crises of the 1960s. Miller noticed that the US nuclear plans did not reflect past US presidents' directives – ignored by the military war planners – but also showcased gross miscalculations regarding nuclear attack options (Kaplan, 2020). One of the many examples that Kaplan (2020) mentions is the provisions to hit a Soviet transportation network with 725 nuclear weapons – an amount more than sufficient to cause irreparable damage to societies worldwide (Pearce and Denkenberger, 2018).

From that moment on, nuclear arms control apparently became a standard practice, and the utopic dream of nuclear disarmament was seemingly within reach. The official dissolution of the USSR and the promising relationship between the US and Russian president Boris Yeltsin all contributed to this scenario. Four months later, Bush, Sr. announced further cuts in his State

of the Union Address, withdrawing short-range weapons from allied territories in Europe and in South Korea. The ‘Communist threat’ that loomed over the West for decades was over, as “communism died this year” and “by the grace of God, America won the Cold War” (Bush, Sr., 1992). Bush, Sr.’s speech emphasised US role as the major winners, consolidating their global recognition of the ‘trusted’ and ‘righteous’ hegemon of the International System:

Much good can come from the prudent use of power. And much good can come of this: A world once divided into two armed camps now recognizes one sole and preeminent power, the United States of America. And they regard this with no dread. For the world trusts us with power, and the world is right. They trust us to be fair and restrained. They trust us to be on the side of decency. They trust us to do what's right [...] Two years ago, I began planning cuts in military spending that reflected the changes of the new era. But now, this year, with imperial communism gone, that process can be accelerated. Tonight I can tell you of dramatic changes in our strategic nuclear force. These are actions we are taking on our own because they are the right thing to do. After completing 20 planes for which we have begun procurement, we will shut down further production of the B-2 bombers. We will cancel the small ICBM program. We will cease production of new warheads for our sea-based ballistic missiles. We will stop all new production of the Peacekeeper missile. And we will not purchase any more advanced cruise missiles (Bush, Sr., 1992).

Moreover, the US also took unilateral steps towards the dismantlement of MIRVed ICBMs (Kaplan, 2020). The argument for this effort stemmed from Miller’s radical revision of SIOP and a nuclear war plan that more accurately reflected post-Cold War realities. Franklin Miller was by no means an advocate for nuclear disarmament. He believed in deterrence and maintaining a policy of maximum deterrence (Sauer, 2005), yet the state of SIOP under the current climate was difficult to justify (Kaplan, 2020). Land-based MIRVed ICBMs would eventually be banned when, in January 1993, outgoing president Bush, Sr. and Yeltsin signed START II – even before START I entered into force. The reversal of “the most destabilizing action in the history of the arms race” (Kaplan, 2020:196) fomented even more optimism for the end of US-Russian hostilities and towards nuclear disarmament.

International threats and crises seemed a relic of the past now; consequently, Bush, Sr., whose reputation was built upon these aspects of his leadership, lost the 1992 elections to Democrat Bill Clinton, whose platform was built on revamping a neglected economy (Freedman and Michaels, 2019; Kaplan, 2020). Clinton was far more interested in economic issues than security or nuclear issues; the Cold War was over, the USSR was no more, Yeltsin was seen as a weakened partner, and there seemed to be no challenges to US power.

Secretary of Defence Les Aspin and Assistant Secretary of Defence for Nuclear Security and Counterproliferation Ashton Carter had hopes to take US nuclear policy to the 21st Century. In their views, there was no need for a policy of maximum deterrence. Miller had already scaled the SIOP back, and with the trend of nuclear reductions since the mid 1980s, both Aspin and Carter aspired to reshape nuclear policy to better reflect the current climate. In the first year of the Clinton administration, Aspin commissioned the Nuclear Posture Review (NPR), a document that explicitly outlined US nuclear policy, current status of nuclear forces, and the role of nuclear weapons to national security.

The 1994 NPR was the first of its kind. Unsurprisingly, Ashton Carter, who was the co-chair of the steering group, responsible for conducting the NPR, met heavy resistance from military hardliners who wished to stay the course of US nuclear policy. In the end, the outcomes of the NPR were published as a press release and a few slides in 1994. Despite the intense strife within the steering group of the NPR – where Carter was in an unfavourable position – NPR publications acknowledged a reduced role of nuclear weapons in US national security strategy (Figure 14) in the post-Cold War world. Moreover, the publication also reviewed options for further reductions (Figure 15).

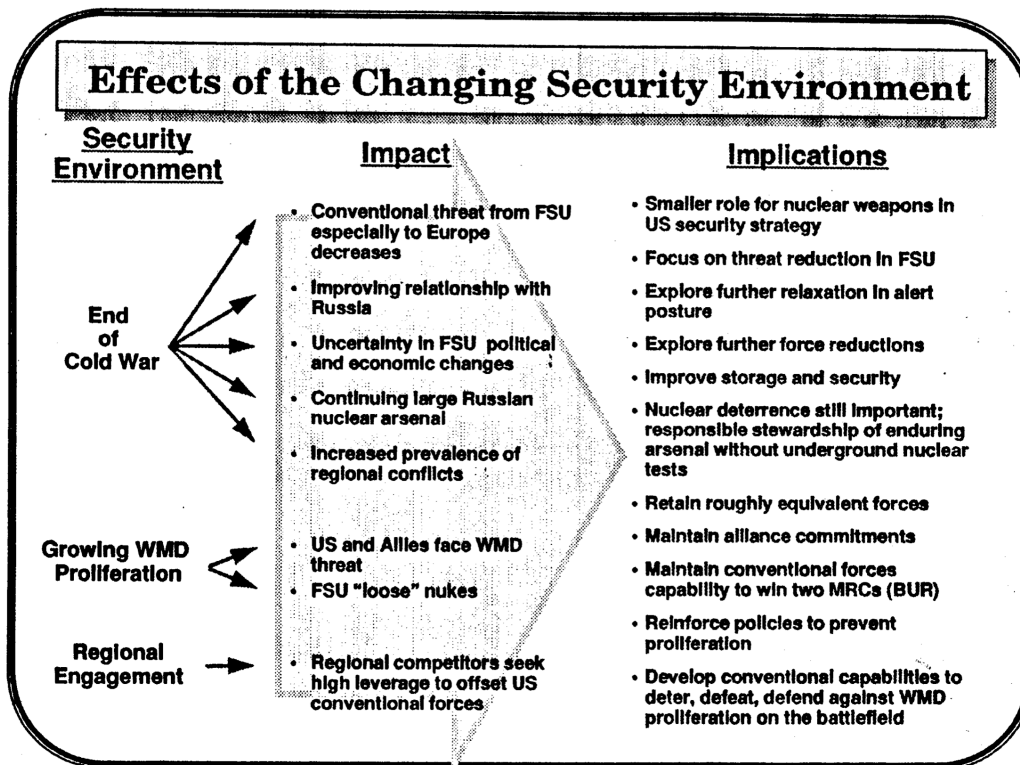


Figure 14: Effects of the Changing Security Environment. Source: United States Department of Defense, 1994.

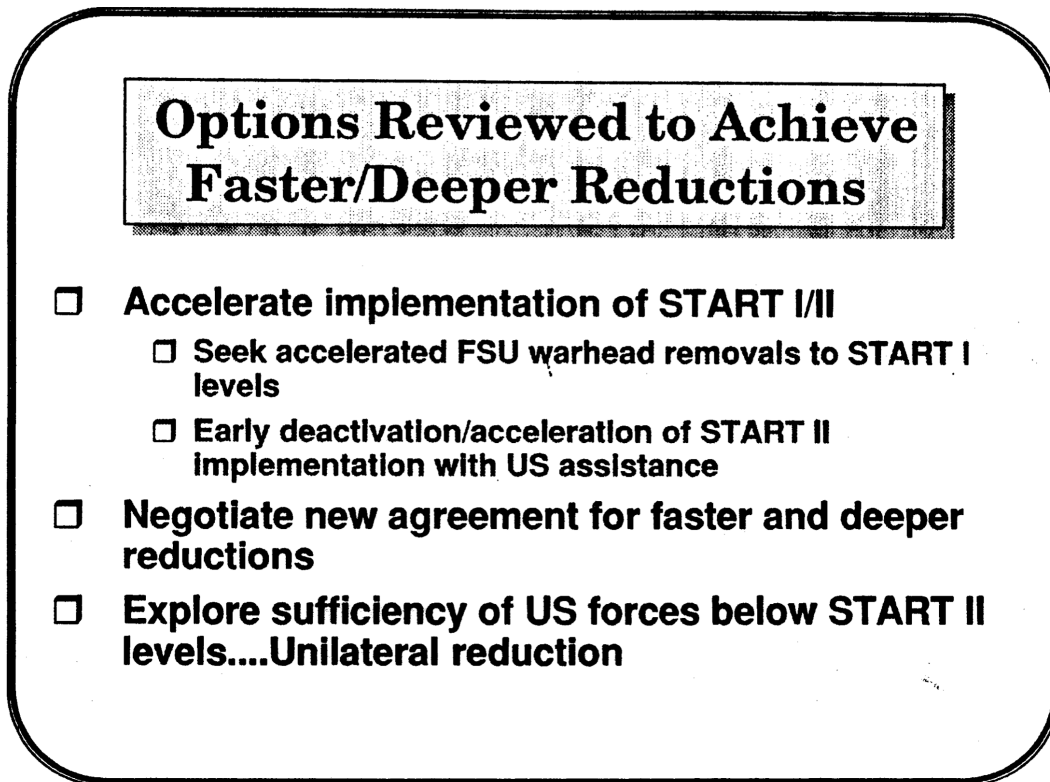


Figure 15: Options Reviewed to Achieve Faster/Deeper Reductions. Source: United States Department of Defense, 1994.

During his time in office, Clinton paid little attention to nuclear issues. The main characters of the major (attempted) changes of nuclear policy – the NPR and its internal struggles – were, on one side, Les Aspin and Ashton Carter, and on the other, the military hardliners and the entire military-industrial complex, who wished to maintain a status quo policy. Aspin and Carter challenged the notion of maintaining a policy of maximum deterrence in a post-Cold War world, yet the strength and robustness of the pro-establishment, combined with Clinton’s lack of interest and strong leadership in nuclear issues led to the defeat of nuclear revisionists (Sauer, 2005). Nuclear weapons were no longer in the spotlight, yet nuclear policies from the Cold War carried over. In 2001, however, George W. Bush is sworn in and nuclear weapons found a new role to play.

Bush’s presidency will forever be scarred by the 11 September attacks and the resulting War on Terror. Terrorism and non-state actors became the main threats, a stark contrast from the Cold War days of superpower stand-off. Prior to that, however, Bush actively contributed to the maintenance of a nuclear status quo policy whilst paradoxically arguing that the world in

the 21st century was no longer bound to the Cold War and that nuclear policies determined there were merely relics of a distant past:

This afternoon, I want us to think back some 30 years to a far different time in a far different world. The United States and the Soviet Union were locked in a hostile rivalry [...] In that world, few other nations had nuclear weapons and most of those who did were responsible allies, such as Britain and France. We worried about the proliferation of nuclear weapons to other countries, but it was mostly a distant threat, not yet a reality. Today, the sun comes up on a vastly different world. The Wall is gone, and so is the Soviet Union. Today's Russia is not yesterday's Soviet Union. Its government is no longer Communist. Its president is elected. Today's Russia is not our enemy, but a country in transition with an opportunity to emerge as a great nation, democratic, at peace with itself and its neighbors. The Iron Curtain no longer exists. Poland, Hungary and the Czech Republic are free nations, and they are now our allies in NATO, together with a reunited Germany. Yet, this is still a dangerous world, a less certain, a less predictable one. More nations have nuclear weapons and still more have nuclear aspirations [...] Most troubling of all, the list of these countries includes some of the world's least-responsible states. Unlike the Cold War, today's most urgent threat stems not from thousands of ballistic missiles in the Soviet hands, but from a small number of missiles in the hands of these states, states for whom terror and blackmail are a way of life. They seek weapons of mass destruction to intimidate their neighbors, and to keep the United States and other responsible nations from helping allies and friends in strategic parts of the world [...] Today's world requires a new policy, a broad strategy of active nonproliferation, counterproliferation and defenses. We must work together with other like-minded nations to deny weapons of terror from those seeking to acquire them [...] We need a new framework that allows us to build missile defenses to counter the different threats of today's world. To do so, we must move beyond the constraints of the 30 year old ABM Treaty. This treaty does not recognize the present, or point us to the future. It enshrines the past. No treaty that prevents us from addressing today's threats, that prohibits us from pursuing promising technology to defend ourselves, our friends and our allies is in our interests or in the interests of world peace (Bush, 2001).

Bush's speech goes on to pledges of nuclear reductions, in order to achieve "a credible deterrent with the lowest-possible number of nuclear weapons consistent with our national security needs, including our obligations to our allies" (Bush, 2001). At first glance, Bush's words might seem reassuring, reinforcing the optimistic views towards a new nuclear policy that reflects a renewed assessment of security threats post-Cold War.

In reality, Bush's comments on the ABM Treaty – which would eventually lead to its demise the following year – were not well received in Russia. START II, which had been signed by Bush, Sr. in 1993, was dependent on the ABM Treaty and the vulnerability resulting from a lack of investment in defensive technologies. The Russians had stipulated commitment to the ABM Treaty as a *condition sine qua non* for START II ratification, particularly since in 1992, Bush, Sr. had already voiced his favourable opinion regarding new funding for the SDI, whose support had become a "shibboleth" (Kaplan, 2020:197) amongst Republicans and Democrats

alike. Bush's declarations about the stark differences between the Cold War and his current political and security landscape – suggesting more peaceful and less tense relations – however were the downfall of START II.

6.2. *New Lease of Nuclear Life*

In September 2001, the entire global security landscape changed and the consequences of the 9/11 attacks were countless. Amongst them was the rise of terrorism as the priority threat to international security. Amidst the chaos of the new scenario, nuclear weapons found a new lease of life and the nuclear establishment found an alibi to maintain the argument in favour of nuclear possession and a nuclear status quo policy after the Cold War.

Prior to that, the restructuring of NATO and US security commitments to its NATO allies already fomented nuclear status quo policies. After the dissolution of the Warsaw Pact, the end of the Cold War, and the fall of the USSR, NATO faced an identity crisis, as its *raison d'être* no longer existed. The imminent threats of a Soviet attack on European soil were relics of the past and as Freedman and Michaels (2019:549) argue, “The end of the Cold War posed unavoidable questions of whether the force structures and doctrines of the Cold War had now become obsolete and should be dismantled”.

Nevertheless, in the aftermath of the Cold War, NATO member States still perceived nuclear weapons and nuclear deterrence as necessary. The London Declaration of 1990, outlining new challenges and paths for NATO, highlighted the need to “keep the peace, the Alliance must maintain for the foreseeable future an appropriate mix of nuclear and conventional forces, based in Europe, and kept up to date where necessary” (North Atlantic Treaty Organization, 1990). In that sense, the US pro-nuclear establishment seized the opportunity to justify nuclear weapons retention in the post-Cold War world.

In his May 2001 speech, Bush (2001) mentioned US security commitments to NATO emphasising how “Nuclear weapons still have a vital role to play in our security and that of our allies”. The main threat – a Soviet invasion – absent, Bush had to look elsewhere to find plausible justifications for the maintenance of a nuclear policy of maximum deterrence, 10 years after the end of the Cold War. The new threat identified by Bush that same day was nuclear proliferation to ‘irresponsible’ States.

The 9/11 attacks had profound and far-reaching consequences in the security landscape, both domestically and internationally. One month after the attack, the CIA received a report denouncing the presence of a 10kt nuclear weapon in New York, in the hands of Al-Qaeda (Allison, 2004). There was no substantial evidence supporting this report, however, the sheer fear of a follow-up act to 9/11 lent credibility to the report, resulting in major security protocols, such as the transfer of vice-president Dick Cheney to a secure, undisclosed location for continuity of government reasons (Allison, 2004).

The idea of nuclear terrorism was now conceptualised as a quasi-existential threat to the US. When Bush spoke earlier that year about the new security challenges, listing nuclear proliferation to irresponsible States as a threat, nuclear proliferation to non-State actors did not make the list. Contrary to ‘standard’ nuclear proliferation, a non-State actor acquiring nuclear weapons presents a significantly higher degree of danger, as communication is restricted – if existent at all. The combination of factors – post-9/11 anxiety, a framing of nuclear proliferation as a threat, and a securitisation of terrorism (and the resulting War on Terror) – elevated nuclear terrorism to the status of national security threat. During his 2002 State of the Union Address, Bush stated that:

Our nation will continue to be steadfast and patient and persistent in the pursuit of two great objectives. First, we will shut down terrorist camps, disrupt terrorist plans, and bring terrorists to justice. And second, we must prevent the terrorists and regimes who seek chemical, biological, or nuclear weapons from threatening the United States and the world [...] [Irresponsible] States like these [Iraq, Iran, and North Korea], and their terrorist allies, constitute an axis of evil, arming to threaten the peace of the world. By seeking weapons of mass destruction, these regimes pose a grave and growing danger. (Bush, 2002).

Bush labelling Iraq, Iran, and North Korea as an ‘axis of evil’ echoes Reagan’s ‘evil empire’ speech, suggesting that the US perceives these States as threats on par with the USSR during the Cold War. One year later, on the same occasion, Bush reiterated his commitment to fight nuclear terrorism, labelling it as the most dangerous threat: “Today, the gravest danger in the war on terror, the gravest danger facing America and the world, is outlaw regimes that seek and possess nuclear, chemical, and biological weapons” (Bush, 2003). Nuclear terrorism was established as the new face of US security threats and even after the major tensions after 9/11 had passed, nuclear proliferation to non-State actors as well as ‘irresponsible’ States – such as Iran and North Korea – remained a grave concern.

Unlike in the case of nuclear proliferation to non-State actors, an argument could be made in favour of deterrence theory to thwart the spread of nuclear weapons to other States. Deterrence – and consequently nuclear weapons – returned to the spotlight. Whereas the previous threat was the opposing superpower and the Eastern bloc, the US now needed nuclear weapons to deter ‘rogue’ States from acquiring nuclear weapons, fomenting a status quo policy now 15 years into the post-Cold War world.

When North Korea announced to the world its nuclear capability, the regime immediately proposed its dismantlement on the condition that the US ceased ‘hostilities’ against North Korea. The proposal did not require the US to take any actions related to its own nuclear arsenal, yet it was instantly refused. Even though North Korea was, for all purposes, a State, the perception was that any negotiation would be an act of appeasement. In this regard, Cheney’s comments encapsulate the common understanding of the Bush administration: “We don’t negotiate with evil; we defeat it” (Kaplan, 2020:218).

The Bush administration allocated the vast majority of its resources on the War on Terror. This task had briefly intersected with nuclear policy under the umbrella of the nuclear terrorism threat. For the pro-nuclear establishment and the US military-industrial complex, this meant a reason to justify pressures for the maintenance of status quo policies. Prior to that, nuclear issues were deliberately made less public and visible. The US was no longer in the Cold War; there was no rival superpower with an equally large nuclear arsenal on hair-trigger alert. Nonetheless, US policy remained fundamentally the same, under the directives of maximum deterrence (Sauer, 2005).

The portrayal of nuclear terrorism as a threat, as well as the emphasis on the dangers of nuclear proliferation to ‘irresponsible’ States corroborate to the crystallisation of a need for nuclear weapons in the post-Cold War world. Nuclear weapons, akin to NATO, had to find new purposes. NATO relied on nuclear weapons to survive, whilst nuclear weapons found its public alibi in nuclear terrorism and what Gusterson (1999) called ‘nuclear orientalism’. In 2008, Barack Obama wins the presidential election and, despite having several pressing issues – including the largest economic crisis since the Great Depression – still managed to add nuclear disarmament to the agenda (Kaplan, 2020).

6.3. *A Nuclear-Weapons-Free World?*

When Obama entered the White House, he worked towards softening the harsher words from his predecessor whilst not appealing to what Bush and Cheney called ‘evil’. In his inaugural speech, Obama (2009b) simply stated his commitment to “lessen the nuclear threat”, but emphasising the diversity of the US, aiming to reduce growing levels of prejudice against Muslims in the US.

Within 100 days of his presidency came the speech that heralded – or was expected to herald – the changes in US nuclear policy that were expected in the aftermath of the Cold War. On 5 April 2009, in Prague, Obama spoke of his vision of a nuclear weapons-free world:

The existence of thousands of nuclear weapons is the most dangerous legacy of the Cold War. No nuclear war was fought between the United States and the Soviet Union, but generations lived with the knowledge that their world could be erased in a single flash of light [...] Today, the Cold War has disappeared but thousands of those weapons have not. In a strange turn of history, the threat of global nuclear war has gone down, but the risk of a nuclear attack has gone up. More nations have acquired these weapons. Testing has continued. Black market trade in nuclear secrets and nuclear materials abound. The technology to build a bomb has spread. Terrorists are determined to buy, build or steal one. Our efforts to contain these dangers are centered on a global non-proliferation regime, but as more people and nations break the rules, we could reach the point where the center cannot hold [...] Some argue that the spread of these weapons cannot be stopped, cannot be checked — that we are destined to live in a world where more nations and more people possess the ultimate tools of destruction. Such fatalism is a deadly adversary, for if we believe that the spread of nuclear weapons is inevitable, then in some way we are admitting to ourselves that the use of nuclear weapons is inevitable. Just as we stood for freedom in the 20th century, we must stand together for the right of people everywhere to live free from fear in the 21st century. And as nuclear power — as a nuclear power, as the only nuclear power to have used a nuclear weapon, the United States has a moral responsibility to act. We cannot succeed in this endeavor alone, but we can lead it, we can start it. So today, I state clearly and with conviction America's commitment to seek the peace and security of a world without nuclear weapons (Obama, 2009a)

Acknowledging the challenges and immediate criticisms of empty words and rhetoric, Obama also spoke of his ideas for practical steps towards materialising his vision. However, the president – much like McNamara in his 1967 speech on the criteria of nuclear superiority – made sure to reaffirm US commitment to fighting nuclear terrorism, an agenda that became increasingly securitised since the Bush administration. On the NPT, despite focusing the first half of his speech on nuclear disarmament, Obama centred on the first pillar of the NPT – non-proliferation – to the detriment of NPT disarmament obligations:

I'm not naive. This goal will not be reached quickly — perhaps not in my lifetime. It will take patience and persistence. But now we, too, must ignore the voices who tell us that the world cannot change. We have to insist, "Yes, we can." Now, let me describe to you the trajectory we need to be on. First, the United States will take concrete steps towards a world without nuclear weapons. To put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy, and urge others to do the same. Make no mistake: As long as these weapons exist, the United States will maintain a safe, secure and effective arsenal to deter any adversary, and guarantee that defense to our allies — including the Czech Republic. But we will begin the work of reducing our arsenal. To reduce our warheads and stockpiles, we will negotiate a new Strategic Arms Reduction Treaty with the Russians this year [...] Second, together we will strengthen the Nuclear Non-Proliferation Treaty as a basis for cooperation. The basic bargain is sound: Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy. To strengthen the treaty, we should embrace several principles. We need more resources and authority to strengthen international inspections. We need real and immediate consequences for countries caught breaking the rules or trying to leave the treaty without cause [...] So, finally, we must ensure that terrorists never acquire a nuclear weapon. This is the most immediate and extreme threat to global security. One terrorist with one nuclear weapon could unleash massive destruction. Al Qaeda has said it seeks a bomb and that it would have no problem with using it. And we know that there is unsecured nuclear material across the globe. To protect our people, we must act with a sense of purpose without delay (Obama, 2009a)

Unlike many of his predecessors since Reagan, Obama had a legitimate interest in nuclear weapons policy, despite not mentioning such issues during his campaign; not only that, but his interest was accelerating the pace of nuclear disarmament. Obama had written about it still as an undergraduate student and, as a senator, spent time discussing nuclear issues with Richard Lugar – known for the Nunn-Lugar Cooperative Threat Reduction, which aimed to secure Soviet nuclear weapons at a moment of fragility of a crumbling Soviet Union in 1991 (Kaplan, 2020). His speech in Prague was his first major speech outside the US, and Obama seized the opportunity to make clear his commitment to updating US policy to post-Cold War realities – without abandoning the popular commitment to fight terrorism. Notably, however, Obama did not adhere to Bush's rhetoric of the 'axis of evil'. Despite growing nuclear crises with Iran and North Korea, Obama advocated for the exercise of diplomacy – more with the former than the latter:

My administration will seek engagement with Iran based on mutual interests and mutual respect. We believe in dialogue. But in that dialogue we will present a clear choice. We want Iran to take its rightful place in the community of nations, politically and economically. We will support Iran's right to peaceful nuclear energy with rigorous inspections. That's a path that the Islamic Republic can take (Obama, 2009a).

Obama's 2009 Prague speech went down in history. Virtually all US presidents spoke about the dangers of nuclear proliferation one way or another, yet Obama's speech went beyond the

sphere of pure rhetoric, acknowledging the challenges – a practice which would be standardised, particularly in NPT Review Conferences – and understanding that 20th century Cold War security threats no longer existed. As a result, Obama won the 2009 Nobel Peace Prize “for his extraordinary efforts to strengthen international diplomacy and cooperation between peoples. The Committee has attached special importance to Obama’s vision of and work for a world without nuclear weapons” (The Nobel Prize, 2009).

In the beginning of his presidency, Obama had a unique opportunity to prove his words were not empty. The newest iteration of the NPR was due and, considering the changes that Bush had made to the 2002 NPR, making progress towards nuclear disarmament and reducing the role of nuclear weapons in US security was not an arduous task. Bush had widened the scope of use of nuclear weapons in his NPR, stating that nuclear weapons “provide credible military options to deter a *wide range* of threats” (Kaplan, 2020:226). Furthermore, Bush’s NPR suggested TNWs would be employed to “complement other military capabilities” (Kaplan, 2020:226).

Obama’s administration favoured massive changes to US nuclear policy, as did Obama himself. The idea was to state in the 2010 NPR that nuclear weapons had a *sole* purpose of deterring or retaliating against other nuclear threats. Obama’s aides wanted to shift US nuclear declaratory policy to NFU. This would be a historical moment: the only State to ever use nuclear weapons in conflict declaring a NFU policy might have influenced other NWSs and NNWSs with aspirations towards nuclear possession. However, as usual, the more hawkish, hardliner voices, mainly from the Pentagon and the US Department of State had qualms with such ‘extreme’ changes.

It was not in the pro-nuclear establishment’s interest to officially and unilaterally declare a NFU policy. Obama’s Secretary of Defence Robert Gates embodied the scepticism of these changes. His argument – which has also become standardised – centred on the fact that such policies would generate anxieties in US allies – NATO member States under US nuclear umbrella. In other words, the US could not change its policies because it might upset its allies – even though the Cold War era threat of a Soviet/Russian invasion in Europe was long gone (Kaplan, 2020). There was, however, the question of North Korea.

North Korea had recently accumulated a number of nuclear crises in the last decades, and at that point, it had withdrawn from the NPT and announced its nuclear capabilities to the world.

Despite a proposal to denuclearise under the condition that the US signed a nonaggression pact, the offer was promptly refused by Bush. Now, North Korea was the setback that harmed Obama's argument for a clearer wording on its NPR. Obama wished to prove that his 2009 speech was more than a speech, yet he was quickly met with the usual resistance and the bureaucracy from the pro-nuclear establishment. Gates's argument and support for it showed Obama that regardless of his desired policy and own personal beliefs, changing nuclear policy was a much more difficult task due to the strength of the pro-nuclear establishment. Compromises would have to be made

The (first) compromise was a declaration that "The *fundamental* role of U.S. nuclear weapons, which will continue as long as nuclear weapons exist, is to deter nuclear attack on the United States, our allies, and partners" (United States Department of Defense, 2010:vii). As Kaplan (2020:254) puts it, "In Obama's mind, no-first-use was the commonsense reality, but he understood it was also, still, the third rail of nuclear deterrence politics; it set off too many shocks and jitters to be discussed out loud, much less enshrined in policy".

The second compromise of Obama's administration regarding nuclear policy came later that same year, when START was about to expire. Bush's eight years in the White House brought not only a harsher nuclear policy with an increased role for nuclear weapons, but also a significant deterioration of US-Russian relationships. One of Obama's goals for his term was to 'reset' these relations and a crucial step in that direction was the negotiation of the follow-up to START – New START.

New START was signed in April and Obama wished to see the treaty ratified by the senate before the end of the year. New START was by no means a grandiose treaty; it was, in fact, quite modest. However, it was the instrument that kept a new nuclear arms race in check. Despite its unassuming nature, Obama's ratification plans were met with resistance from the Republicans, mainly senator Jon Kyl. The Democrats had a majority in the senate, yet the ratification of treaties required a two-thirds majority, meaning that at least eight Republicans would have to vote for it. The problem was that Kyl was extremely influential amongst Republicans in the senate, particularly regarding nuclear issues. Kyl's condition to allow for a ratification of New START would be a substantial increase in the budget allocated for nuclear weapons. The treaty was ratified on 22 December 2010 and the overall cost was north of 185 billion dollars over a ten-year period, growing to a staggering 1.3 trillion dollars over the next 30 years (Kaplan, 2020).

North Korea proved to be a problematic issue. When Kim Jong-Il died, Obama offered his son and successor, Kim Jong-Un a deal involving a provision of essential supplies (food and energy) in exchange for a moratorium on nuclear tests. Kim's response was to test a rocket (Kaplan, 2020). On the other hand, negotiations with Iran seemed to be moving forward. For the first time since the Iranian Revolution, both States held high-level talks, fomenting hope of better relations. These hopes were materialised in 2015 with the Joint Comprehensive Plan of Action (JCPOA).

As per the JCPOA, involving Iran and the P5 plus Germany, Iran would virtually eliminate all its stockpile of fissile material, greatly reduce the number of centrifuges, and agree to a cap on the level of uranium enrichment. In August 2015, shortly after the creation of the JCPOA, Obama spoke about the JCPOA at the American University – the same site Kennedy spoke in the aftermath of the Cuban Missile Crisis, about creating strategies towards peace. Obama drew parallels between the two moments, arguing that the JCPOA contributed to the lasting peace envisioned by Kennedy 52 years earlier:

[Kennedy] promised strong, principled American leadership on behalf of what he called a “practical” and “attainable peace” -- a peace “based not on a sudden revolution in human nature but on a gradual evolution in human institutions -- on a series of concrete actions and effective agreements.” Such wisdom would help guide our ship of state through some of the most perilous moments in human history. With Kennedy at the helm, the Cuban Missile Crisis was resolved peacefully. Under Democratic and Republican Presidents, new agreements were forged -- a Non-Proliferation Treaty that prohibited nations from acquiring nuclear weapons, while allowing them to access peaceful nuclear energy; the SALT and START Treaties which bound the United States and Soviet Union to cooperation on arms control. Not every conflict was averted, but the world avoided nuclear catastrophe, and we created the time and the space to win the Cold War without firing a shot at the Soviets. The agreement now reached between the international community and the Islamic Republic of Iran builds on this tradition of strong, principled diplomacy. After two years of negotiations, we have achieved a detailed arrangement that permanently prohibits Iran from obtaining a nuclear weapon. It cuts off all of Iran's pathways to a bomb. It contains the most comprehensive inspection and verification regime ever negotiated to monitor a nuclear program (Obama, 2015).

The JCPOA proved to be successful, achieving its goal of keeping Iran from developing nuclear weapons. Its success was attested by IAEA Director Yukia Amano (2018), who stated in 2018 that “Iran is implementing its nuclear-related commitments”. In 2009, Obama pledged to work towards nuclear disarmament, undoing many of the changes and policies from the Bush administration he deemed harmful towards that goal. However, he soon realised the strength of the pro-nuclear establishment, which thwarted his plans to change US nuclear policy. Towards the end of his presidency, Obama planned on reassessing his pledges made in Prague,

yet, with the shocking election of Donald Trump in the 2016 elections, his farewell speech had to address other issues. Not wanting to leave this question unattended, vice-president Joe Biden delivered a speech, looking back on nuclear policies under the Obama administration. What stands out is what is said about the role of US nuclear weapons to US security:

Given our non-nuclear capabilities and the nature of today's threats—it's hard to envision a plausible scenario in which the first use of nuclear weapons by the United States would be necessary. Or make sense. President Obama and I are confident we can deter—and defend ourselves and our Allies against—non-nuclear threats through other means. The next administration will put forward its own policies. But, seven years after the Nuclear Posture Review charge—the President and I strongly believe we have made enough progress that deterring—and if necessary, retaliating against—a nuclear attack should be the *sole* purpose of the U.S. nuclear arsenal (Biden, 2017).

On his way out, Obama shows his true intention, despite the strongarming from the pro-nuclear establishment during the 2010 NPR discussions, that he envisioned deterring or retaliating against a *nuclear* attack as the *sole* purpose of US nuclear weapons. This was his initial idea for the NPR and US nuclear policy. Obama was keen on changes to the status quo policies, yet he soon understood that several compromises would have to be made if any changes at all were to be achieved. Furthermore, Obama understood the incoming president – Donald Trump – would create his own policies and a new NPR was also due. Even though Obama was not able to fundamentally change US nuclear policy as was his desire, his progress was immediately threatened by Trump.

6.4. Nuclear Inertia

In Biden's speech at the end of Obama's administration, the vice-president quoted Eisenhower's famous Atoms for Peace speech, which warned the world against the illusion of safety behind a larger nuclear arsenal in face of any opposing nuclear weapon. In 1961, during his farewell address, Eisenhower advocated for caution against another pressing threat, that is, the growing strength and influence of what he called the 'military-industrial complex':

This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence-economic, political, even spiritual-is felt in every city, every state house, every office of the Federal government. We recognize the imperative need for this development. Yet we must not fail to comprehend its grave implications. Our toil, resources and livelihood are all involved; so is the very structure of our society. In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist. We must never let the weight of this combination endanger our liberties or democratic processes. We should take nothing for granted only an alert and knowledgeable citizenry can compel the proper

meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may prosper together (Eisenhower, 1961).

The term ‘military-industrial complex’ encapsulates a variety of things, yet, akin to ‘symbolism’, its definition is often vague. The core of ideas of what I mean by the term can be summarised by J. Paul Dunne and Elisabeth Sköns (2010) as “coalitions of vested interests within the state and industry, which could lead to decisions being made which were in the interest of the coalition members and not necessarily in the interests of national security”.

These coalitions benefit from an increased spending on arms and weapons development, under the arguments that a larger and more advanced military apparatus is synonymous with peace and security, and that the sector generates jobs. Lockheed Martin, one of the largest defence companies in the world used both arguments to try to save the F-22 Raptor fighter plane in 2009, with an ad that mentioned “300 MILLION PROTECTED, 95,000 EMPLOYED” (Hartung, 2012:1).

During the Cold War, under the constant threat of an all-out thermonuclear war, the military-industrial complex’s argument for increased spending fit within the *zeitgeist*. In the face of a major enemy, a rivalry that divided the world, security guarantees were crucial, and acquiring more weapons, personnel, and funding for military research and development was quasi-unquestionable – the result of intensive work, pressure, and enlargement of the military-industrial complex. This process is observed throughout the history of US nuclear policy this research briefly presented. From the beginning of the US nuclear programme, there has always been these coalitions pushing for more weapons development and the guidelines of the SIOP and its maintenance are a clear example.

Wartime politics, however, are supposed to be different from peacetime politics. After the end of the Cold War, the existential threat which justified inflated defence budgets and military spending vanished. The expectations were that with it, so would the prominence of the military-industrial complex and the wartime policies of the Cold War. Although there were no realistic expectations of an immediate nuclear reversal, substantial changes both in policy, spending, and role of nuclear weapons were anticipated. In reality, however, few to no changes have taken place and US nuclear policy after the Cold War was labelled by Sauer (2005) as nuclear inertia.

According to Sauer (2005), the threat of a potential aggressor – as was the case with the USSR during the Cold War – was not a crucial factor to determine the course of US nuclear policy. The post-Cold War period pushed the US to the status of sole superpower. Rather, there domestic factors form the core force behind a policy of status quo. Political leaders have their own personal beliefs regarding national interest, yet they also have their own personal interests to defend. Unlike status quo policies, major changes to any kind of policy require robust justifications paired with a set of strong leadership and solid personal interest from the policymakers. Regarding the case of US nuclear policy, Sauer (2005:166) argues that “the political variables pointed in the direction of a status-quo. Political decision-makers could have expected a lot of opposition against radical change by at least two major constituencies in US society: the nuclear bureaucracy and the Republicans”.

The nuclear bureaucracy Sauer talked about is fiercely defended by the military-industrial complex. The Cold War left deep scars in US society and US politics, and even before its end, Eisenhower identified such scars in his foretelling speech. During the initial stages of the Cold War, few would argue against the necessity of a strong, well-financed military in the face of the Soviet threat, and the military-industrial complex served as a provider of survival. Its power and relevance were crystallised during that period and even after the fall of the Warsaw Pact and the Soviet Union, those factors proved to be resilient:

The Pentagon has an enormous – one could even say disproportional – influence on American foreign and defense policy and on American society in general [...] In the 1990s, many analysts perceived a crisis of civilian control over the military, of which the origins had to be found during the Cold War (Sauer, 2005:89).

Active nuclear research and development – and, more broadly, a wartime military industry – was unsurprisingly lucrative to the military-industrial complex. William Hartung’s (2012) description of Lockheed Martin’s campaign to salvage the F-22 Raptor fighter plane illustrates how the military-industrial complex is more than a group of actors interested in warmongering. It is also a job programme, something that is often used to influence decisionmakers. No politician wishes to be accused of shutting down programmes that employed 95,000 people, as the Lockheed Martin ad claimed (Hartung, 2012).

Sauer (2005) argues that for major change to take place, there must be strong political leadership and interest by the president to face the pro-nuclear establishment – formed of the major constituencies against nuclear disarmament, such as military-industrial complex itself

or, as Sauer (2005:166) argues, the Republicans. That applies even to changes that would conform to a sober interpretation of threats, such as letting go of a maximum deterrence policy to a minimum deterrence policy. In the aftermath of the Cold War, US leadership lacked the strength – or the desire – to advocate for such changes.

Bush, Sr.'s time in the White House was influenced by his predecessor, Reagan. Bush, Sr. showcased an interest in trimming nuclear arsenals and reducing the role of US nuclear weapons by keeping Reagan's arms control legacy, including unprecedented unilateral measures to disarm. However, Bush, Sr. had a much more important task to handle: the political transition after the fall of the USSR and the construction of new, positive relations with its heir, Russia.

The major historical changes the world underwent during this period made nuclear issues less public. The spotlight was on the integration of Russia and the former Soviet republics with the West. US Nuclear weapons became a non-issue for the time being, whilst the fate of Soviet nuclear weapons was carefully watched and controlled by the US, illustrated by the Nunn-Lugar Cooperative Threat Reduction programme. With the focus shifted away from US nuclear weapons, there were few incentives to dive into policy – even during the Cold War, some aspects of nuclear policy – such as operational and targeting policy – were left unchecked for long periods of time (Kaplan, 2020). As a result, the US kept its maximum deterrence policy, even though the major target of its deterrence no longer existed, and the pro-nuclear establishment retained its Cold War period strength.

Clinton's election signalled this major shift in political interest. Bush, Sr., who was Reagan's vice-president, was known for his crisis management and leadership skills. With no more crises on the horizon, Clinton's agenda focused on domestic economy prevailed. Clinton showed no particular interest in security issues, let alone nuclear policy. Nevertheless, people in his administration – namely Les Aspin and Ashton Carter – were very much interested in contributing to the expected changes in nuclear policy. Clinton delegated the majority of defence matters to Aspin, to whom he showed signs of support (Sauer, 2005).

Under Clinton came the challenge to create the first NPR, which was first under Aspin's supervision, then Carter. The NPR process proved that the pro-nuclear establishment was not inclined to agreeing to major changes in nuclear policy, and the struggle between Carter's

provisions to reduce the role of nuclear weapons and the military's status quo stance. Clinton's lack of interest in nuclear issues led to his abstinence in support for Carter and the NPR:

But crucial is of course that President Clinton did not speak out when the NPR ran into difficulties. It can be argued that at that point none of the other principals actively supported the NPR anymore and that Clinton therefore was not going to push something through against the advice of his principal advisers [...] With a president who did not speak out, the opponents of the NPR felt no constraints whatsoever (Sauer, 2005:135).

Carter's efforts to push for change was met with overwhelming resistance from the pro-nuclear establishment. As Sauer (2005) argues, one of the major factors that could lead to change is a strong political leadership inclined to fight the nuclear bureaucracy, and Clinton did not have the motivation or the strong desire to fight this battle. Carter's aspirations for the NPR were involved not only a disruption of inadequate nuclear policies to match current threats, but also to make official US nuclear doctrine transparent, conflicting with the pro-nuclear establishment's manoeuvre to 'invisibilise' nuclear issues in order to quietly maintain the status quo. The outcome was the publication of a few slides that vaguely mentioned a changing role of US nuclear weapons, emblematic of the crystallised influence of the military-industrial complex on US policy.

Bush's presidency was deeply marked by the responses to 9/11 and the resulting War on Terror. The US entered two wars in this period, which helped consolidate the military-industrial complex's influence on US policy even further. Terrorism was identified as the new security threat and, consequently, nuclear terrorism was also portrayed as a major concern. The military-industrial complex was once again at full steam and US nuclear policy reflects that. The 2002 NPR attributed an increased role of US nuclear weapons – now envisioned as a viable option against a wider range of threats.

Under Bush, nuclear weapons found a new lease of life as the deterrents to nuclear terrorism – despite the major conceptual flaws that the application of deterrence theory to the case of non-State actors acquiring nuclear weapons has. Unlike Clinton, whose discourse hardly touched upon nuclear weapons and policy, Bush was vocal about his convictions. When speaking at the National Defense University in 2001, the president made clear distinctions between 'responsible' and 'irresponsible' nuclear powers, reinforcing the long-standing US nuclear identity of portraying itself as a responsible and peaceful nuclear leadership:

[During the Cold War] few other nations had nuclear weapons and most of those who did were responsible allies, such as Britain and France. We worried

about the proliferation of nuclear weapons to other countries, but it was mostly a distant threat, not yet a reality [...] Yet, this is still a dangerous world, a less certain, a less predictable one. More nations have nuclear weapons and still more have nuclear aspirations. Many have chemical and biological weapons. Some already have developed the ballistic missile technology that would allow them to deliver weapons of mass destruction at long distances and at incredible speeds. And a number of these countries are spreading these technologies around the world. Most troubling of all, the list of these countries includes some of the world's least-responsible states (Bush, 2001).

Bush's harsh stance on Iran and North Korea also contributed to the affirmation of the importance of nuclear weapons in US security. Akin to nuclear terrorism, the 'axis of evil' and their portrayed 'irresponsible' nuclear aspirations were instrumentalised to justify the crucial role of nuclear weapons to US security. Bush left a legacy of wars, unilateral decisions and, in terms of nuclear policy, a strengthening of the pro-nuclear establishment. Whilst his predecessor was uninterested in nuclear and security issues in general – which led to a continuity of Cold War policies – Bush's interests dovetailed those of the military-industrial complex. In stark contrast, his successor was an advocate of nuclear disarmament.

One of the tenets of Obama's presidential campaign was his strong opposition to the war in Iraq. In October 2002, still as a senator, Obama showed his contrasting views regarding US invasion of Iraq post-9/11, fiercely advocated and executed by Bush:

I don't oppose all wars. And I know that in this crowd today, there is no shortage of patriots, or of patriotism. What I am opposed to is a dumb war. What I am opposed to is a rash war. What I am opposed to is the cynical attempt by Richard Perle and Paul Wolfowitz and other armchair, weekend warriors in this administration to shove their own ideological agendas down our throats, irrespective of the costs in lives lost and in hardships borne. What I am opposed to is the attempt by political hacks like Karl Rove to distract us from a rise in the uninsured, a rise in the poverty rate, a drop in the median income — to distract us from corporate scandals and a stock market that has just gone through the worst month since the Great Depression. That's what I'm opposed to. A dumb war. A rash war. A war based not on reason but on passion, not on principle but on politics (Obama, 2002).

Obama's perceptions seem to differ from Bush's in a myriad of arenas, including nuclear weapons. Whilst Bush increased the role of US nuclear weapons, officially stated in the 2002 NPR, Obama entered the White House with disarmament aspirations, even though the domestic agenda after the 2008 global economic crisis demanded immediate attention. His speech in Prague during the first few months of his term are emblematic of his desire to change nuclear policy. All presidents before him, including Bush, spoke about disarmament and reducing the number of US nuclear arsenals to varying degrees – it seemed to be a rhetorical must for any head of state after the Cold War. Obama, however, had an anti-nuclear background, from his

undergraduate studies, up until his work with Lugar on the Nunn-Lugar programme during his time in the senate. More importantly, he acknowledged the challenges of the NPT, a treaty whose dispositions legitimises a select number of states to possess a weapons and prohibits others, despite UN principles of sovereign equality.

To his disappointment, Obama would soon grasp the strength and influence of the pro-nuclear establishment, especially after Bush's warmongering legacy and the events of 2001. Still in his first year, Obama experienced the artifices of the pro-nuclear establishment in the process of updating the NPR and the domestic negotiations with said establishment to ratify New START. In the end, despite Obama's desire to change nuclear policy, the compromises he had to reach resulted in no fundamental changes. Nuclear bureaucracy and the pro-nuclear establishment made sure to maintain the reign of nuclear inertia.

The post-Cold War period was not accompanied by the changes in nuclear policy to accurately reflect new realities. During the Cold War, nuclear weapons were a major area of concern, even during the periods of a stable détente, and nuclear issues were explicitly made public. On the other hand, after the Cold War and the end of the existential threat the opposing superpower posed to the US, these issues were not given the same publicity treatment as before. Even US presidents, such as Clinton, were no longer interested in nuclear issues. As a result, Cold War nuclear policies endured.

The overall sizes of US nuclear arsenals may have decreased, but they have been since the mid 1960s, after McNamara's reshaping of the concept of nuclear superiority. The role of nuclear weapons, on the other hand, was not significantly altered and at times, such as under Bush, even increased. One party who greatly benefitted from the status quo was the pro-nuclear establishment, largely composed of the military-industrial complex. During the Cold War, the pro-nuclear establishment amassed political power to heavily influence US decisionmakers and sway them to act in its interest to the detriment of national interests, as warned by Eisenhower in 1961.

Significant changes to US nuclear policy – such as moving from maximum to minimum deterrence – or rapid efforts to reduce the role of nuclear weapons to US nuclear security would negatively impact the symbolic status that nuclear weapons maintained since the 1940s. It was, therefore, in the interest of the pro-nuclear establishment to cement the symbolic value of nuclear weapons by creating bureaucratic mechanisms and exerting pressure against such

changes, a struggle illustrated by the 1994 NPR efforts and, more recently, Obama's compromises in declaratory policy and modernisation plans.

Akin to nuclear policy, significant changes were expected in the symbolic perceptions of nuclear weapons. Nuclear issues became less and less visible and publicised. There was no mass panic of nuclear war similar to the 1980s and, as a consequence, the anti-nuclear movement lost much of its strength and momentum. Behind the scenes, however, nuclear policy that did change. Whilst the public may have been steered towards other issues, through a deliberate effort to make nuclear issues less visible, the US maintained its Cold War policies in place, maintaining the strength and influence of the pro-nuclear establishment and, consequently, the role of nuclear weapons, regardless of the existence of immediate credible threats.

Constant reinforcement of the constructed nuclear identity served as a pillar to the maintenance of status quo policies. Towards the end of the Cold War, the US made particular efforts to portray itself as a responsible nuclear power and leadership, in contrast to the erratic and at times 'evil' USSR. With the growing pace of nuclear proliferation and the alleged plans of the 'axis of evil' to acquire nuclear weapons, the rhetoric became even more relevant, explicitly mentioned in official discourse. Bush's speech determining which states were responsible and which were not are emblematic of US nuclear identity aspirations.

In his 2003 State of the Union address, Bush emphasised the idea that nuclear weapons in the hands of 'responsible' states pose no threat, whilst 'irresponsible' states must not be allowed to acquire the same weapons. A portion of the speech targeted North Korea, affirming that nuclear weapons in North Korean hands "will bring only isolation, economic stagnation, and continued hardship. The North Korean regime will find respect in the world and revival for its people only when it turns away from its nuclear ambitions" (Bush, 2003), whereas in the US – a 'responsible' nuclear power – "nuclear weapons still have a vital role to play in our security and that of our allies" (Bush, 2001).

These divisive tactics – creating stark contrasts between 'us', the good, and 'them', the bad – are extremely relevant for matters of international status and public opinion, which in many cases serves as legitimisation of a set of policies. References to this *othering*²² are present in most spheres of everyday life. Popular culture play an important role in cementing division

²² For more on the concept of othering, see Said, 1978.

and, consequently, legitimising action and portraying the *self* as the ‘good’ and there is no shortage of examples, from the portrayal of Eastern Europeans and/or Middle Easterners as villains in Western films to the literary work of Tom Clancy and its dissemination of conservative world views (Daniel and Musgrave, 2017).

From the second half of the Cold War to the first decades of the post-Cold War period, there were no fundamental changes to US nuclear symbolism (**Figure 16**). The most prominent difference was the lack of visibility of nuclear issues from the perspective of the public, which guaranteed a status quo policy to the benefit of the pro-nuclear establishment. The US also maintained its course of reinforcing the constructed nuclear identity through the identification of new threats and the instrumentalization of nuclear terrorism to justify nuclear possession, which contributed to the retention of the status-based symbolic values of nuclear weapons.

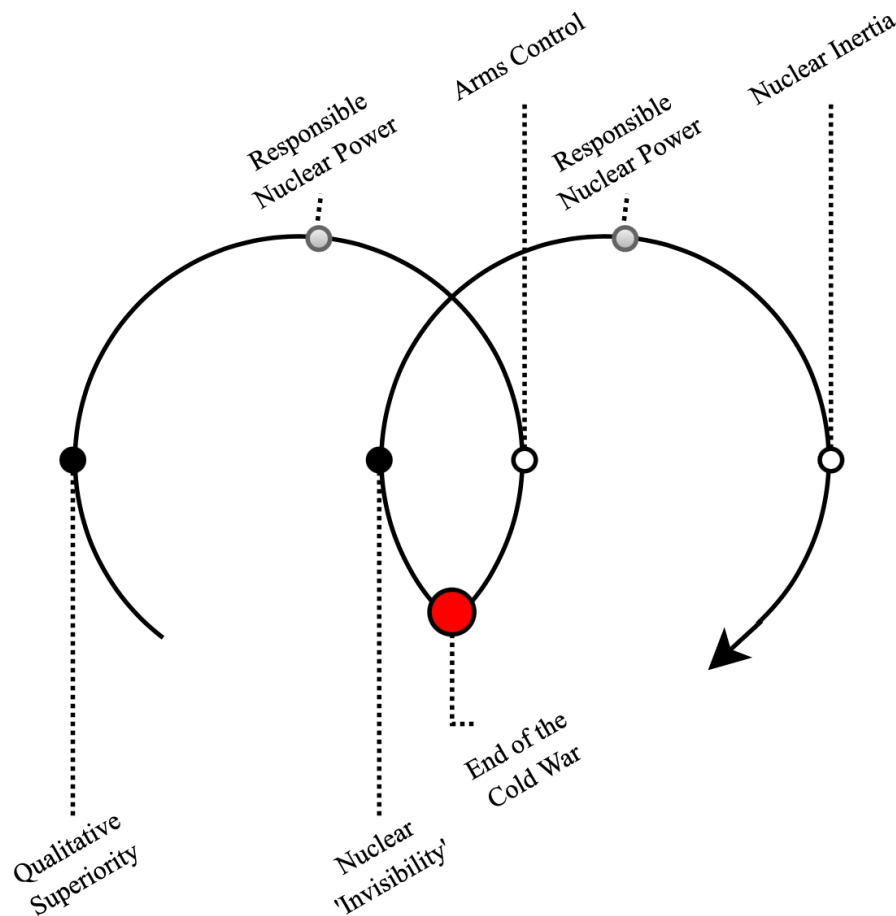


Figure 16: Nuclear Symbolism in the Fourth Period. Elaborated by the author.

The pro-nuclear establishment played a significant role in establishing the inertia of nuclear policy. Not only did it pressure leaders to maintain Cold War nuclear policies in place through lobbying or even public propaganda, as was the case with Lockheed Martin in 2009 (Hartung, 2012), but also it influenced the intellectual rationale through funding of think tanks. Kjølsv Egeland and Benoît Pelopidas (2022) investigated the influence of the vested interests of the pro-nuclear establishment on the production of intellectual research, finding that:

All think tanks in our sample listed donations either from companies involved in the production or maintenance of nuclear-weapon systems (58% of the think tanks surveyed), governments that explicitly base their security on nuclear deterrence (91% of the think tanks surveyed), or both (56% of the think tanks surveyed) (Egeland and Pelopidas, 2022:7).

The consequences are substantial. It illustrates the extent of the power and influence the pro-nuclear establishment exerts on the development, implementation, and enforcement of foreign policy to the detriment of the actual interests of the State. Nuclear politics outgrew its original confines of security issues; it became a lucrative business which is not to be meddled with, regardless of the political or actual security consequences its continuation may have. The active obstruction of changes in nuclear policy to accurately reflect the current security landscape are proof that Eisenhower's warning from 1961 has materialised beyond all expectations.

Conclusion

The development of nuclear weapons has fundamentally changed international security and politics. The nuclear revolution took place over 75 years ago and during that time, not a single nuclear weapon was used, despite an estimate of nine States currently possessing them. The non-use of nuclear weapons, even under favourable circumstances in which there would be little to no security backlashes, was puzzling. Tannenwald's (2007) work provided a solid, credible answer with the theorisation of a nuclear taboo. Considering the existence of a strong, normative taboo on the use of nuclear weapons, why do States pursue and maintain nuclear weapons? What roles do these weapons play within national interests? In 1996, Sagan outlined one explanation centred on non-material aspects of nuclear weapons. In this research, standing on the shoulders of giants, I elaborated a theoretical model centred on the subjective facets of nuclear weapons.

Symbolism is often alluded to in IR research, yet rarely defined. For this model, I presented a definition of symbolism, drawing from adjacent fields, such as semiotic and linguistic, in order to investigate what nuclear weapons symbolise. Symbolism as an isolated concept provides limited insights on the semiotic process of construction of meaning in which I am interested. For this reason, I turned my attention to the relationship between symbolic perceptions, identity, and behaviour. The nature of this relationship, according to the model, is morphogenetic: an actor's symbolic perceptions of a referent object shape its identity related to said object which, in turn, informs and conditions the actor's behaviour. Due to the fluid character of symbolic perceptions, however, new factors – both endogenous and exogenous, such as resulting developments from the actor's interaction with others and the consequences of its behaviour – serve as input to new iterations of the actor's symbolic perceptions (**Figure 8**).

The most appropriate case study to apply the model is the US. The nuclear revolution stemmed from the Manhattan Project and the US being the only State to use nuclear weapons in history played a starring role in the construction of the first widespread symbolic perceptions of nuclear weapons. Symbolic perceptions, however, are not static. As I posited in the elaboration of my theoretical model, these perceptions are in a constant state of change, influenced by diverse factors, from global developments to a leader's personal profile and beliefs. One of the core contributions of this research and the application of the theoretical model is mapping out the changes in symbolic perceptions across US nuclear history. To this end, I identified four major

distinct periods of clustered perceptions, divided by what I called ‘symbolism markers’. Each period encapsulates the core symbolic perceptions of nuclear weapons in the US and its influence on the construction of a specific facet of US State identity (nuclear identity), which in turn conditions US nuclear policy.

The first period (1939-1949) encompasses the first moves towards the development of nuclear weapons. Up until that point, the weaponization of nuclear fission was considered barely theoretically possible. When fears of a German nuclear programme threatened to influence the war, the US focused on a crash programme of its own. The Manhattan Project remains, to this day, the fastest nuclear programme in history and its success changed the course of history. By the end of the war, after Germany had already surrendered, President Truman decided to use two nuclear weapons in Hiroshima and Nagasaki.

Questions of necessity aside, the bombing of Japan granted the US unrivalled status. The US became the first State to develop this class of weapons which, less than a decade prior, were thought to be unfeasible – and Truman’s statement after the bombing of Hiroshima focused almost entirely on that. The statement praised the US scientific and overall intellectual prowess, establishing the first perceptions of nuclear weapons. The world did not know what these weapons were; it just watched its power and was told of the hardships of the programme, unprecedented in history. Nuclear weapon symbolised military and scientific power, which shaped US nuclear identity to portray itself as a pioneering modern State. During the 1940s, official US documents show government plans to capitalise on it, expanding further and conceptualising the development of thermonuclear weapons – the ‘super’. In 1949, however, the USSR tested its first nuclear weapons (the first symbolism marker), ending the period of US nuclear monopoly. From that moment on, with the tenets of the Cold War taking shape, the symbolism of nuclear weapons changed.

The second period (1949-1962) comes as a response to the symbolic shift triggered by the Soviet nuclear test. Nuclear weapons, whilst still retaining significant symbolic value relating to the scientific effort to develop them, were no longer exclusive to the US. The spirit of competition emblematic of the Cold War naturally encompassed the most powerful weapon ever created which was now possessed by both competing superpowers. Nuclear weapons’ value was centred on quantitative superiority, and considering the nature of the Cold War, the US incorporated the competition to its nuclear identity, portraying itself as the superior State. Nuclear superiority – measured quantitatively – dictated the ‘winner’ of the Cold War, a crucial

aspect to US State identity which, in turn, triggered and fomented a nuclear arms race. In 1960, Kennedy won the presidential election after extensive criticisms of Eisenhower's idleness in circumventing the so-called missile gap. In his farewell address, Eisenhower issued a warning against what he called the military-industrial complex and its vested interests influencing foreign policy to the detriment of national interests. Kennedy experienced that upon entering office, when the missile gap myth was debunked by satellite imagery.

It was only after the Cuban Missile Crisis of 1962 – the second symbolism marker – that Kennedy started to decisively question the value of quantitative superiority and the nuclear arms race. He realised that even a small number of nuclear weapons, such as the Soviet weapons stored in Cuba, provided enough deterring power. The aftermath of the Cuban Missile Crisis serves as the second symbolism marker. It was no longer in Kennedy's interest – or national interest, according to the president – to extend the nuclear arms race. However, the symbolic perceptions of nuclear weapons, which Kennedy himself helped cement during his 1960s presidential campaign, prevented a simple reversal of policy. Despite the president's change of heart, a crystallised nuclear symbolism constrained behaviour. Nevertheless, Kennedy wished to steer clear of a continuing arms race, a desire shared both by his successor and his Secretary of Defence.

The third period (1963-1991) is characterised by the materialisation of Kennedy's plans. President Johnson had no interest in engaging further with a costly arms race. Rather, he had his own agenda – the construction of a Great Society – to pursue. To that end, Johnson and McNamara worked to overturn the symbolic perception of nuclear weapons closely linked to quantitative superiority. In a 1967 speech, McNamara reshaped the concept of nuclear superiority. It removed the emphasis on quantitative superiority – thus exempting the US from the public pressure of continuing a nuclear arms race – placing it on qualitative aspects of nuclear weapons, that is, the technology imbued, accuracy, and delivery methods. The intention of the speech was to provide a plausible justification for a major change in US policy. However, due the constraints in place – a product of the crystallised symbolism of nuclear weapons – McNamara had to repeatedly reassure the audience that in either scenario, the US prevailed.

The result was a period of gradual decline in the overall size of the US nuclear stockpile, accompanied by its modernisation. Consequently, this period is also characterised by the strong emphasis on nuclear arms control and the non-proliferation and disarmament regime. Détente was particularly strong and stable in the 1970s until the USSR invasion of Afghanistan. The

election of Reagan and his first term were marked by a sharp increase in tensions, as well as a widespread panic in the US and the rise of the anti-nuclear movement. Reagan's harsh discourse and rhetoric against the USSR and Communism – which he labelled an “evil empire” (Reagan, 1983a) – revoked the progress made in US-Soviet relations. Reagan's second term, however, displayed stark differences, and the election of the reformist Gorbachev also aided in mending the damage and promoting an agenda of nuclear disarmament.

Throughout this time, Reagan's harsh criticism of the USSR helped consolidate responsibility and leadership aspects within US nuclear identity. The dichotomy of ‘good’ and ‘bad’ was abused to portray the US as a ‘good’ and responsible nuclear leader – in stark contrast to the ‘evil empire’ of the East. These aspects, in conjunction with the symbolic shift, moving away from quantitative superiority, conditioned US nuclear policy towards nuclear arms control. Unsurprisingly, this period was bookended by two major treaties – the NPT, in 1968, and the INF Treaty, in 1987.

The fourth period (1991-2016) was triggered by the dissolution of the USSR and the end of the Cold War, and it is difficult not considering it the third symbolism marker. With the threat of the USSR gone and promising relations with the heir state – Russia – the early 1990s was marked by a continuity of efforts to disarm – particularly under Bush, Sr. However, the elimination of the threat also brought about a decrease in interest and visibility of nuclear issues. The election of Clinton and his domestic agenda signalled his disinterest in nuclear policy, later proved by his handling – or lack thereof – of the NPR process. With nuclear issues merely in the background, no significant changes in nuclear policy took place, despite the expectations, following one of the most significant events of the 20th century.

The Cold War ended, yet its policies remained. The post-Cold War period was marked by an inertia of nuclear policy due to the ‘invisibilisation’ of nuclear issues. Throughout the Cold War, the military-industrial complex and the pro-nuclear establishment established a firm grip on foreign policy – something Eisenhower warned the public in 1961. Despite the end of the Cold War, the pro-nuclear establishment had vested interests in status quo policies, actively influencing decision-making. There is no lack of examples, from the 1994 NPR process to Obama's compromises to ratify New START. Despite the lack of major symbolic changes during this period – contrary to expectations – the most significant factor how nuclear issues became increasingly less visible which allowed for Cold War era nuclear policies to remain, despite these policies not reflecting new, post-Cold War realities.

In the 2000s, the US was led by two contrasting figures. Bush’s presidency was marked by the 9/11 attacks and his response in the form of the War on Terror. Under Bush, relationships with Russia deteriorated and the role of nuclear weapons was increased through the 2002 NPR. Nuclear terrorism – a scar of 9/11 – was identified as a major threat and counterproliferation became a priority for national security. Obama, on the other hand, had a particular interest in changing nuclear policy and advocating for disarmament, despite taking over during a time of domestic turbulence. Obama was soon met with the strength and influence of the pro-nuclear establishment. Despite his interest, he, too, had little impact on US nuclear policy due to the plethora of compromises he had to make.

Both presidents, however, reinforced the tenets of the established nuclear identity. Bush’s discourse against nuclear proliferation explicitly indicated a division between ‘responsible’ and ‘irresponsible’ States, reinforcing US’s portrayal of the *self* as a responsible nuclear leadership through contrast. Obama, on the other hand, pursued an idea of leadership through disarmament, actively pursuing nuclear arms control and treaties, and diplomatic alternatives to military action.

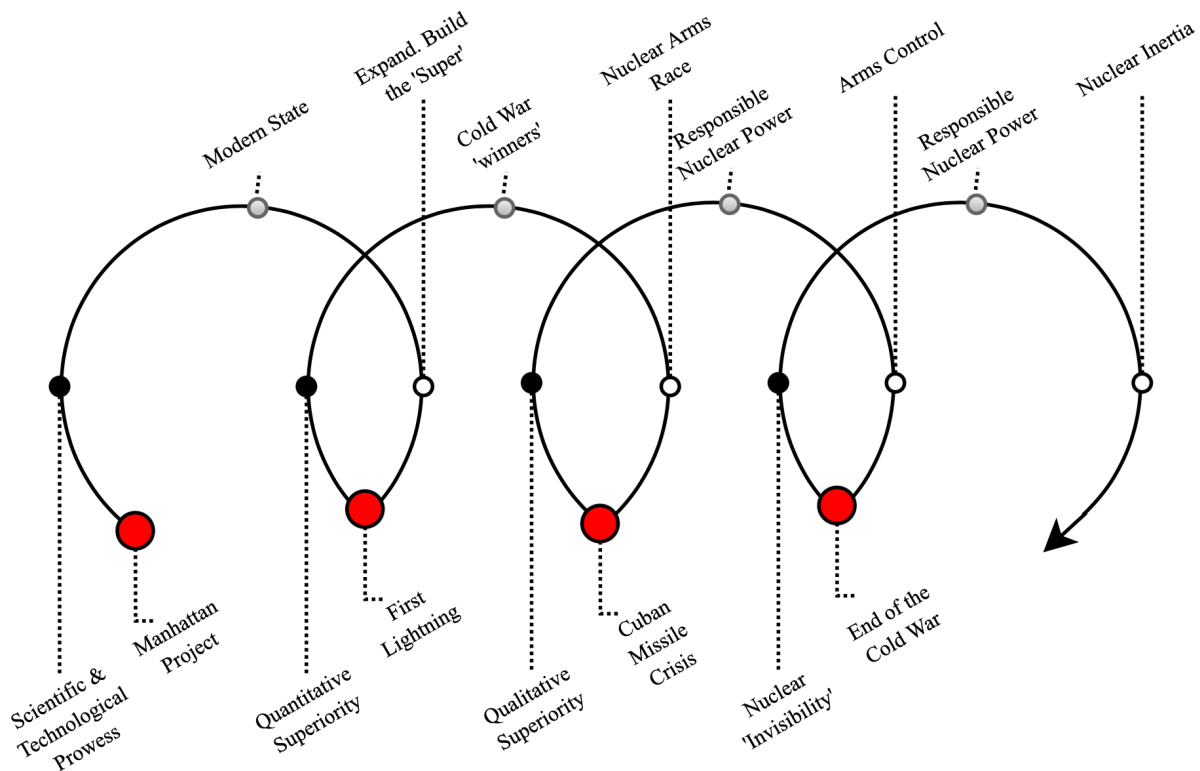


Figure 17: Nuclear Symbolism, 1939-2016. Elaborated by the author.

Circling back to the guiding research questions, this research has illustrated the morphogenetic relationship between symbolism, identity, and behaviour in the case of nuclear weapons in the US. The symbolic value of nuclear weapons is multifaceted. Its focus changed throughout US nuclear history, yet new symbolic perceptions were formed upon its previous iterations. The cycle shows how these symbolic perceptions created a facet of State identity which, in turn, conditioned State behaviour in that particular area of interest. From that moment on, new symbolic perceptions are formed based on a wide range of developments which are then fed into the constant shaping of identity, conditioning a new set of behaviour and so on.

Symbolism and identity are fluid concepts, constantly changing and incorporating new elements to evolve. One important aspect is the fact that older elements of symbolic perceptions and identity are not necessarily replaced; rather, they absorb these new elements. In this research, I showed how this model applied to the case of US nuclear weapons, trying to focus on the subjective aspects of nuclear weapons linked to ideas of status and prestige. These ideas were attributed to nuclear weapons from the first iterations of nuclear symbolism and endured – in one way or another – to this day.

The linkage between the development of nuclear weapons and scientific status, for example, was deliberately established since the 1940s, crystallised by Truman’s statement after the bombing of Hiroshima. Although symbolic perceptions of nuclear weapons acquired new elements throughout time, those initial ideas of status remained. Similarly, the status-based symbolic value attributed to nuclear weapons in the 1940s shaped a nuclear identity centred on the image of a modern State. This identity incorporated new elements, such as the idea of responsible leadership – particularly through the dichotomic division of ‘us’ versus ‘them’ – without overwriting the previous elements of modernity.

The consequences of these findings point to potential reasons beyond security for the stagnation in nuclear disarmament. Actors are unlikely to relinquish their major sources of status and prestige. Despite a regularity in quantitative disarmament, the role of nuclear weapons has not decreased, which indicates plans for retention (Acheson, 2012). Tackling the underlying reasons States are drawn to maintaining nuclear weapons – such as their status symbolism – might pave the way for more successful disarmament efforts. This process is already taking place, as some States are actively trying to ‘flip’ the standard of civilisation linking nuclear weapons to ideas of status, prestige, and modernity by questioning what is prestigious about possessing devices that cause such destruction and death (Bolton, 2020).

By questioning the established “regime of nuclear truth” (Ritchie, 2013:152) and addressing the issue of status linked to nuclear weapons might provide a pathway to reduce the role of nuclear weapons and, consequently, move forward with disarmament efforts. One obstacle to that is the strong influence the pro-nuclear establishment has not only on policymaking, but also on intellectual development. Egeland and Pelopidas’s (2022) work on the vested interests of the pro-nuclear establishment in the intellectual product of think-tanks suggests a firm control on what ideas are produced and developed – particularly those aligned with the pro-nuclear establishment’s interests – and which are not.

These developments open new pathways for a future research agenda centred on an increasingly latent topic. Apart from the theoretical questionings that the subjective challenges to the nuclear regime might have for nuclear disarmament, several events of major significance happened the established analytical timeframe, ending in 2016. The election and entire presidency of Donald Trump brought nuclear issues back to the spotlight. Trump was the first US president to explicitly threaten nuclear use against another State (Schwarz, 2021).

Trump’s controversial ‘Twitter diplomacy’ raises questions of a possible new shift in the symbolic perceptions of nuclear weapons in the US. Under Trump, US relations with Russia, North Korea, and Iran reached new a new low. The US president not only threaten nuclear use against North Korea through his Twitter account, but also withdrew from the JCPOA in 2018, despite several sources – including the IAEA – pointing to Iran’s compliances with the deal. Trump also refused to sign an extension of New START, despite Putin’s unconditional offer, under the argument that China – whose nuclear arsenal is far smaller than either State involved in New START – should also be included. There are, however, significant developments that might tip the scale in favour of the other side. The rise of the TPNW also poses significant questions regarding the regime of nuclear truth. Can nuclear weapons be stripped of their status-based symbolic values? How can normative values, such as the nuclear taboo and the TPNW change the foundation of the symbolic value of nuclear weapons?

After five years researching nuclear symbolism, I found more questions than answers. This is a latent research area that remains largely untapped. There is ample space for this research agenda to expand. It can go deeper, analysing Trump’s presidency as well as Biden’s – who was part of Obama’s pro-disarmament administration – to question whether there is a new symbolic shift on the horizon. It can also go wider, applying the same theoretical model to other cases, such as Brazil. The case of the Brazilian nuclear submarine programme (PROSUB)

indicates a prominent role of status in Brazil's pursuit of a nuclear-propelled submarine, to the apparent detriment of national security interests.

This research was but the first step of a long journey. It served to establish a long-term research agenda and to prove that there is room for questioning monolithic 'truths' within scientific boundaries. Nuclear weapons issues have been around since the 1940s. It is a quasi-universal rhetoric that complete and general disarmament is desirable. Equally widespread is the belief in deterrence and in the peacekeeping role of nuclear weapons. One cannot expect different outcomes from a prescribed and unchanged understanding of the issue. Only by reconceptualising the problem and reimagining solutions will we be able to achieve significant change and hope for a nuclear weapons-free world.

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