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Don’t poke the sleeping Bear

Russia’s nuclear programme under Putin

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Abstract

In recent years, Russia's nuclear weapons program has been widely discussed among policymakers, think-tank analysts, and academics. Some argue that Russia pursues an increasingly assertive weapons policy and has lowered its threshold of using them in conflict. On the other end of the spectrum, there are scholars who argue that Russia's nuclear weapons modernization is proceeding at a normal pace, and in extension, that there is little reason to be concerned about Moscow's at times confrontational nuclear rhetoric. This thesis seeks to contribution to that debate by addressing to central questions: (1) How has Russia's nuclear weapons policy evolved in the last two decades? (2) What explains the evolution in Russia's nuclear weapons policy? Towards that end, the thesis first conducts an historical analysis, which provides a detailed overview of the changes and continuities that have characterized Russia's nuclear weapons policy in the last 20 years. Building on this, the thesis then seeks to explore the underlying drivers and objectives of Russia's nuclear weapons policy via the lenses of offensive realism, defensive realism, and constructivism. The thesis concludes that the evolution of Russia's nuclear weapons policy is best explained by two factors: the attempt to uphold a secure-second strike capability (defensive realism) and an attempt to defend its status as a major global power (constructivism).

Keywords: nuclear weapons programme, Russia, New START, modernization, escalate to de-escalate, Putin, realism, constructivism,

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List of Acronyms/Abbreviations

ABM Treaty – 1972 Anti-Ballistic Missile treaty

IAEA – International Atomic Energy Agency

ICBM – intercontinental ballistic missile

INF – 1987 Intermediate-Range Nuclear Forces Treaty

MAD – Mutual Assured Destruction

NATO – North Atlantic Treaty Organization

New START – 2010 Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms

NPT - 1968 Treaty on the Non-Proliferation of Nuclear Weapons

NU – Nuclear Umbrella

NWS - Nuclear Weapon States

PNI – Presidential Nuclear Initiate's

SALT – Strategic Arms Limitations Talks

SLBM - submarine-launched ballistic missile

SORT – 2002 Strategic Offensive Arms Treaty (Moscow Treaty)

START 1991 Treaty on the Reduction and Limitation of Strategic Offensive Arms

USSR - Union of Soviet Socialist Republics

WMD's- weapons of mass destruction

Introduction

Nuclear Weapons – a weapon of the past? During the Cold War, nuclear weapons dominated the international political landscape, and their power, status, and deterrence factor were at an all-time high. Nuclear weapons and their programmes fell into disregard with the collapse of the Soviet Union and the end of the Cold War. The 1990s were dominated by wars in the Middle East, genocides in Africa and Eastern Europe, and September 11th, 2001, started the Global War on Terror. Nevertheless, in the last five years, issues surrounding nuclear weapon treaties and their members have ramped up. North Korea has engaged in sabre rattling with the international community through its rapid and multiple nuclear weapons tests. After years of suffering under US sanctions, Iran entered a multilateral nuclear weapons treaty – the Joint Comprehensive Plan of Action in 2015, which the US left in 2019. Both events and President Putin's announcement in March 2018 that Russia had developed four new nuclear weapon systems brought nuclear weapons and its issues back to the forefront of many policymakers.

Why does this matter? Nuclear weapons are the top deterrent tool mainly due to their short-term and long-term destructive effects. Even though the Nuclear Non-Proliferation Treaty was signed in 1972, the world is far from complete disarmament. There are nine nuclear weapon states: Russia, UK, France, US, Pakistan, India, Israel, China, North Korea. Iran has been suspected of having proliferated, yet confirmation is still missing. Nuclear weapons have the power to eradicate human society and shift global politics and alliances all the time, simply by existing. Defence and Foreign policy are often determined and shaped by if a state possesses nuclear weapons or not.

This thesis will focus on Russia's nuclear weapons programme. In recent years, Russia has dominated headlines with its increasingly assertive rhetoric concerning its nuclear weapon programme. For example, in 2018, President Putin announced the development of four new nuclear weapons[1]. Furthermore, in 2019 the INF Treaty was terminated[2], and President Putin stated he was ready for another Cuban Missile Crisis when engaging with the United States[3].

[1] Anthony H Cordesman, 'Putin and Russia's New Nuclear Weapons: Whoever Dies with the Most Toys Wins?' (CSIS, 8 March 2018).
[2] Arms Control Association, 'The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance | Arms Control Association', Arms Control Association, August 2019, https://www.armscontrol.org/factsheets/INFtreaty.
[3] Andrew Osborn, 'Putin to U.S.: I'm Ready for Another Cuban Missile-Style Crisis If You Want One', *Reuters*, 21 February 2019, https://www.reuters.com/article/us-russia-putin-idUSKCN1QA1A3.

These statements, coupled with the rapid modernization program that Russian nuclear forces have engaged in the last decade, hint at a proactive approach. However, the extent and underlying rationale remain contested. Unsurprisingly, a large and growing literature surrounding this topic exists.

Nevertheless, much of this literature remains broken. This means that most studies focus on a singular piece or episode of the programme rather than looking at the bigger picture. As a result, they fail to provide a comprehensive analysis of Russia's nuclear weapons policy. This thesis seeks to fill that gap, especially looking at Russian's nuclear weapons policy under Vladimir Putin.

This thesis will look at the overarching research problem: How has Russia's nuclear programme changed under President Putin?

Chapter 2 puts the topic into a temporal context and provides a historical analysis of how various aspects and elements of Russia's nuclear weapons policy have evolved. Modernization of the Russian nuclear programme, its nuclear and military doctrines, and the arms control agreement and international weapon treaties will demonstrate a shift towards a proactive modernization strategy in the last several years. The remaining sections will then take a closer look at the Russian nuclear weapon programme while President Putin is in power. This is done to limit the scope of the study.

Chapter 3 provides a literature review surround Russia's nuclear programme, identifying the key debates in the existing studies. Three main arguments emerged from the literature:

1. First, Russia is pursuing a pro-active modernization approach through an escalate to de-escalate strategy as part of its quest for regional hegemony.
2. Second, Russia is modernizing at an average speed while investing in the future of Russia through developing new weapon and delivery systems to maintain a secure second-strike capability.
3. Third, Russia is pursuing nuclear weapons as a key status symbol.

Chapter 4 lays out the methodological approach of congruence analysis and its limitations for this thesis. Building on this presents both constructivist and realist theory and their relevance for understanding Russia's nuclear weapons policy.

Chapter 5 carries out a theoretically informed analysis, exploring to what extent realist and constructivist theory can provide one with a more thorough understanding of the critical drivers and ambitions of Russia's more proactive and assertive nuclear weapons policy.

Chapter 6, the conclusion, summarizes the main findings and briefly discusses their implications for policymakers as they engage in negotiations surrounding nuclear weapon treaties in the future. This thesis found that the defensive realist argument and the constructivist arguments are more likely to be used by Russia than the offensive realist argument. While each theoretical argument has its own merits, there is no one distinct argument that presents itself to be used over the other. Most states tend to pursue a combination of different reasons rather than one. This requires a certain flexibility of policymakers when looking to engage with Russia.

Russia's Nuclear Weapons Policy, 1992-2020: A Historical Analysis

Russia's nuclear weapons policy consists of three main features: the individual doctrines themselves, international nuclear treaties, and the recent modernization of its nuclear arsenal. When it comes to nuclear weapons, the Russian Federation and its precursor, the Union of Soviet Socialist Republics (USSR), have long been acknowledged to be among the major players globally. While the Cold War defined a bi-polar theatre comprehensive nuclear threat between the USSR and the United States of America, the subsequent 30 years have been far from quiet for the Russian Federation. This chapter aims to give a historical analysis on each of the three main features. It will first look at the doctrinal developments, then international weapon treaties, before looking at the modernization aspect.

Doctrinal Developments

During the Cold War, the military doctrines of both the United States and the USSR heavily relied on their nuclear arsenal. As a result, most of their defence budget went towards the research and development of nuclear missiles. However, the Non-Proliferation Treaty (NPT) ratification 1970 and other significant arms control treaties signalled the shift away from using nuclear weapons as the primary political and military tool for state dominance.

Since the collapse of the USSR, each President of the newly formed Russian Federation has had a slightly different approach to the military and the importance of nuclear weapons as part of their strategic toolset. However, some things remain the same. The importance of national security on a regional level as well as an international one remains a priority. President Yeltsin arguably had a distant and reactive approach to his military. No significant military reform, nuclear or conventional, was taken by him, and he was more pro-West than his predecessor. He stands in direct opposition to President Putin, who sees the West and its advancement as a direct threat to the Russian stability.[4] Due to his lack of emphasis on nuclear weapons, there was a significant amount less money spent on the advancement, allowing the nuclear arsenal to be dimmish. The military doctrine focuses on domestic threats rather than external ones.[5] Yeltsin provides a short outline of nuclear weapon use in his *Main Provisions of Russia's Nuclear*

[4] Stephen J. Blank, *Russian Nuclear Weapons: Past Present and Future* (Strategic Studies Institute, 2011).
[5] Blank.

Deterrence Policy document of 1997. However, this was four years after the 1993 military doctrine was already in place. [6]

The 1993 military doctrine of Russia focuses primarily on local, rapid-force armed responses keeping to more limited warfare rather than large theatre operations and the heavy focus on developing new military technology. The new technology does include research and development within their nuclear arsenal. However, it focuses on a more limited and localized nuclear-warfare approach in line with their smaller warfare technique.[7] This is a distinct shift away from the Cold War when nuclear war was global theatre warfare and focused on deterring the United States of America rather than the proliferating countries closer to Russia's border, such as China, India, and Pakistan.

This shift away from Soviet-era type nuclear weapons to more strategic nuclear weapons the 1993 Military Doctrine signals the start of Russia's policy of escalate to de-escalate policy.[8] The rapid de-escalation of Russia's nuclear arsenal in the 1990s paved the way for a more straightforward modernization of the nuclear arsenal in the 2000s under President Vladimir Putin.

The reliance on nuclear weapons can be seen by analyzing the 2000 *National Security Concept of the Russian Federation*. This document outlines Russia's national interests, emphasizing strengthening the country as a dominant and highly influential power in a multipolar world[9]. It is clear from this Security Concept that Russia strives to be equal to the leading powers of the world, specifically the United States, both politically and economically. Russia further strives to achieve "mutually advantageous international cooperation" with these dominant powers[10]. Russia's military interests outline their priorities: protection of its independence, sovereignty and state territorial integrity, prevention of military aggression against Russia and its allies, and ensuring the condition for the peaceful and democratic development of the state[11]. This document further identifies what Russia perceives as a threat to its country.

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[6] Blank.
[7] Mary C. FitzGerald, 'Russia's New Military Doctrine', *Naval War College Review* 46, no. 2 (1993): 35-36.
[8] Amy F Woolf, 'Russian Nuclear Forces, 2019' (Congressional Research Service, 2 January 2020), https://crsreports.congress.gov/product/pdf/R/R45861.
[9] "National Security Concept of the Russian Federation". *The Ministry of Foreign Affairs of the Russian Federation.* Last modified January 10, 2000. http://www.mid.ru/en/foreign_policy/official_documents/-/asset_publisher/CptICkB6BZ29/content/id/589768
[10] Russian Federation, 'Russia's Military Doctrine 2000' (Arms Control Association, January 2000), https://www.armscontrol.org/act/2000-05/russias-military-doctrine?print=.
[11] Russian Federation.

The doctrine includes threats such as strengthening military-political blocs and alliances, especially NATO's eastward expansion[12].

The document highlights the dangers of weakening "Russia's political, economic and military influence in the world."[13] Many more threats are stated throughout this document; however, the national interests, military interests, and protection from threats still have a reliance on the possession of nuclear weapons. The document states, "one of the major tasks of the Russian Federation to exercise deterrence in the interest of preventing aggression on any scale, nuclear or otherwise against Russia and its allies."[14] Furthermore, Russia emphasizes the importance of possessing nuclear forces that provide a credible threat to inflict the intended level of damage against any aggressor of the state. This is a clear departure from the 1993 Military Doctrine.

In 1993 the military doctrine states its main aim was to prevent wars and armed conflicts on a regional and global level. In addition, it aimed to ensure the defence of military organizational development while ensuring defence readiness and providing a countermeasure for any threats of concern to Russia.

In both the 1993 and 2000 military doctrines, they state that Russia will not use its nuclear weapons against NPT-states who do not possess nuclear weapons unless they act in compliance or alliance with NWS. This statement is no longer included from 2010 onwards. It is essential to note that this is not a statement of no first use. It simply states that they will not act pre-emptively without cause. It also states both in the 1993 and the 2000s military doctrines that any acts of aggression against Russia would not retaliate through nuclear weapons due to its catastrophic consequences.[15] This course of action stands in direct contrast to the 2010 and 2014 doctrines that clearly state any conventional war could escalate into a nuclear conflict if needed. While the doctrines state that "a war involving two or more states in the same region waged by national or coalition armed forces and involving the utilization of both conventional and nuclear means of attack on the territory of the region" is not a problem for them. The military doctrine aims to prevent "a nuclear military conflict [to] maintain strategic stability and the nuclear

[12] Patrick Truffer, 'Comparison-of-the-Russian-Military-Doctrine-1993-2000-2010-and-2014.Pdf', 2015, https://www.offiziere.ch/wp-content/uploads-001/2015/08/Comparison-of-the-Russian-Military-Doctrine-1993-2000-2010-and-2014.pdf.
[13] Russian Federation, 'Russia's Military Doctrine 2000'.
[14] Russian Federation.
[15] Truffer, 'Comparison-of-the-Russian-Military-Doctrine-1993-2000-2010-and-2014.Pdf'.

deterrence potential at an adequate level."[16] When Vladimir Putin took over the Presidency from President Yeltsin, he faced a failed military, which needed a complete revamp.

The new Military Doctrine of 2000 was approved by Russian Presidential Edict 706 on April 21.[17] This document states that the Russian Federation maintains the right to "use nuclear weapons in response to the use of nuclear weapons or other weapons of mass destruction (WMD's) against Russia or its allies, as well as in response to large-scale conventional aggression in a critical situation for Russian national security."[18] Unlike Yeltsin, President Putin promptly made a clear statement clarifying the position of Russia's nuclear deterrence policy. He stated, "if the practice of preventive strikes should de facto become widespread and grow stronger, Russia reserves the right to such practice," he continued stating that, "[…] we retain the right to carry out preventive strikes."[19]

President Putin's attitude towards arms control is arguably defiant. He actively states his right to utilize these weapons of mass destruction if he feels it is necessary to do so instead of engaging in efforts to reach agreements in arms control treaties with the West. Despite budgetary restrictions, the Kremlin could find a way to maintain and expand its nuclear arsenal inexpensively, consequently making this statement credible[20]. This way allows President Putin to strengthen Russia's nuclear capabilities in an evident era of deterrence by punishment.

Deterrence by punishment and deterrence by denial have been initially developed in a game theory context but are used by foreign policymakers since the 1960s.[21] Deterrence by denial is the act of convincing the opponent that they are unlikely to attain their desired outcome in a quick time frame and at a reasonable cost. Deterrence by punishments is the act that if the opponent engages in specific behaviour, they will be punished with extreme measures.[22] For either of these behaviours to work best, the side attempting these needs to be a credible actor

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[16] Russian Federation, 'The Military Doctrine of the Russian Federation' (Carnegie Endowment, 5 February 2010), https://carnegieendowment.org/files/2010russia_military_doctrine.pdf.
[17] Stephen J Blank. "Russian Nuclear Weapons: Past, Present, and Future." *Strategic Studies Institute.* November 2011. http://www.strategicstudiesinstitute.army.mil/pdffiles/pub1087.pdf 7.
[18] Blank, *Russian Nuclear Weapons*.
[19] Blank.11
[20] Blank.
[21] Thomas C. Schelling, *The Strategy of Conflict* (Harvard University Press, 1960).
[22] Jörg Noll, Osman Bojang, and Sebastiaan Rietjens, 'Deterrence by Punishment or Denial? The EFP Case', in *NL ARMS Netherlands Annual Review of Military Studies 2020: Deterrence in the 21st Century—Insights from Theory and Practice*, ed. Frans Osinga and Tim Sweijs (The Hague: T.M.C. Asser Press, 2021), 109–28, https://doi.org/10.1007/978-94-6265-419-8_7. Also see: Michael J Mazarr, 'Understanding Deterrence', *RAND*, 2018, 14.; Schelling, *The Strategy of Conflict*.

willing to do so rather than just signal their willingness and not follow through. The most used tool for deterrence by punishment is implementing sanctions on a political, economic, and social level.

The *National Security Concept of the Russian Federation* in 2000 further outlines Russia's national interests, with a strong emphasis on strengthening military capabilities and the country itself as a dominant, highly influential power in a multipolar world.[23] The interests of Russia's military, as previously outlined, emphasize Russia's desire to be a powerful, sovereign state. To achieve these national interests, Russia continues to rely on the power of the possession of nuclear weapons. In addition, the *National Security Concept* highlights the importance of Russia's right to exercise deterrence to prevent any level of aggression. Therefore, Russia views the possession of nuclear weapons as critical for any potential threats towards aggressors to be credible. Russia's determination to be a strong state result in a heavy reliance on nuclear weapons.

These Military Doctrines of Russia continuously show similar trends in nuclear posture. Moscow maintains that its primary goal is to keep its status as a great nuclear power[24]. In times of imminent threat to national security, Russia maintains that it is in the position to inflict a preventative nuclear strike upon an aggressor. Both Oxenstierna [25] and Sandler[26] note the rapid decline in Russia's military expenditures in the 1990s after the collapse of the Soviet Union, only to climb again in 2000 steadily. This is a clear indicator that the military doctrine of Russia has a heavy impact on the economy of the Russian defence budget when it comes to modernizing and maintaining its nuclear arsenal.

Although Russia's nuclear posture proves to maintain similar patterns from 1991 to 2000, it is clear that the change in the presidency has impacted the nuclear posture. This is visible in the military doctrines and the policy that surrounds nuclear weapons.

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[23] "National Security Concept of the Russian Federation". *The Ministry of Foreign Affairs of the Russian Federation.* Last modified January 10, 2000. http://www.mid.ru/en/foreign_policy/official_documents/-/asset_publisher/CptICkB6BZ29/content/id/589768

[24] Elias Götz, 'Strategic Imperatives, Status Aspirations, or Domestic Interests?', *International Politics* 56, no. 6 (2019): 810–27.

[25] Susanne Oxenstierna. 'A new trend in Russia's defence Spending.' In Torbjörn Becker and Susanne Oxenstierna (eds) *The Russian Economy under Putin.* Routledge. (2019)

[26] Todd Sandler and Justin George, 'Military Expenditure Trends for 1960–2014 and What They Reveal', *Global Policy* 7, no. 2 (2016): 174–84, https://doi.org/10.1111/1758-5899.12328.

These changes are consistently driven by the President's desire for his country to be recognized as a leading power on the international stage. However, despite its development into a strong economy, Russia still does not have the powerful reputation it desires. This brings into question what additional factors have led to Russia not being recognized globally as the power the country views itself as. Furthermore, the United States seems to continue to progress towards the end goal of a nuclear-free world. In contrast, Russia maintains these weapons as a tool of deterrence and a symbol of power to aid its status on the world stage.

Since President Vladimir Putin came into power in 1999, he has put his stamp on both the military doctrines and the nuclear doctrines of Russia. Since 2000 Russia has not publicly shared their nuclear doctrine with the world but instead included nuclear weapons and their use in their military doctrines, often quite vague. The *2020 Basic Principles of Nuclear Doctrine* signalled a distinct shift from its predecessor. The new doctrine explicitly states that there is no policy of escalate to de-escalate, as has been speculated by many western scholars over the last decades. Simultaneously, it does not signal a drastically new nuclear policy compared to 2010 and 2014 military doctrines. However, it does clarify much vague detail and elaborates on others.[27]

Being one of nine nuclear weapon states (NWS) and arguably the most powerful one tied with the US. Russia has had the privilege of setting the tone of nuclear strategy throughout the Cold War and its modernization efforts in the later 2000s.

Sokov notes in his report from 2011 that Russia mirrors the other NWS in that it shifted its nuclear strategy away from more longer-range missiles and weapons of deterrence to more of a status symbol. Russia is looking towards non-strategic (tactile) nuclear weapons that it prioritizes in its modernization effort. He also argues that Russia has started to shift away from strategic deterrence. He started to look at the concept of war differently through its changing military doctrines, looking more at limited and unconventional warfare than total theatre warfare as was traditional over the last century. This is an astute observation considering Sokov wrote this in 2011, three years before the annexation of Crimea. He already notes that Russia has

[27] Nikolai Sokov, 'Russia Clarifies Its Nuclear Deterrence Policy', Vienna Center for Disarmament and Non-Proliferation, 3 June 2020, https://vcdnp.org/russia-clarifies-its-nuclear-deterrence-policy/.

started positioning itself and its nuclear doctrine differently from the other nine NWS but maybe as a direct response to the ongoing NATO Expansion.[28]

2010 signalled the start of departure on Russia's nuclear weapon policy within the military doctrine. The 2010 doctrine's main aim is no longer to prevent and neutralize military threats. In contrast, it states that its primary aim is to prevent arms racing by deterring and preventing military conflicts and defending and safeguarding Russia's security. It highlights the nature of Russia's national interest in its military doctrine. Nuclear weapons serve as an essential deterrence factor against nuclear military conflicts and conventional military conflicts and attacks. It explicitly states that: "[t]he Russian Federation reserves the right to utilize nuclear weapons in response to the utilization of nuclear and other types of weapons of mass destruction against it and (or) its allies, and also in the event of aggression against the Russian Federation involving the use of conventional weapons when the very existence of the state is under threat."[29]

Whereas the 1993 and 2000 doctrines stated that Russia is ready and seeking the reduction of nuclear weapons, the 2010 doctrine makes no mention of this, and in 2014 they state that they will do so only in compliance with international treaties that aim at the reduction and limitation of nuclear weapons.[30]

In 2014 the military doctrine went a step farther. It states that "[t]he main tasks of the Armed Forces, other troops and authorities in peacetime: a) the protection of sovereignty, territorial integrity The Russian Federation and the integrity of its territory; b) strategic (nuclear and non-nuclear) deterrence is including the prevention of armed conflicts; c) maintaining composition, state of combat and mobilization preparedness and training of the strategic nuclear forces, forces and means to ensure their operation and use, and management systems at a level guaranteeing the infliction unacceptable damage to the aggressor in any situation."[31] The theme of preserving sovereignty and territorial integrity is again similar to the previous doctrines. The 2014 doctrine reads as if nuclear weapons are on the same level as conventional weapons and marks no difference. It names NATO as a primary threat to its sovereignty and border security.

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[28] Nikolai Sokov, 'NUCLEAR WEAPONS IN RUSSIAN NATIONAL SECURITY STRATEGY', Russian Nuclear Weapons: Past, Present, and Future (Strategic Studies Institute, US Army War College, 2011), JSTOR, http://www.jstor.org.ezproxy.its.uu.se/stable/resrep12072.9.
[29] Russian Federation, 'En'.
[30] Truffer, 'Comparison-of-the-Russian-Military-Doctrine-1993-2000-2010-and-2014.Pdf'.
[31] Russian Federation, '2014 Military Doctrine of the Russian Federation' (Russian Federation, 26 December 2014), https://www.offiziere.ch/wp-content/uploads-001/2015/08/Russia-s-2014-Military-Doctrine.pdf.

It states that nuclear weapons may be used against an attack on Russia, and its allies, made by other WMDs or nuclear weapons[32].

However, the *2020 Basic Principles of Nuclear Deterrence* document does state that such a difference does exist. Within the first few paragraphs, it states that it "considers nuclear weapons exclusively as a means of deterrence, their use is an extreme and compelled measure. [Taking] all necessary efforts to reduce the nuclear threat and prevent aggravation of interstate relations, that could trigger military conflicts, including nuclear ones."[33] This statement seems to indicate that nuclear deterrence is the main aim of Russia's nuclear program and that their weapon program is aimed as a security guarantor rather than as a tool to coerce its enemies.[34] Furthermore, it goes into greater detail on the circumstances in which nuclear weapons could be used.

The most concerning of these is the third one that in its phrasing could include an "attack by an adversary against critical governmental or military sites of the Russian Federation, disruption of which would undermine nuclear forces response actions." By simply stating that this must be an attack that could disrupt critical government function, it leaves it open if this includes attacks of cyber nature or not. When Russia is willing to use nuclear weapons, this inclusion of circumstances is the central departure point of previously published military doctrine. It signals a significant shift in Russia's nuclear policy. Roberts cautions against seeing the 2020 nuclear doctrine as a declaration of an escalation to win or as a confirmation of a escalate to de-escalate policy. Instead, to state their use of nuclear weapons is one of deterrence and keeps their status within the international system against the US[35].

The escalate to de-escalate policy has been speculated about for many years by predominantly western scholars. Ross cautions against using this terminology, yet he is not the first to use this terminology when referring to Russia's nuclear posture. Surprisingly, or not this phrase which has gained much traction when referring to Russia's nuclear programme, has first been used by American scholars around 2015. While the phrase itself was already used during the

[32] Ivar Isachenkov, 'New Russian Military Doctrine Says NATO Top Threat', Newspaper, The Washington Times, 26 December 2014, https://www.washingtontimes.com/news/2014/dec/26/new-russian-military-doctrine-says-nato-top-threat/.
[33] Russian Federation, 'Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence' (Russian Federation, 8 June 2020), https://www.mid.ru/foreign_policy/international_safety/disarmament/-/asset_publisher/rp0fiUBmANaH/content/id/4152094.
[34] Cynthia Roberts, 'Revelations about Russia's Nuclear Deterrence Policy', *War on the Rocks* (blog), 19 June 2020, https://warontherocks.com/2020/06/revelations-about-russias-nuclear-deterrence-policy/.
[35] Roberts.

Cold War by US State Secretary Robert McNamara, it has seen a resurgence of popularity in the last ten years, officially appearing in a US briefing document in June 2015. It quickly became a general layman's term and received more credibility from its usage in the 2018 Nuclear Posture Review from the US Defence Department.[36]

While there is no singular definition for the phrase or even the policy, the general idea behind it is essentially the security dilemma in a specific nuclear context. The security dilemma argues that if state A starts to build up its military, state B will most likely also build up its military to secure against the potential threat of state A. The Cold War is the perfect example of what happens when a security dilemma occurs between two nuclear states. The perceived threat by the opposing state quickly leads to arms racing, and both states end up with a sizeable nuclear arsenal very quickly. Even though the Nuclear Taboo has been in use for decades, it does not guarantee that this will always be the case. The Nuclear Taboo refers to the norm that while both sides have nuclear weapons, it is unthinkable to use them in a conflict due to the extremely short and long-term consequences.[37]

In terms of Russia, the United States has stated that they believe Russia has a escalate to de-escalate policy due to its reduction of the nuclear arsenal, in compliance with international treaties, such as New START. This American belief stems from Russia's quick and rampant modernization and development of new nuclear weapons in recent years and its willingness to engage in a nuclear conflict, as stated in its military doctrines of 2010. Overall, several prominent themes are present in each military doctrine: the importance of Russia on a local, regional, and global level; the possession and use of nuclear weapons as tools of deterrence; and the willingness to use nuclear weapons in a conventional armed conflict. While these themes vary throughout the years, these themes are present in each doctrine. There is also not a directly stated escalate to de-escalate policy in place. However, the doctrine emphasizes the importance of nuclear modernization and the adherence to international nuclear treaties. There is a clear statement of a more proactive approach to the modernization of the nuclear arsenal from 2010 onwards. It is evident that the President influences the military doctrines and the ongoing modernization of the nuclear arsenal and guided by international treaties that Russia is a member state.

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[36] Kevin Ryan, 'Is "Escalate to Deescalate" Part of Russia's Nuclear Toolbox? | Russia Matters', *Russia Matters* (blog), 8 January 2020, https://www.russiamatters.org/analysis/escalate-deescalate-part-russias-nuclear-toolbox.
[37] Nina Tannenwald, 'The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use', *International Organization* 53, no. 3 (1999): 433–68.

Russia and international nuclear weapons treaties

The second pillar that is important for Russia's nuclear policy is international treaties and arms embargoes. One of the earliest international nuclear treaties was the Non-Proliferation Treaty (NPT), signed in 1968 and came into effect in 1970. It served as the first way to entrench the concept of deterrence in international humanitarian law and the start of international nuclear treaties. Throughout the Cold War, the US and Russia signed and ratified several nuclear treaties from SALT to START to INF and New START. These treaties served as international markers that these two states could guide their nuclear doctrines. These treaties have evolved and have influenced military doctrines and were influenced and constrained by them on both sides. They also guided the speed of the modernization of the nuclear arsenal that started in the 2000s.

This section will briefly overview of the significant nuclear treaties signed and implemented between the United States of America and Russia. It will not focus on nuclear treaties or arms control agreements. Russia is a member, of the Joint Comprehensive Plan of Action, the Comprehensive Test Ban Treaty or other sanctioning agreements. This thesis acknowledges that as a permanent member of the UN Security Council, Russia has full right to use its veto power to restrict nuclear weapons and their development. This section, in particular, will focus on the main nuclear treaties that are or were in force between the US and Russia since the two countries possess around 90% of the world's nuclear arsenal.[38] Several nuclear treaties, such as the NPT, SALT I, SALT II and the INF treaty, were negotiated and implemented during the Cold War. Though an upswing of treaty signage can be seen post-Cold War, especially in the 1990s, supported by the Presidential Nuclear Initiatives (PNI's) by President George H.W. Bush and President Mikhail Gorbachev. Both Figure 1 and Table 1 gives an overview of the evolution of the nuclear treaties. This section will focus on the major ones that were implemented and give a summary of each.

The NPT's main aim is the complete mutual disarmament of all NWS, the achievement of a nuclear-weapon-free world, and increased transparency of the build-up of nuclear weapon programs. This increased transparency is achieved mainly by the International Atomic Energy Agency (IAEA) inspections, a neutral party often regarded as the nuclear watchdogs. The first significant treaty that came into play after the ratification of the NPT was SALT I.

[38] 'Russia', NGO, Center for Arms Control and Non-Proliferation, accessed 20 April 2021, https://armscontrolcenter.org/issues/russia/.

The main aim of the Strategic Arms Limitation Talks (SALT I) was to restrict the number of strategic missile defences and as well as the intercontinental ballistic missiles (ICBM) and submarine-launched ballistic missiles (SLBM) both sides could have. These talks also produced the Anti-Ballistic Missile Treaty (ABM Treaty). The combination of the ABM and SALT I limited the defence capabilities against the weapon delivery systems of both sides and the type of missiles each side could employ and stockpile. Unfortunately, the US withdrew from the ABM Treaty in 2002, and SALT I expired in 1977 when it was supposed to be replaced by SALT II, which never ended up entering into effect in the first place.[39] It also is of note that SALT I included both army and naval deployable weapon systems. Rather than just including one branch of the military, the treaty strategically included both of them.

The subsequent major treaty that is of importance is the Intermediate-Range Nuclear Forces (INF) Treaty. This treaty was most recently terminated in August 2019 by the US after accusing Russia of breaking the treaty several times. Similar to SALT I, the INF Treaty looked at restricting missiles. This time, it specifically looked at ground-launched ballistic and cruise missiles with a range between 500 and 5500 kilometres.[40] This range would be sufficient to reach Europe and the Eastern Coast of the United States if launched from Moscow. The treaty states that they are not allowed to "possess, produce, or flight-test [such missiles, as well as], possess or produce launchers of such missiles."[41] What is unique about this treaty is that it is the first one that required on-site inspections, which would later also be included in START I. While initially signed in 1987, under the USSR, newly independent states such as Ukraine, Belarus, Kazakhstan, and Russia are active members of the agreement with the US after its break-up.[42]

The INF Treaty has received much attention since 2014, both sides accusing each other of breaking the treaty. The US has also used its alliance with NATO to caution and accuse Russia of breaking the treaty.[43] The INF Treaty has been one of the longest-standing nuclear arms control treaties that have been signed and ratified between the United States and the

[39] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association', Arms Control Association, accessed 16 April 2021, https://www.armscontrol.org/factsheets/USRussiaNuclearAgreements.
[40] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association'.
[41] Arms Control Association, 'The Intermediate-Range Nuclear Forces (INF) Treaty at a Glance | Arms Control Association'.
[42] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association'.
[43] NATO, 'Statement on Russia's Failure to Comply with the Intermediate-Range Nuclear Forces (INF) Treaty, Issued by the North Atlantic Council, Brussels, 1 February 2019', NATO, 1 February 2019, http://www.nato.int/cps/en/natohq/news_162996.htm.

Russian Federation. In many ways, it set the ground rules of treaties between the US and Russia in how arms control is done and carrying out inspections. It gives both countries a reason to develop new weapon systems which are not constrained by the INF Treaty but can be just as effective when deployed. It is also the only treaty that eliminates one type of weapon, and with it no longer in effect can signal a return to a Cold War-esque arms racing.[44]

Around the same time that the INF Treaty came in force, shortly after START I was signed, the PNI's or Presidential Nuclear Initiatives were created and signed by President George H.W. Bush and President Gorbachev in the fall of 1991. Both presidents agreed to remove the majority of their tactical nuclear forces from deployment. This included several ballistic missile warheads from naval and army forces. These PNI's signalled the first step towards a drastic reduction of nuclear weapons following the break-up of the Soviet Union.

The ratification of START I in 1992 certainly helped with the PNI as START I set out a target of how many deployed warheads each country could have and limiting the deployable delivery system. START I was in place from 1992 until 2009. While the actual reduction of arms took until 2001 to be completed, it can still be seen as successful. START II and III were in negotiations but ended up falling through due to various reasons.

The next breakthrough in limiting the US and Russia's nuclear arsenal came with the Strategic Offensive Reductions Treaty, also known as SORT or the Moscow Treaty. SORT was signed on May 24, 2002, and ratified on June 1, 2003. SORT's issue was that while it set a limit of the strategic arsenal to 1700-2200 warheads per side, it did not specify how these are counted, leaving a door open for interpretation. As a result, New START replaced SORT in 2011.

New START reduced deployable warheads and delivery systems even further by limiting them to 1550 warheads, roughly 30% less than previously allowed under SORT. New START re-affirmed the exchange of data from both sides and the process of allowing on-site inspections and limiting the number of test-flights each country can undertake to five per year.[45] Under the terms of New START, President Putin announced four new nuclear weapon systems in March 2018.[46] New START has received much attention in the last two years, especially once the

[44] 'INF Nuclear Treaty: US Pulls out of Cold War-Era Pact with Russia', *BBC News*, 2 August 2019, sec. US & Canada, https://www.bbc.com/news/world-us-canada-49198565.
[45] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association'.
[46] Pranay Vaddi, 'Bringing Russia's New Nuclear Weapons Into New START', *Lawfare* (blog), 13 August 2019, https://www.lawfareblog.com/bringing-russias-new-nuclear-weapons-new-start.

Trump Administration withdrew from the INF Treaty. It was the last major nuclear treaty between the US and Russia and expired in February of 2021.

Even though in their 2014 military doctrine and 2020 Basic Principles Doctrine, Russia had stated that compliance with international treaties for reducing and limiting nuclear weapons is a priority.[47] Their 2020 Basic Principles Doctrine also states that they are committed to maintaining and developing their nuclear programme. President Putin had previously stated that Russia is willing to extend New START to 2026 as per the treaty's text, but President Trump had no willingness to do the same. New START was extended from February 5, 2021, until 2026, once President Biden came into office in January 2021.[48] Since then, Russia has continued to signal its willingness to engage in further talks in preventing an arms race between the US and Russia.[49]

In summary, Russia has a long history of being a member of several nuclear treaties and arms control agreements, both as a secondary and primary member. The INF Treaty and the PNI's in the late 1980s, early 1990s signalled a shift towards nuclear arms reduction, which was supported by the military doctrines and the emphasis on compliance with nuclear arms treaties. Both SORT and New START have made significant gains in reducing the existing nuclear arms, though it does not cover newly developed weapon systems. Russia stated it is committed to compliance with its international treaties, especially those with the US, and its planned modernization a priority.

Looking at the main international treaties between the US and Russia, the overarching theme of reducing arms is an easy trend to see. The first treaties were predominantly looking at an overall reduction of arms. The ABM and INF Treaties stood out as they banned complete delivery systems. New START is due to be replaced in 2026, and they do not cover several newly developed weapon and delivery vehicles. There is a clear statement of a more proactive approach to the modernization of the nuclear arsenal from 2010 onwards[50].

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[47] Truffer, 'Comparison-of-the-Russian-Military-Doctrine-1993-2000-2010-and-2014.Pdf'.
[48] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association'.
[49] Kingston Reif and Shannon Bugos, 'U.S., Russia Signal Willingness to Hold Arms Control Talks | Arms Control Association', NGO, Arms Control Association, 17 March 2021, https://www.armscontrol.org/blog/2021-03/us-russian-nuclear-arms-control-watch.
[50] Pavel Baev, 'Russian Nuclear Modernization and Putin's Wonder-Missiles: Real Issues and False Posturing', *Russie. Nei.Visions*, no. 115 (August 2019): 32.

Figure 1: Timeline of Strategic Nuclear Arms Control Agreements[51]

[51] 'Russia'.

Table 1: Strategic Nuclear Arms Control Agreements[52]

Strategic Nuclear Arms Control Agreements

Strategic Nuclear Arms Control Agreements								
	SALT I	SALT II	INF Treaty	START I	START II	START III	SORT	New START
Status	Expired	Never Entered Into Force	Terminated	Expired	Never Entered Into Force	Never Negotiated	Replaced by New START	In Force
Deployed Warhead Limit	N/A	N/A	N/A	6,000	3,000-3,500	2,000-2,500	1,700-2,200	1,550
Deployed Delivery Vehicle Limit	US: 1,710 ICBMs & SLBMs USSR: 2,347	2,250	Prohibits ground-based missiles of 500-5,500 km range	1,600	N/A	N/A	N/A	700
Date Signed	May 26, 1972	June 18, 1979	Dec. 8, 1987	July 31, 1991	Jan. 3, 1993	N/A	May 24, 2002	April 8, 2010
Date Ratified, U.S.	Aug. 3, 1972	N/A	May 28, 1988	Oct. 1, 1992	Jan. 26, 1996	N/A	March 6, 2003	Dec. 22, 2010
Ratification Vote, U.S.	88-2	N/A	93-6	93-6	87-4	N/A	95-0	71-26
Date Entered Into Force	Oct. 3, 1972	N/A	June 1, 1988	Dec. 5, 1994	N/A	N/A	June 1, 2003	Feb. 5, 2011
Implementation Deadline	N/A	N/A	June 1, 1991	Dec. 5, 2001	N/A	N/A	N/A	Feb. 5, 2018
Expiration Date	Oct. 3, 1977	N/A	Aug. 2, 2019	Dec. 5, 2009	N/A	N/A	Feb. 5, 2011	Feb. 5, 2026*

[52] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association'.

Russia's Nuclear Weapons Modernization

The third pillar is that of nuclear modernization. This modernization refers to the building and development of new nuclear weapons on all levels, long and short-range, tactical and non-tactical weapons for use on land, sea, and air.

Both the US and Russia have started to modernize their nuclear triad (sea, air, land). The US stated its intention for modernization in its 2017 National Security Document and its 2018 Nuclear Posture Review[53]. In contrast, Russia had the modernization included in the 2014 military doctrine. Russia has not only actively started its nuclear modernization plans, but it also shared the development of several utterly new weapon delivery systems within the last five years. Russia has claimed that the overall modernization of its nuclear arsenal was already done to 70% by 2018. This modernization included four new delivery systems that President Putin mentioned in his 2018 speech. These included a new intercontinental ballistic missile and a new nuclear-armed "Avanguard" hypersonic glide vehicle.[54] This brings to question the start date of Russia's planned modernization.

To accurately understand Russia's nuclear arsenal size, this section will briefly look at the overall number of Russia's arsenal from 1990-2020, highlighting the rapid advancement from 2010 onwards.

Both military and nuclear doctrines reflect the ongoing modernization and the ending of several international nuclear treaties. Looking at the past year, Figure 2 demonstrates quite nicely that despite the overall reduction of nuclear arsenal from Russia and the US, the other NWS, except for France, is increasing their nuclear arsenal. One possible explanation for that could be attempting to match the modernization of the nuclear arsenal, which Russia has been on for 20 years.

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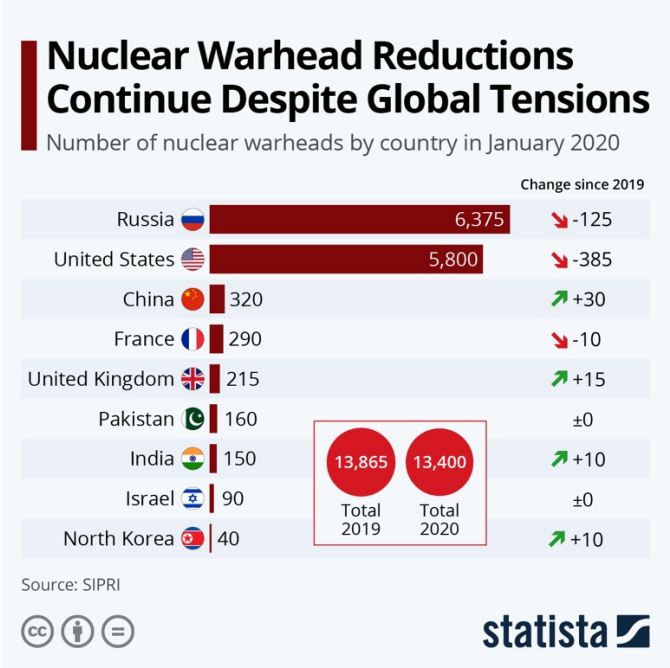
[53] Hans M. Kristensen and Robert S. Norris, 'United States Nuclear Forces, 2018', *Bulletin of the Atomic Scientists* 74, no. 2 (4 March 2018): 120–31, https://doi.org/10.1080/00963402.2018.1438219.

[54] Lt. Gen. Robert P. Ashley Jr., 'Russian and Chinese Nuclear Modernization Trends' (Defense Intelligence Agency, 29 May 2019), https://www.dia.mil/News/Speeches-and-Testimonies/Article-View/Article/1859890/russian-and-chinese-nuclear-modernization-trends/.

Figure 2: Worlds Nuclear Warheads in January 2020[55]



[55] Niall McCarthy, 'Infographic: Nuclear Warhead Reductions Continue Despite Global Tensions', Statista Infographics, 15 June 2020, https://www.statista.com/chart/3653/the-countries-with-the-biggest-nuclear-arsenals/.

Figure 3: Russian Nuclear Forces, 2010[56]

RUSSIAN NUCLEAR FORCES, 2010

TYPE	NAME	LAUNCHERS	YEAR DEPLOYED	WARHEADS X YIELD (KILOTONS)	TOTAL WARHEADS
STRATEGIC OFFENSIVE WEAPONS					
ICBMs					
SS-18	Satan	50	1979	10 x 500/800	500
SS-19	Stiletto	60	1980	6 x 400	360
SS-25	Sickle	150	1985	1 x 800	150
SS-27 (Mod. 1)	(Topol-M, silo)	50	1997	1 x 800	50
SS-27 (Mod. 1)	(Topol-M, mobile)	18	2006	1 x 800?	18
SS-27 (Mod. 2)	(RS-24)	3	2009	~4 x 400?	12
SUBTOTAL		**331**			**1,090**
SLBMs					
SS-N-18 M1	Stingray	4/64	1978	3 x 50 (MIRV)	192
SS-N-23	Skiff	2/48	1986	4 x 100 (MIRV)	128
SS-N-23 M1	Sineva	4/48	2007	4 x 100 (MIRV)[1]	256
SS-N-32	Bulava-30	(1/16)	~2010	6 x 100 (MIRV)	0
SUBTOTAL		**10/160**			**576**
Bombers/weapons					
Tu-95 MS6	Bear H6	31	1984	6 x AS-15A ALCMs, bombs	186
Tu-95 MS16	Bear H16	31	1984	16 x AS-15A ALCMs, bombs	496
Tu-160	Blackjack	13	1987	12 x AS-15B ALCMs or AS-16 SRAMs, bombs	156
SUBTOTAL		**75**			**838**
SUBTOTAL STRATEGIC OFFENSIVE FORCES					**~2,600**
NONSTRATEGIC AND DEFENSIVE WEAPONS					
ABM/Air defense					
53T6	Gazelle	68	1986	1 x 1,000/10	68[2]
SA-10	Grumble	1,900	1980	1 x low	630
Land-based air					
Bombers/fighters		~524		ASM, bombs	650
Naval					
Submarines/surface ships/air				SLCM, ASW, SAM, ASM, DB, torpedoes	700
SUBTOTAL NONSTRATEGIC AND DEFENSIVE FORCES					**~2,000[3]**
TOTAL					**~4,600[4]**

[56] Robert S. Norris and Hans M. Kristensen, 'Russian Nuclear Forces, 2010', *Bulletin of the Atomic Scientists* 66, no. 1 (1 January 2010): 74–81, https://doi.org/10.2968/066001010.

Figure 4: Russian nuclear forces 2021[57]

Table 1. Russian nuclear forces, 2021.

Type/name	Russian designation	Launchers	Year deployed	Warheads x yield (kilotons)	Total warheads
Strategic offensive weapons					
ICBMs					
SS-18 M6 Satan	RS-20V	46	1988	10 x 500/800 (MIRV)	460[a]
SS-19 M3 Stiletto	RS-18 (UR-100NUTTH)	0	1980	6 x 400 (MIRV)	0[b]
SS-19 M4	? (Avangard)	4	2019	1 x HGV	4
SS-25 Sickle	RS-12M (Topol)	27	1988	1 x 800	27
SS-27 Mod 1 (mobile)	RS-12M1 (Topol-M)	18	2006	1 x 800?	18
SS-27 Mod 1 (silo)	RS-12M2 (Topol-M)	60	1997	1 x 800	60
SS-27 Mod 2 (mobile)	RS-24 (Yars)	135	2010	4 x 100? (MIRV)	540[c]
SS-27 Mod 2 (silo)	RS-24 (Yars)	20	2014	4 x 100? (MIRV)	80
SS-X-29 (silo)	RS-28 (Sarmat)	-	(2022)	10 x 500? (MIRV)	-
Subtotal		**310**			**1,189**[d]
SLBMs					
SS-N-18 M1 Stingray	RSM-50	1/16	1978	3 x 50 (MIRV)	48[e]
SS-N-23 M1	RSM-54 (Sineva)	6/96	2007	4 x 100 (MIRV)[f]	384[g]
SS-N-32	RSM-56 (Bulava)	4/64	2014	6 x 100 (MIRV)	384[h]
Subtotal		**11/176**[i]			**816**[j]
Bombers/weapons					
Bear-H6/16	Tu-95MS6/MS16/MSM	55	1984/2015	6-16 x AS-15A ALCMs or 14 x AS-23B ALCMs	448
Blackjack	Tu-160/M	13	1987/2021	12 x AS-15B ALCMs or AS-23B ALCM, bombs	132
Subtotal		**68**[k]			**580**[l]
Subtotal strategic offensive forces		**554**[m]		**2,585**[n]	
Nonstrategic and defensive weapons					
ABM/Air/Coastal defense					
S-300/S-400 (SA-20/SA-21)		750	1992/2007	1 x low	~290
53T6 Gazelle		68	1986	1 x 10	68[o]
SSC-1B Sepal (Redut)		8[p]	1973	1 x 350	4
SSC-5 Stooge (SS-N-26) (K-300P/3M-55)		60	2015	(1 x 10)[q]	25
Land-based air					
Bombers/fighters (Tu-22M3(M3M)/Su-24M/ Su-34/MiG-31K)		~300	1974-2018	ASMs, ALBM, bombs	~500
Ground-based					
SS-26 Stone SSM (9K720, Iskander-M)		144	2005	1 x 10-100	70[r]
SSC-7 Southpaw GLCM (R-500/9M728, Iskander-M)[s]					
SSC-8 Screwdriver GLCM (9M729)[t]		20[u]	2017	1 x 10-100	20
Naval					
Submarines/surface ships/air				LACM, SLCM, ASW, SAM, DB, torpedoes	~935
Subtotal nonstrategic and defensive forces					**1,912**[v]
TOTAL STOCKPILE					**4,497**
Deployed					1,600
Reserve					2,897
Retired warheads awaiting dismantlement					**1,760**
Total inventory					**6,257**

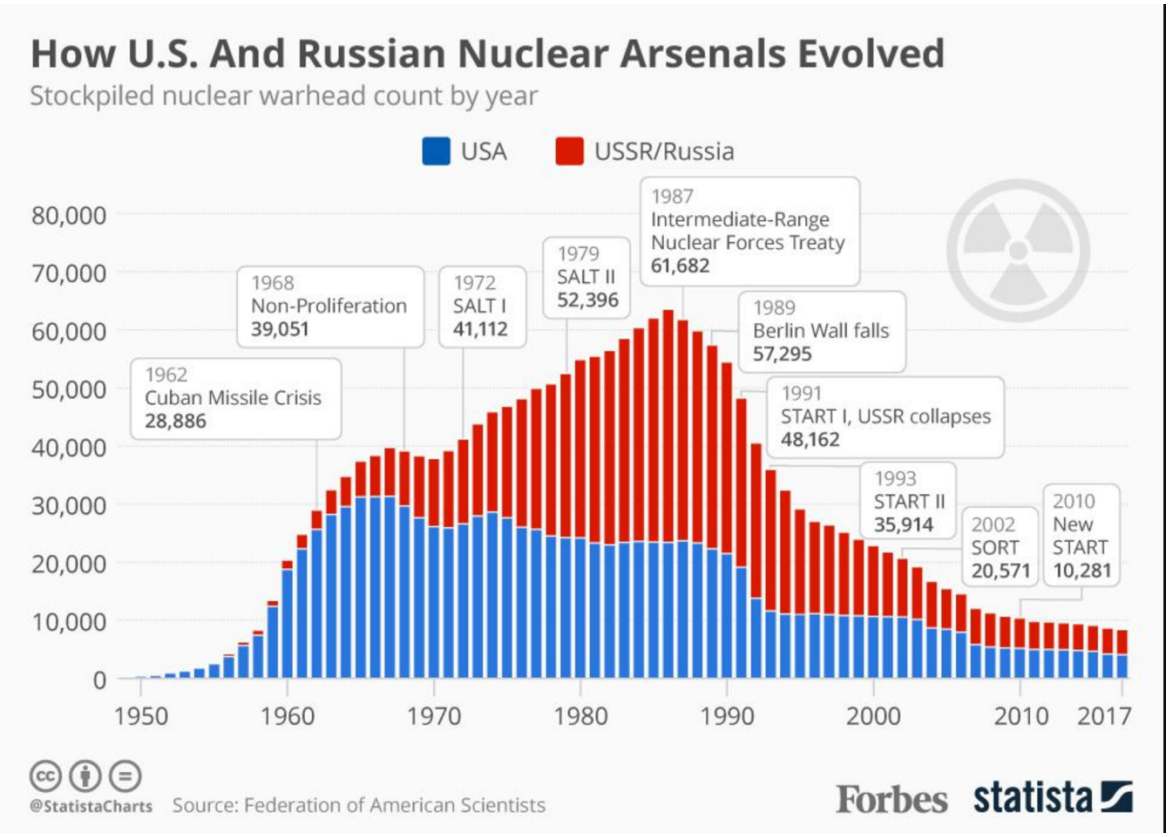
Figures 3 and 4 give an in-depth look at the types of weapons that the Russian nuclear programme comprises. Several of them have been first deployed from 2010 onwards. It is also notable that there has been an increase in both strategic and non-strategic forces across the entire nuclear triad (air, land, sea). Both figures show nicely that both non-strategic and strategic forces

[57] Hans M Kristensen and Matt Korda, 'Russian Nuclear Weapons, 2021', *BULLETIN OF THE ATOMIC SCIENTISTS* 77, no. 2 (18 March 2021): 90–108, https://doi.org/10.1080/00963402.2021.1885869.

have had evident importance, based on the first deployment, during the end of the cold war, and then again, the development of new weapons picks up in the 2000s. This is in line with the restrictions placed on Russia through the ABM and INF Treaty and its military doctrines. A well as Russia's focus on domestic and regional stability in the 1990s and 2000s. The planned modernization first comes up in the 2010 military doctrine and is again emphasized in the 2014 military doctrine.

In Figure 5, McCarthy charted the US and Russia's nuclear arsenal in an easy-to-see manner. Figure 5 illustrates how the overall stockpile has decreased since the end of the Cold War. Despite making a drastic reduction in arms between 1990 and 2000, the overall reduction of arms has significantly slowed down in the last ten years. What is not clear in this graph is if the number refers to only strategic weapons or the combined total of strategic and non-strategic weapons and how the modernization of each weapon arsenal has impacted the overall total.

Figure 5: Russian and US Nuclear Arsenal 1950-2017



Summary

The historical analysis has started to shed light on the three pillars that are clear in the discussion surrounding Russia's nuclear weapon program: the importance and evolution of its military and nuclear doctrine, the ongoing modernization of its arsenal, and thirdly the importance of international treaties.

Several main themes are present in each military doctrine: the importance of Russia on a local, regional, and global level; the possession and use of nuclear weapons as tools of deterrence; and the willingness to use nuclear weapons in a conventional armed conflict. While these themes vary throughout the years, these themes are present in each doctrine. There is also not a direct stated escalate to de-escalate policy in place. However, the importance of nuclear modernization and the adherence to international nuclear treaties are emphasized.

Looking at the main international treaties between the US and Russia, the overarching theme of reducing arms is an easy trend to see. The first treaties were predominantly looking at an overall reduction of arms. The ABM and INF Treaties stood out as they banned complete delivery systems. New START is due to be replaced in 2026, and they do not cover several newly developed weapon and delivery vehicles. There is a clear statement of a more proactive approach to the modernization of the nuclear arsenal from 2010 onwards[58]. How can this approach be explained when looking at the development and changing nature of the nuclear program under President Putin?

[58] Baev, 'Russian Nuclear Modernization and Putin's Wonder-Missiles: Real Issues and False Posturing'.

Literature Review from 2000 to 2020

The literature review will focus on the modernization pillar during President Putin's office from 2000-present day. Therefore, this chapter will primarily focus on the discussion surrounding modernization and the different sides and arguments that emerge from the existing literature.

The first argues that Russia is modernizing at an average speed and cycle. The second argues through the escalate to de-escalate policy that Russia has sped up its modernization rapidly in the last two decades. This literature review will showcase both sides before attempting to lay out two explanatory theories that attempt to explain the motivation behind Russia's nuclear programme. This chapter will also identify some of the main arguments that are intertwined within the broader theme of modernization. These can be summarized into five categories:

1. domestic ability,
2. distraction of economic problems,
3. deflection of internal struggles while assuring regional stability,
4. status-seeking in a global context, and
5. lastly, the speed of its nuclear modernization.

The factors of achieving state security through nuclear weapons and using them as a status factor shifted in importance throughout the two decades. Consequently, this chapter will use primarily secondary source material in the form of peer-reviewed journal articles and blog posts.

Bruusgaard argues that the modernization of Russian nuclear forces started in 2010 on both a material and conceptual basis. He does this by looking at "training, exercises, and displays of nuclear capabilities that are likely to affect the credibility of nuclear threats."[59] Rather than looking at just the number of strategic and non-strategic weapons, as Kristensen and Korda[60] do every year, Bruusgard looks at how the rhetoric around Russia's nuclear arsenal has changed since 2000. He states that Russia used its nuclear arsenal to stabilize Russia's position domestically and stabilize its position abroad due to limited military capability through

[59] Kristin Ven Bruusgaard, 'Russian Nuclear Strategy and Conventional Inferiority', *Journal of Strategic Studies* 44, no. 1 (2 January 2021): 3–35, https://doi.org/10.1080/01402390.2020.1818070.
[60] Kristensen and Korda, 'Russian Nuclear Weapons, 2021'.

conventional weapon systems. Specifically, when looking towards the threat that US interventions in Afghanistan and Iraq present.

Russia was also concerned with the rapid NATO expansion in the later 1990s and early 2000s, threatening Russia's position in Eastern Europe. This focus of regional stability through nuclear weapons shifted in 2010 with the "restructuring of the entire military organization."[61] The development of new conventional weapons has allowed Russia to engage in a proactive approach to its nuclear weapon modernization and increased its use as an escalation tool should conventional and precision weapons fail. This approach is a distinct change from previous Cold War thinking, where nuclear weapons acted as the base of the military forces rather than the tip of the iceberg.

Woolf states that Russia started nuclear modernization in 2000 and aims for its conclusion at some point in the 2020s. She goes through each newly developed weapon system, the different doctrines, and the total nuclear weapons available. Russia's modernization focuses on building and developing new weapons and weapon delivery systems and replacing its Soviet-era arsenal while adhering to reducing total nuclear arms as laid out by the ABM and New Start Treaties.[62] She also argues that while modernization and the new weapon systems are likely to finish in the early 2020s, they most likely will not be deployed until the second half of the 2020s.

In her report, she also depicts the two camps that this literature review is laying out. In which Woolf is also in, the one side states this modernization is simply that a needed modernization of the nuclear arsenal will happen.[63] For example, former US Secretary of Defense Ashton Carter noted in 2016, "[i]n the end, though, this is about maintaining the bedrock of our security, and after too many years of not investing enough, it is an investment that we, as a nation, have to make because it is critical to sustaining nuclear deterrence in the 21st century." He goes on to say that Russia is simply doing the same in modernizing its arsenal.[64]

Tertrais argues that instead of a escalate to de-escalate strategy, Russia focuses on its military policy rather than its political statement to the world. It seems to focus on more low-

[61] Amy F Woolf, 'Russia's Nuclear Weapons: Doctrine, Forces, and Modernization' (Washington, DC: Congressional Research Service, 20 July 2020).
[62] Woolf.
[63] Woolf.
[64] Ash Carter, 'Remarks by Secretary Carter to Troops at Minot Air Force Base, North Dakota', U.S. DEPARTMENT OF DEFENSE, 26 September 2016, https://www.defense.gov/Newsroom/Transcripts/Transcript/Article/956079/remarks-by-secretary-carter-to-troops-at-minot-air-force-base-north-dakota/.

yield strategic nuclear weapons that can replace strategic conventional weapons and function as both nuclear and non-nuclear strategic focus. It is not interested in developing nuclear weapons for a traditional global theatre nuclear warfare situation. He argues that Russia's 2014 military doctrine supports this by stating that it "reserves the right to use nuclear weapons in response to the use of nuclear and other types of weapons of mass destructions against it and (or) its allies." He also argues that the current deployment of new weapon systems cannot be an unexpected one as rumours of its development started in the early 2000s. The Russian strategy of ambiguity, specifically towards its nuclear weapon system, is an old and proven one in the political sphere. Russia has consistently carried out military exercises that have had a nuclear aspect only support it. He agrees with Bruusgaard that the issue of Russia's escalate to de-escalate strategy is one that came out of the West and seems to address more Western weaknesses and strategy rather than Russia's lowered nuclear threshold.[65]

Scholar Olga Oliker agrees with both Tertrais and Bruusgaard. She firmly believes that the Russian escalate to de-escalate problem is a non-existent one and stems from a misunderstanding of Russian doctrine. In her February 2018 *War on the Rocks* blog post, co-authored with Andrey Baklitskiy, she states that "[de]terrence works best when the adversary understands which actions will trigger an undesirable response."[66] She states that Russia is strategically reminding both the other NWS and the world should not forget that it remains a nuclear power in its strategic position. Geographically, Russia is a vital neighbour when looking at European allies and its distance to the Middle East, China, and Asia. She cautions that non-nuclear strategic deterrence should no come at the risk of deterrence failure.

Oliker repeats this in her December 2018 *Foreign Affairs* article. She states that the escalate to de-escalate strategy is a false reading of Russia's nuclear strategy. This strategy has emerged in Western rhetoric to justify and analyze Russia's rapid modernization of its nuclear arsenal and its conventional weapon arsenal since 2010. The different military doctrines support this modernization. While the no first use promise Brezhnev made was taken back by Putin,

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[65] Bruno Tertrais, 'Russia's Nuclear Policy: Worrying for the Wrong Reasons', *Survival* 60, no. 2 (4 March 2018): 33–44, https://doi.org/10.1080/00396338.2018.1448560.

[66] Olga Oliker and Andrey Baklitskiy, 'The Nuclear Posture Review and Russian "De-Escalation:" A Dangerous Solution to a Nonexistent Problem', *War on the Rocks* (blog), 20 February 2018, https://warontherocks.com/2018/02/nuclear-posture-review-russian-de-escalation-dangerous-solution-nonexistent-problem/.

many Russian analysts agree that Russia is still using its nuclear weapons as a deterrence tool. Even the new Iskandar missile is more of a conventional weapon rather than a nuclear one.[67]

General John Hyten, the former head of the US Strategic Command, like Oliker[68], states that Russia does not escalate to de-escalate strategy. Rather than a destabilizing doctrine, Russia focuses on a strategy that is escalate to win. This interpretation aligns with President Putin's statement of focusing on conducting reciprocal counter strikes instead of pre-emptive ones.[69] Nevertheless, when looking at the 2020 Basic Principles Document, one straightforward interpretation of stating the willingness to use nuclear forces in a conventional armed conflict is just that, a willingness to pre-emptively strike. While this may not directly connect to a escalate to de-escalate strategy, it certainly shows an escalate to win type mindset.

One problem visible in the literature is that while there is an extensive discussion of whether Russia pursues a escalate to de-escalate strategy, no one has a concrete definition of what this strategy exactly states or looks like.

Scholars Oliker and Fink[70], Sokov[71], and Götz[72] disagree about why Russia prioritizes its nuclear weapon program. Some state nuclear weapons act as a stability enhancer domestically or as a strategic defence tool globally.

Arbman and Thornton write that Russia contradicted itself. Despite its statement of no-first-use against non-nuclear-weapon states and its allies, Russia still maintained its nuclear arsenal as a deterrence tool rather than start to reduce significantly outside of the guidelines set out by the START Treaty and the ABM Treaty.[73] Moreover, various Russian and American analysts observe an unanticipated distinct shift in relying on nuclear weapons as strategic weapons after the 1991 PNI's by Gorbachev.[74]

For the last fifty years, nuclear weapons have secured global stability and security. Therefore, nuclear weapons use is at a high-level priority-wise for Russia's state interest. This

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[67] Olga Oliker, 'Moscow's Nuclear Enigma', *Foreign Affairs*, December 2018.
[68] Oliker.
[69] Hans M. Kristensen and Matt Korda, 'Russian Nuclear Forces, 2020', *Bulletin of the Atomic Scientists* 76, no. 2 (3 March 2020): 102–17, https://doi.org/10.1080/00963402.2020.1728985.
[70] Anya Loukianova Fink and Olga Oliker, 'Russia's Nuclear Weapons in a Multipolar World: Guarantors of Sovereignty, Great Power Status & More', *Daedalus* 149, no. 2 (2020): 37–55.
[71] Sokov, 'NUCLEAR WEAPONS IN RUSSIAN NATIONAL SECURITY STRATEGY'.
[72] Götz, 'Strategic Imperatives, Status Aspirations, or Domestic Interests?'
[73] Gunnar Arbman and Charles Thornton, 'Russia's Tactical Nuclear Weapons Part I: Background and Policy Issues', User report (FOI Swedish Defence Research Agency, November 2003). 26
[74] Arbman and Thornton.27

statement by President Yeltsin in 1999 still seems to ring true today.[75] This high-priority status backs the multitude of military exercises and the 2000 military doctrine itself.

Cordesman argues that Putin's public statements about the Russian nuclear program and the newly developed weapon systems in 2018 were merely a smokescreen. Putin's statement focused predominantly on the Western threat and ignored the changing role of China. Cordesman states that this was a political tool to deflect attention from the failing Russian economy. Even though Russia has developed five new weapon systems and publicly revealed them in an unprecedented maneuver, these weapons are not yet deployable. However, this does enhance overall strategic deterrence as now other states are aware that Russia has these weapons and is willing to use them.[76]

Joshua Ball brings up that maybe Russia does not necessarily have a escalate to de-escalate policy in place even though the military doctrines could be interpreted that way. He argues that maybe it is how nuclear deterrence works as a strategy itself that has changed. During the Cold War, both sides operated under the mutually assured destruction (MAD) doctrine. However, this is no longer the primary mode of thinking, and the policies have shifted to reflect the changing thinking about what nuclear deterrence means and could look like in practice.[77] This thinking supports the 2020 Basic Principles. Russia states that it is willing to use nuclear weapons in retaliation to state existence-threatening attacks, whether nuclear forces or conventional ones made them.[78]

Sokov states that in the 2020 Basic Principles Document, Russia states that instead of escalating to de-escalate policy, they see a nuclear strike as a deterrence tool to deter states from continuing armed conflict.[79]

Colby argues that the main problem with Russia's significant and wide-reaching nuclear modernization over the last decades is Russia's willingness to use its nuclear forces against NATO as well as states that have historically belonged to Russia's near abroad. Not only has Russia developed quick and efficient nuclear strikes, but it has actively included them in its annual military exercises. In 2015, NATO had not conducted or developed a concise

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[75] Arbman and Thornton.28
[76] Cordesman, 'Putin and Russia's New Nuclear Weapons: Whoever Dies with the Most Toys Wins?'
[77] Joshua Ball, 'Nuclear De-Escalation: Russia's Deterrence Strategy', *Global Security Review* (blog), 10 June 2019, https://globalsecurityreview.com/nuclear-de-escalation-russias-deterrence-strategy/.
[78] Russian Federation, 'Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence'.
[79] Sokov, 'Russia Clarifies Its Nuclear Deterrence Policy'.

counterstrategy. He argues that European and American security cannot lay in the hands of the Kremlin and its willingness to use nuclear and conventional weapons at will.[80]

Trenin argues that nuclear weapons and the authorization to use nuclear weapons are critical cornerstones of Presidential power in Russia. He states that Russia remains focused on deterring potential threats that could come from the US. While NATO does present a threat, especially with France, Britain and the UK all possessing a nuclear arsenal, the US remains a strategic deterrence priority for Russia. He predicts that Russia will continue to use nuclear weapons to keep its strategic nuclear capability yet rejects nuclear weapons used in military interventions. He wrote this in 2005. While the doctrines have changed to allow nuclear weapons use in military interventions, he remains correct in his assessment that nuclear weapons continue to be a foundational step in Russia's presidential power.[81]

Pavel Baev argues that Russia has invested so much in the modernization of its nuclear arsenal that not using it seems to be not an option for Russia. He argues that Russia uses its military exercises and high-profile statements about its nuclear programme as a strategic political tool for deterrence against the West and as a stabilizing factor domestically.[82] He looks at the complete nuclear triad and depicts how Russia is modernizing or replacing old weapon systems for each branch. He also brings up the issue of ongoing delays within the modernization and how this affects the Russian budget and its plan to complete modernization by 2027. He states that "the pronounced worry about falling behind in global competition shifts political attention to new technological designs, which interferes with the half-implemented projects, particularly in a situation where available resources are dwindling."[83] In his report, he argues that Russian modernization favours Russia's increased projected stability domestically while simultaneously keeping the US and NATO threat level through its perceived lowered nuclear threshold.

In his article Mark Schneider quotes several statements of President Putin. In November 2020, President Putin stated that "I want to emphasize that, despite the constantly changing

[80] Elbridge Colby, 'Countering Russian Nuclear Strategy In Central Europe', Center for a New American Security, 11 November 2015, https://www.cnas.org/publications/commentary/countering-russian-nuclear-strategy-in-central-europe.
[81] Dmitri Trenin, 'Russia's Nuclear Policy in the 21st Century Environment', *IFRI*, Proliferation Papers, Autumn 2005, 30.
[82] Pavel Baev, 'PART II: The Re-Emerging Nuclear Dimension in Russian-European Relations', Georgetown Journal of International Affairs, 7 May 2019, https://www.georgetownjournalofinternationalaffairs.org/online-edition/2019/5/3/part-ii-the-re-emerging-nuclear-dimension-in-russian-european-relations.
[83] Baev, 'Russian Nuclear Modernization and Putin's Wonder-Missiles: Real Issues and False Posturing'.

nature of military threats, the nuclear triad remains the primary, key guarantee of Russia's military security. From a broader perspective, this applies to global stability as well. Preserving this balance of power neutralizes the threat of a large-scale military conflict, making vain any attempts to intimate or pressure our country."[84] In December, he follows by saying: "First, it is necessary to maintain our nuclear weapons in high combat readiness and develop all components of the nuclear triad. This is of fundamental importance to ensure our national security and preserve strategic parity in the world."[85] Schneider says that the increase from 86% to 88.3% in the strategic nuclear force modernization in 2021 is not a slight increase by any means. Russia's aim to complete modernization in 2024 should be of concern to the world. He argues that these statements from President Putin and other high-ranking Russian officials should not be taken lightly.

The idea of nuclear escalation through a pre-emptive strike against Russia's enemies is a possibility in the future.[86] Matthew Kroenig also mentions the pre-emptive strike as part of a de-escalation strategy. Russia's actions in Syria and Crimea signal a willingness to be more proactive in their approach to armed conflicts. The biggest worry from a Western perspective is the potential Russian invasion of the Baltic states, which would force NATO to retaliate under its Article V provision. This could quickly escalate into a nuclear conflict if Russia sees the necessity to conduct a pre-emptive strike against NATO and its allies.[87]

Sandler and George note that while Russia has pursued a more aggressive military posture from the early 2000s onwards. Its struggling economy will slow down the rapid modernization of its military, despite an increase in military expenditures.[88] Gottemoeller cautions against Russia's modernization and its implications for the Western sphere specifically. She states that while Russia has been showing new weapon systems in the last few years.

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[84] Mark B. Schneider, 'Russian Modernization of Its Nuclear and Military Forces in 2021 | RealClearDefense', *RealClearDefence*, 20 February 2021, https://www.realcleardefense.com/articles/2021/02/20/russian_modernization_of_its_nuclear_and_military_forces_in_2021_661111.html.
[85] Schneider.
[86] Schneider.
[87] Matthew Kroenig, 'The Case for Tactical U.S. Nukes', *Wall Street Journal*, 24 January 2018, sec. Opinion, https://www.wsj.com/articles/the-case-for-tactical-u-s-nukes-1516836395.
[88] Sandler and George, 'Military Expenditure Trends for 1960–2014 and What They Reveal'.

They should not be considered more deterrent than previous systems even though the Iskander missile can carry both conventional and nuclear warheads and is more accurate in targeting than previous systems.[89]

Russia is actively participating in the sabre-rattling surrounding its nuclear programme. As the literature shows, two distinct camps are surrounding modernization. The first states that Russia does not have a escalate to de-escalate strategy and that the modernization is progressing at an average speed. In contrast, they argue that Russia is escalating much quicker than expected and has no problem engaging in a nuclear war. Nevertheless, another layer is also emerging—the motivation and intention behind the nuclear programme. President Putin stated that he considers nuclear weapons of highest priority and a foundation of Russia's military strength throughout his long presidency. However, nuclear weapons act as a stabilizer both domestically and abroad.

Two sides of a debate are identifiable when looking at Russian modernization of its nuclear arsenal. One group of scholar's states that Russia does not have a escalate to de-escalate approach but relies on nukes as a strategic deterrence tool. In contrast, the group of scholars is firm in stating that Russia has a escalate to de-escalate policy. No matter which group is closer to the truth, Russia took a proactive approach to nuclear modernization in the last 20 years. As a result, a rapid incline in technology advancement has taken place, especially after 2010. This advancement is puzzling since New START came into effect in 2011, yet there has been long speculation of a secret nuclear doctrine released in 2010[90].

It is crucial to understand the normal cycle of military modernization to understand Russia's rapid modernization. Generally, the military arsenal is either modernized through incremental updates of the same weapon system. The other option is major modernization that correlates to the significant advancements in science and technology that have been made.[91] Examples include trench warfare in World War 1, mustard gas, and the deployment of the first nuclear bomb in 1949. Nuclear weapons have dramatically changed the landscape of military

[89] Rose Gottemoeller, 'Russia Is Updating Their Nuclear Weapons: What Does That Mean for the Rest of Us?', Carnegie Endowment for International Peace, 29 January 2020, https://carnegieendowment.org/2020/01/29/russia-is-updating-their-nuclear-weapons-what-does-that-mean-for-rest-of-us-pub-80895.
[90] Elbridge Colby, 'Russia's Evolving Nuclear Doctrine and Its Implications' (FRS: Foundation for Strategic Research, 12 January 2016), https://www.frstrategie.org/en/publications/notes/russias-evolving-nuclear-doctrine-implications-2016.
[91] Daniel Gouré, 'Winning Future Wars: Modernization and a 21st Century Defense Industrial Base', The Heritage Foundation, 2019, https://www.heritage.org/military-strength-topical-essays/2019-essays/winning-future-wars-modernization-and-21st-century.

weaponry. Its weapon delivery systems and strategic systems are looking to receive a significant overhaul in Russia's current modernization cycle, as evident by the development of four new systems by 2018. As Russia is leading the charge in modernizing its nuclear arsenal away from the Soviet-era weapons into the 21st century, many policymakers are concerned. Moreover, as the literature shows, analysts are unable to agree whether Russia has a escalate to de-escalate policy in place or not. This ambiguity is of interest as now there can be different policy implications.

There are five main arguments identifiable within the literature regarding Russia's modernization of its nuclear programme. Many scholars address multiple of these arguments in their works. At the same time most, articles fall into one of two categories: shorter policy-orientated papers or highly technical papers focused on the composition of the Russian nuclear weapons and their delivery systems.

The first argument is one of domestic stability. Russia continues to pursue and develop a nuclear weapon program to stabilize its internal structure.

The second argument is one of distraction. These scholars argue that the primary purpose of the nuclear arsenal is to distract attention away from the rapidly declining Russian economy while hiding the fact that due to the economy, its nuclear modernization is slowing down.

On the same line is argument three. These authors state that by modernizing nuclear weapons, Russia attempts to counteract the perceived threats from NATO and the West while simultaneously deflecting other internal struggles that Russia faces.

The fourth argument is that Russia uses its nuclear arsenal to signal its status as a world power to Western countries, simultaneously strengthening its regional power.

The last argument splits into two sides of the same coin: Russia's nuclear modernization speed. One group of scholars holds that the current cycle of nuclear modernization is occurring at an average speed and technological advancement. Other scholars maintain that Russia has lowered the nuclear threshold and is willing to use nuclear weapons to deter and finish armed conflict of all kinds.

Theory

The previous chapter looked at the literature surrounding the Russian nuclear programme, focusing on its modernization cycle. Five different arguments emerged, and within those, some align with different theoretical viewpoints. Two different theories can be used to look at these pillars more closely: realism and constructivism. Two types of factors are said to significantly affect Russia's nuclear weapon policy. Material-instrumental factors and calculations, and ideational influences. Building on this, this section will introduce two theoretical perspectives – realism and constructivism – that can help us gain a deeper understanding of Russia's nuclear weapons policy. This theory section will do just that. It will first lay out the markers of realism and then go into its two subsections of offensive and defensive realist theory to lay out some theoretical arguments that could apply to this thesis. It will then look at the constructivist's theory and the idea of status-seeking. Finally, this thesis explores how these two theories can explain Russia's increasingly more proactive and assertive nuclear weapons policy in the subsequent section.

Realism

Classical realist theory coined by Morgenthau[92] in the 1950s is often referred to as the dominant world view regarding foreign policy in the 20th century.[93] However, the roots of political realist theory are much older[94]. Realism is technically not one single defined theory, but rather it consists of several subcategories within the overarching umbrella.

Realism has six key assumptions that are shared. First, the state of nature is one of anarchy. Second, power and the pursuit of it is the defining feature of realism. Third, states are the only key actor that matter, it is not concerned with the individual on any level. Fourth, all states are rational actors, and their decision-making is always in their own best interest. Fifth, states are unitary actors and see each other on a state-to-state basis only. They are not concerned with who the individual head of state is or how domestic concerns affect international actions.

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[92] Hans J. Morgenthau, *Scientific Man Versus Power Politics* (Chicago: University of Chicago Press Books, 1946). See also: Robert Jervis, 'Hans Morgenthau, Realism, and the Scientific Study of International Politics', *Social Research* 61, no. 4 (1994): 853–76.
[93] Alan Collins, ed., *Contemporary Security Studies*, Fifth Edition (Oxford: Oxford University Press, 2019).
[94] See: Thucydides, *History of the Peloponnesian War*, trans. Rex Warner (Harmondsworth: Penguin Books, 1972).; Thomas Hobbes, *Leviathan* (Ware, Hertfordshire: Wordsworth Editions Limited, 2014).: Niccolò Machiavelli, *The Prince*, trans. Harvey C. Jr. Mansfield (Chicago: Chicago Univeristy Press, 1515).

Furthermore, lastly, maybe most importantly, realism sees the state as a primary actor within the international system. All other actors, including international organizations, are secondary to the state.[95]

In summary, all realist theories share three key assumptions. The first is that international order is one of anarchy. The second, power, is the critical aspect of the international order. Lastly, the state is a rational and unitary actor within the system. The line where realist theories are diverse is that the focus is either on the structure of the international order or the state's motives. For example, both offensive and defensive realism are concerned with the international structure rather than state motivation.[96]

Looking through a realist lens, the primary assumption concerning Russia's nuclear programme would be that it is in Russia's interest to have nuclear weapons to secure its position in the global order.

Offensive realism, coined by John Mearsheimer, is one popular subcategory of realism. The other being defensive realism, which Kenneth Waltz[97] is more associated with.

Both offensive and defensive realism understand that states are always in the pursuit of power within international politics. However, offensive realists see this pursuit not necessarily as an end but as a means. As a result, states actively try to maximize their power and pursue the status of a hegemonic power at all costs.

Defensive realism stands in contrast to offensive realism. It does not tend to the competitiveness within the international realm. It states that depending on the condition's states should pursuit to increase their security. At the same time, they are trying to reduce their opponent's security. This scenario is often present in the security dilemma.[98] Both disciplines emphasize the international structure and the state as key actors within those structures. Jervis argues that realist scholars have agreed that "nuclear weapons made the world more or less safe, but again agreed that they brought important changes in state policies, bargaining tactics, alliance relationships, and opportunities to change the status quo. [Nuclear weapons] decrease the chance

[95] Charles L Glaser, 'Realism', in *Contemporary Security Studies*, Fifth (Oxford: Oxford University Press, 2019), 11–29.
[96] Glaser.
[97] Kenneth N. Waltz, *Theory of International Politics* (Boston, MA: McGraw-Hill, 1979).
[98] Glaser, 'Realism'.

of war and coercive change at the center of the international system."[99] This statement highlights the firm belief that power is the ultimate tool within the international system.

Defensive Realism

The main difference between offensive and defensive realism is their pursuit of power. Figure 6 shows some of those key differences in terms of arms racing and expansion. It also ties in the element of arms control that this thesis focuses on through international nuclear treaties. Defensive realism believes that a state seeks to power balance other states. In contrast, offensive realists seek to maximize their power (here defined as possession of material resources). Defensive realism believes that cooperation and restraint are the best options for a state under certain conditions within the international system. However, this is only possible if the system does not produce insecurity or competition among states. Key markers include the fact that states balance actively against threats rather than attempting to predict which states will have the most amount of power.

Moreover, defensive realism holds that cooperation can be feasible under the right conditions.[100] This willingness to engage in cooperation means that states are more concerned with the motive behind their opponents' power-play rather than only the potential threat they display.

While arms races surrounding Russia's nuclear weapon programme are distinguishable, the threat of expansion and war are harder to distinguish. Similarly, with qualitative arms control. Arms control regarding nuclear weapons is precious and needed because security is not as high as wished within the international system. The foremost observable defensive realist expects to see is that Russia is modernizing its nuclear arsenal at an average speed and value arms control treaties, mainly because it wants to keep its second-strike capability.

[99] Robert Jervis, 'Realism in the Study of World Politics', *International Organization* 52, no. 4 (1998): 971–91.984.
[100] Glaser, 'Realism'.

Figure 6: Implications of offence-defence variable[101]

Advantage			
Offence	**Defence**		
Arms races are intense Expansion is key War is frequent	Arms races are mild Expansion is difficult War is infrequent	**No**	Offence and defence can be distinguished
Qualitative arms control is feasible and valuable but risky Signalling is feasible and valuable but risky	Qualitative arms control is feasible but less valuable because security is high Signalling is feasible but less valuable	**Yes**	

As Figure 6 shows, a key advantage to defensive realism is that qualitative arms control is not as necessary as offensive realism due to the balance of power between individual states. The ultimate deterrence tool within the international system that is also the most effective for balancing power is the possession of nuclear weapons. WMDs, specifically nuclear weapons, are simply unmatched in the threat level and the security they provide for states. In the Cold War, this deterrence thinking manifested in the Mutual Assured Destruction (MAD) doctrine. As the name implies, if one state fires nuclear weapons, the other will retaliate, resulting in the mutual destruction of one another.[102]

Waltz argues that nuclear-weapon states keep an inherent balance of power within their deterrence capability by owning nuclear weapons, as states are less likely to attack one another.[103] Even though Russia states that it is willing to comply with the NPT, which aims at complete disarmament, it is still in its best interest to possess nuclear weapons. Nuclear weapons are primarily seen as a deterrence tool in defensive realism.

[101] Glaser. 23 Figure 2.2. replication
[102] Alexey Arbatov, 'Mad Momentum Redux? The Rise and Fall of Nuclear Arms Control', *Survival* 61, no. 3 (4 May 2019): 7–38, https://doi.org/10.1080/00396338.2019.1614785.
[103] Scott Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: An Enduring Debate*, 3rd ed. (W.W. Norton & Company, 2012), https://politicalscience.stanford.edu/publications/spread-nuclear-weapons-debate-renewed-second-edition.

However, nuclear weapons only work as deterrence tools if a state possesses a second-strike capability or is part of a nuclear umbrella (NU). Therefore, it is in Russia's best interest to secure and maintain a second-strike capability.

Offensive Realism

One of the critical markers of offensive realism[104] is the idea of power and security. A state's primary interest is in assuring its security both domestically and abroad. Assuring state stability and security is done mainly by seeking more power and striving to be a regional and global hegemonic power rather than content with the status quo. Foreign policy is the crucial mechanism to achieve this goal.[105] This pursuit of power to be a regional or global hegemony relies on taking and gaining more power in all areas. These include foreign, economic, political, and military policies to alter the balance of power in a state's favour. It is essential to realize that if one state does not take advantage of these opportunities, another state will. Mearsheimer is convinced that geography plays a huge part in becoming and staying a regional hegemony. He states that topography such as water has a significant impact on whether a state can expand.[106]

Offensive realism has several key observable markers and implications. The marker that distinguishes offensive and defensive realism is the belief that the greater a state's power, often through military advantage, is over another state, the more secure it is. Therefore, it is in a state's best interest to rely on offensive tactics.[107] In a power competition, states always assume the worst motive from their opponent and see the maximization of power as the best tool to ensure survival.[108] Mearsheimer states that being the dominant hegemonic power within the international system at the detriment of other states should be the ultimate goal.[109]

While nuclear weapons are a powerful tool in achieving this goal of state security, it does not mean that once a state has nuclear weapons, they have achieved a maximization of power.[110]

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[104] John J. Mearsheimer, *The Tragedy of Great Power Politics* (New York: Norton, 2001).
[105] Brandon Valeriano, 'The Tragedy of Offensive Realism: Testing Aggressive Power Politics Models', *International Interactions* 35, no. 2 (20 May 2009): 179–206, https://doi.org/10.1080/03050620902864493.
[106] Steven E. Lobell, 'Structural Realism/Offensive and Defensive Realism', *Oxford Research Encyclopedia of International Studies*, 1 March 2010, https://doi.org/10.1093/acrefore/9780190846626.013.304.
[107] Mearsheimer, *The Tragedy of Great Power Politics*.
[108] Glaser, 'Realism'.
[109] Mearsheimer, *The Tragedy of Great Power Politics*.
[110] Zanvyl Krieger and Ariel Ilan Roth, 'Nuclear Weapons in Neo-Realist Theory', *International Studies Review* 9, no. 3 (2007): 369–84.

One way to secure regional hegemony is by using a NU to deter opponents from proliferating themselves and gaining more power/deter other great powers from intervening in conflicts in one's neighbourhood.

Looking at the characteristics of offensive realism and the Russian nuclear doctrine implies that Russia is pursuing a proactive approach to be a regional and global hegemony in terms of nuclear weapons. One observable implication that is expected is that Russia is looking to not only secure and maintain its second-strike capability but is willing to use it if it feels threatened to use nuclear weapons to expand its power and influence, especially in its neighbourhood. Thus, offensive realists would argue that Russia will use the threat of employing nuclear weapons as a means to keep other major powers out of its geographical neighbourhood, and in the most extreme cases, perhaps even employ (tactical) nuclear weapons in the pursuit of regional hegemony.

Cimbala cautions against using strict realist thinking when looking at Russia's military program, specifically its nuclear arsenal. He states that this one-dimension thinking discounts newer weapon technology and relies on the offensive realist to use nuclear weapons. He argues that this does not consider the potential escalation of regional conflict using nuclear weapons and the different state's motives.[111] For this reason, and because the existing literature suggests that ideational factors may play an important role in Russia's nuclear weapons policy, this thesis also looks to constructivism as an alternative theoretical approach.

Constructivism

Constructivism offers an alternative theoretical argument when looking at Russia's nuclear weapon programme. Differences from realism must come apparent when looking at the meaning of anarchy and the balance of power. Realists argue that the international order is one of anarchy. Constructivists argue that anarchy is structured and "mutually constituted by actors employing constitutive rules and social practices."[112] This belief directly implies that the concept of anarchy can change depending on which actors are involved.

[111] Stephen J. Cimbala, 'Nuclear Proliferation in the Twenty-First Century', *Strategic Studies Quarterly* 11, no. 1 (2017): 129–46.
[112] Ted Hopf, 'The Promise of Constructivism in International Relations Theory', *International Security* 23, no. 1 (1998): 171–200, https://doi.org/10.2307/2539267. 174

Jervis argues that constructivism is marked by the belief that "material factors and the external environment do not determine a state's behaviour. [Instead, they look to] the importance of regulative and constitutive norms, shared understandings, and common practises. [Specifically, how] norms form, how identities are shaped, and how interest become defined as they do."[113] He argues that realists share a view that overlaps and is informed of those in power rather than take a more constructivist approach and look at the motives and norms leading to the decision-making. According to Wendt and Jervis, this means norms guide a state's behaviour and social practices in place, such as the nuclear taboo and how other states view one another.[114]

There are two aspects of constructivism that are important for this thesis. First, norms and identities can change over time. Second, norms are both regulatory and constitutive. Like realism, conventional constructivists believe that identities are uniform and solid and that they share norms and beliefs. Norms are regulatory in that they inform how states behave and constitutive. A constitutive norm is implementing the Non-Proliferation Treaty, which states that all states should strive for complete mutual disarmament. The nuclear taboo is more regulatory in nature.[115] It is crucial to understand how the Nuclear Taboo affects policy thinkers as it is a distinct shift away from Cold War policy thinking in terms of nuclear deterrence.

Hopf argues that in constructivist theory, "state actions in the foreign policy realm are constrained and empowered by prevailing social practices at home and abroad."[116] This could offer one explanation as to Russia's changing behaviour towards its nuclear weapon doctrine.

This thesis will specifically use conventional constructivism rather than critical constructivism. The main difference is that both understand the concept of identity differently. Conventional constructivism argues that identity is tied to a particular set of social practices and implies specific actions. Moreover, conventional constructivism also argues that studying reality in an objective and detached fashion is possible.

In contrast, critical constructivists state that identities are tied to a single version rather than out of a set of different circumstances. At the same time, critical constructivists believe that any study results are inherently biased due to the researchers' views and values.

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[113] Jervis, 'Realism in the Study of World Politics'. 976.
[114] Alexander Wendt, 'Anarchy Is What States Make of It: The Social Construction of Power Politics', *International Organization* 46, no. 2 (1992): 391–425.
[115] Christine Agius, 'Social Constructivism', in *Contemporary Security Studies*, Fifth Edition (Oxford: Oxford University Press, 2019), 74–90.
[116] Hopf, 'The Promise of Constructivism in International Relations Theory'.

Hopf summarizes this when he states: "critical theory aims at exploding the myths associated with identity formation, whereas conventional constructivists wish to threaten those identities as a possible cause of action. Thus, the critical theory claims an interest in change and a capacity to foster change, that no conventional constructivists could make."[117] As this study seeks to understand (rather than change) Russia's nuclear weapons policy, a conventional constructivist approach is applied.

Constructivists believe that cooperation is possible even in anarchy. However, the outcome is different. Moreover, while identity is informed by domestic and external social practises and constructs such as religion, demographic, gender, and political behaviour, constructivism does not offer one causal path on how identity is formed.[118]

For this thesis, it simply means that the Russian identity is informed by the government and its people and motivations domestically. This implies that a state's behaviour is informed by its economic, social, and political factors. In this case, Russia's nuclear weapon programme ambition is directly affected by domestic factors and not just the potential security threat from its opponents. This is because nuclear weapons have long been seen as the ultimate status symbol while simultaneously guaranteeing peace and acting as a significant deterrent against others.

Schweller argues that nuclear weapons are a status symbol in international politics. The same way that a fancy car or going on exotic vacations acts as a signal of perceived status in society.[119] While there is no formal definition of status and how it looks like in either the international order or constructivist theory. There is the inherent belief that status can be measured by economic growth, political reach, and military might. Constructivists believe that identity is shaped and informed by all these factors. The international system is one of anarchy, but cooperation is possible in it. One way to achieve this cooperation is by having nuclear weapons as a tool to signal a state's status within the international system.

By using and modernizing its nuclear weapon system, Russia's status-seeking aspiration serves as a reminder to Western powers. Russia is both willing to engage in nuclear war and

[117] Hopf.183-184.
[118] Hopf.
[119] Xiaoyu Pu and Randall L. Schweller, 'Status in World Politics: Status Signaling, Multiple Audiences, and China's Blue-Water Naval Ambition', in *Status in World Politics* (Cambridge University Press, 2014), 141–64, https://www.scinapse.io/papers/1685553312.

more than capable of doing so. Therefore, one observation that constructivist theory expects to see is that Russia uses its nuclear weapons as a status symbol towards Western countries.

Summary

In summary, this chapter has looked at two main theoretical arguments used when it comes to Russia's nuclear weapon programme. The first is that according to offensive realist theory, Russia is pursuing the goal of becoming a regional hegemon, and to this end, employs nuclear weapons to prevent outside great powers from intervening in post-Soviet Eurasia. This is expected to be demonstrated by the threat to carry out pre-emptive strikes to maintain its state's security to the detriment of its opponent's security. Using offensive realism implies a proactive approach to Russia's nuclear weapon program to secure more power in the international order. Defensive realists argue the need to secure more power to control against other state's nuclear ambition. Offensive realists would argue that Russia is pursuing a escalate to de-escalate policy as part of its quest for regional hegemony. In contrast, defensive realists would argue that Russia is simply modernizing at an expected rate for nuclear modernization to maintain a secure second-strike capability.

In contrast, looking through the constructivist lens, Russia is looking to secure its status as a major global power, which is done using nuclear weapons as a primary status symbol. Therefore, in the eyes of constructivists, the ongoing modernization would imply the high status of nuclear weapons as a symbol of Russia's power and that they are still a key player in the international order.

This chapter laid out the critical aspects of each theory and its main observations. In the analysis, this thesis will look at Russia's nuclear policy under President Putin and test each theory to see if there is evidence that supports the expected observations. It will then look at what each approach means for future policy regarding Russia.

The implied observations can be summarized into three main hypotheses:

1. Russia is pursuing a pro-active modernization approach through an escalate to de-escalate strategy as part of its quest for regional hegemony (offensive realism)

2. Russia is modernizing at an average speed while investing in the future of Russia through developing new weapon and delivery systems to maintain a secure second-strike capability (defensive realism).
3. Russia is pursuing nuclear weapons as a key status symbol (conventional constructivism).

Method

When looking at social phenomenon such as the evolution of a nuclear program, scholars have used many different methodologies. The most common are casual process-tracing[120], comparative or co-variational and congruence analysis, which combines the first two elements. Common examples of these methodologies in international politics are Tannenwald's process tracing, Skocpol's comparative historical analysis[121], Mill's method of differences and similarities, and Bennet and George's structured, focused comparison[122]. Comparative Historical Analysis and structured focused comparison are both prevalent methodologies when it comes to case studies.

However, they work best when looking at two different cases rather than a single-case study. Process-tracing is a method that has long been used in single-case study research when it comes to looking at patterns or a chain in events. However, this method works best when many different data points, either quantitative or qualitative, are available to the researcher. Due to the limitation of open-access source material that this thesis has, congruence analysis fits best.[123]

This study uses a case study research design, looking at the Russian nuclear weapon programs and how it has changed from 2000 to 2020. Not only is this a distinct and long enough period to see actual change take place. However, another bonus is that Russia has had one prominent leader in power: President Putin.

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[120] Nina Tannenwald, 'Process Tracing and Security Studies', *Security Studies* 24, no. 2 (3 April 2015): 219–27, https://doi.org/10.1080/09636412.2015.1036614.
[121] Theda Skocpol, *States and Social Revolutions: A Comparative Analysis of France, Russia and China* (Cambridge: Cambridge University Press, 1979), https://doi.org/10.1017/CBO9780511815805.
[122] Alexander L. George and Andrew Bennett, *Case Studies and Theory Development in the Social Sciences | The MIT Press* (Belfer Center Studies in International Security: MIT Press, 2005), https://mitpress.mit.edu/books/case-studies-and-theory-development-social-sciences.
[123] Juliet Kaarbo and Ryan K. Beasley, 'A Practical Guide to the Comparative Case Study Method in Political Psychology', *Political Psychology* 20, no. 2 (June 1999): 369–91.

President Putin first came into office in 1999, taking over as acting President for Boris Yeltsin before being officially elected President in March 2000. Putin held this office until 2008, when Dmitry Medvedev held the presidency until 2012. During Medvedev's presidency, Putin was elected Russia's prime minister before returning as Russia's President in 2012 and being in office ever since. Even though Medvedev held the presidency, most scholars argue that Putin used Medvedev as a puppet. Putin effectively calls the shots while acting as prime minister simultaneously as unofficial president. Putin can stay in power through the new Russian constitution until 2036 and guarantee "internal stability and time to strengthen the country and all its institutions," which he believes is vital.[124] Therefore, Russia's nuclear weapon policy from 2000-2020, possibly further, and any changes are unaffected by individual-level factors such as changing the head of state. This is an advantage in analyzing changes in Russia's nuclear weapons policy as it allows disregarding individual-level variables.

A single case study has the advantage of controlling a dependent variable and looking for shifts in patterns. In this case, the dependent variable is the Russian Nuclear Weapon program. The independent variable is the shift in proactiveness and modernization of the weapon program. When looking at single case empirical focused methodology, Blume and Blatter "argue that [co-variational]is aiming to draw generalizing conclusions from cases to a wider population, whereas [causal process tracing] strives to get deeper and denser insights, and congruence analysis] is used in order to address a broader theoretical discourse[125]."

Congruence analysis allows the researcher to focus on a single case, look at patterns that may emerge, and see if the observable implications are congruent with the empirical evidence. In addition, congruence analysis allows for two different theories to be tested and see if there is a causal link between them or not.

Blatter and Haverland formulate the goal of congruence analysis into two fundamental questions. First, "does theory A provide a better explanation in comparison to other theories?". Secondly, they ask, "does theory A provide relevant explanatory insights that no other theory has

[124] Brian D. Taylor, 'Putin's Rules of the Game', *Foreign Affairs*, 13 April 2021, https://www.foreignaffairs.com/articles/united-states/2021-04-12/putins-rules-game.
[125] Joachim Blatter and Till Blume, 'In Search of Co-Variance, Causal Mechanisms or Congruence? Towards a Plural Understanding of Case Studies', *Swiss Political Science Review* 14, no. 2 (2008): 315–56, https://doi.org/10.1002/j.1662-6370.2008.tb00105.x.

revealed?" This results in having either a competing or complementary theories approach.[126] The literature discussed above shows the two competing theories most argued when assessing the motivation behind Russia's programme.

Limitations

The primary source of material will be open-source secondary source material in books and peer-reviewed journals. Wherever possible, it will also use primary source material in the form of newspaper articles, international treaties, and declassified government documents. Due to the potential classified nature of the source material, precisely the primary source material, it will be easier to receive source material from the end of the Cold War to 2000 or even earlier, yet the main timeframe of this study is between 2000 and 2020. The general air of secrecy surrounding nuclear weapon programs, policy, and arsenal is apparent and evident. This may cause issues specifically for the later years in what is reliable and available. While Russia currently has a clear doctrine on nuclear weapons available and does provide a government English translation of this document, another material is still unavailable. Mainly reports on the extent of the new weapons and numbers and military spending are not always reliable. This thesis needs to rely on secondary material from think tanks such as SIPRI for this data collection. Therefore, the data collection part will be limited to sources that the author will access via the internet as a civilian, non-Russian speaker. This, unfortunately, does provide an inherent bias towards the English source material. Due to Covid-19, the conduct of interviews with Russian scholars and diplomats in Russia was not available as a possible data gathering or methodological choice.

[126] Joachim Blatter and Markus Haverland, 'Congruence Analysis', in *Designing Case Studies: Explanatory Approaches in Small-N Research*, Research Methods Series (London: Palgrave Macmillan UK, 2012), 144–204, https://doi.org/10.1057/9781137016669_4.

Analysis

As the theoretical exploration has shown, there are three main theoretical arguments. First, Russia is using its nuclear weapon program as a status symbol. Second, Russia is pursuing a escalate to de-escalate strategy, and third, Russia is modernizing its arsenal at an average speed to maintain a secure second-strike capability. The first argument looks through a constructivist lens. In contrast, arguments two and three looks through an offensive and defensive realist lens, respectively. This will allow for exploring different sides while attempting to explain the motives and drivers behind Russia's modernization of its nuclear arsenal.

Nukes = Status

In the early 2000s, Russia witnessed a decline in military personnel and overall military spending. However, it shifted towards a military made up of professional soldiers rather than just conscription soldiers. It also started to see a focus on developing and updating critical military technology. As a result, essential capacities are being built and improved, which Oliker argues reflects Russia's "desire to maintain a large and sufficiently technologically impressive force to garner respect."[127] This modernization serves as a signal to the Russian people that its government is determined to stay a global power and to its neighbours. The 2000 Military doctrine reiterates that the emphasis is not strictly on nuclear weapons but that Russia is a dominant power in a multipolar world.[128] The document emphasizes both domestic and international stability as a national interest. It also calls on strengthening alliances, threatened by NATO's eastward expansion, and adapting existing arms control and disarmament agreements to comply with the new emerging security threats.[129]

Russia is concerned with its identity domestically, but by stating the external threats and modernizing its military, it is re-investing in its identity as a powerful military state. While the military doctrine states that arms control and disarmament agreements need to be complied with, it still has a rough clause that states it will not use nuclear weapons unprovoked.

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[127] Olga Oliker et al., 'Russia's Defense and Security Policy', in *Russian Foreign Policy*, Sources and Implications (RAND Corporation, 2009), 139–74, http://www.jstor.org/stable/10.7249/mg768af.12.
[128] Russian Federation, 'Russia's Military Doctrine 2000'.
[129] Russian Federation, 'National Security Concept of the Russian Federation', Government Website of Russia, 10 January 2000, https://www.mid.ru/foreign_policy/official_documents/-/asset_publisher/CptICkB6BZ29/content/id/589768.

Nuclear weapons have long been seen as powerful threats both domestically and externally in Russia[130]. Including the potential use of nuclear weapons in its national security strategy allows Russia to signal its people that it believes in the stability they provide.[131]

Traditionally Russia has had a great power identity that has spanned centuries. This narrative of Russia being a great power took a hit throughout the 1990s. However, President Putin, with the help of the media, has taken action to change this. The strategic narrative depicts Russia as a great power that President Putin has skillfully used to achieve his goals. Not only does the Russian media help spread this narrative domestically to the Russian people, but it also has very skillfully used strategic communications to spread this narrative to former Soviet Union states.[132] After the Cold War, Russia lost its status as a world power, which could explain the early start of modernizing its nuclear weapon program and the public announcement of new weapon technology in 2018. Constructivists argue that this aspiration for status can be traced through several of Russia's official documents, and it is visible in Putin's speeches over the years. He often states that Russia is a great power, and the West should not underestimate Russia. Strategic narrative, domestically and internationally, and the behaviour exhibited by Russia concerning its nuclear weapons shows an assertive Russia on its quest for power.[133]

Russia has conducted multiple nuclear weapon tests throughout the last two decades, the most recent one in Spring 2021[134]. These have taken place both within military exercises and separate from them. This is an easy way for Russia to state its status. Using nuclear weapons in a test scenario reminds others that it has fully functioning nuclear weapon systems. Scholars argue that this is just another way for Russia to remind allies and opponents of its military might in Russia's quest for great power status. Pu and Schweller argue this is similar to how the Chinese have a single aircraft carrier, not because it is militarily of advantage, especially a single one.

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[130] Sokov, 'NUCLEAR WEAPONS IN RUSSIAN NATIONAL SECURITY STRATEGY'.
[131] Sokov.
[132] Laura Roselle, 'Strategic Narratives and Great Power Identity', in *Forging the World*, ed. Laura Roselle, Alister Miskimmon, and Ben O'Loughlin, Strategic Narratives and International Relations (University of Michigan Press, 2017), 56–84, http://www.jstor.org/stable/10.3998/mpub.6504652.6.
[133] Anne L. Clunan, 'Historical Aspirations and the Domestic Politics of Russia's Pursuit of International Status', *Communist and Post-Communist Studies* 47, no. 3/4 (2014): 281–90.
[134] Thomas Colson, 'Russia Is Testing a Nuclear Torpedo in the Arctic That Has the Power to Trigger Radioactive Tsunamis off the US Coast', news outlet, Business Insider, 7 April 2021, https://www.businessinsider.com/russia-tests-nuclear-doomsday-torpedo-in-arctic-expands-military-2021-4.

Nevertheless, the possession of an aircraft carrier or, in Russia's case, nuclear weapons is a clear status symbol in the international order.[135]

The ABM Treaty was terminated by the US in 2002, allowing Russia to start its modernization of ballistic missiles shortly after.[136] As a result, there are new missiles such as the Avanguard and SS-19-X-Mod4, high-precision intermediate and long-range ballistic missiles. However, as Arbatov notes, Russia also started a space-defence system in 2011 and started to have more of a divide between offensive weapons and defensive weapons. Moreover, going into the 2010s, Russia has emphasized its development and perceived lowered nuclear threshold to signal its opponents that it has not been idle and is still a critical power on the world stage.[137]

This status-signalling is a critical marker of Constructivist theory. Constructivists argue that by adhering to pre-determined rules of the game, such as arms control agreements and international norms, a state's behaviour is guided in its decision-making. Conventional constructivism allows for this identity and state motive to be more fluid, fitting to explain Russia's behaviour in the last twenty years. In the early 2000s, Russia focused much more on maintaining domestic stability, boosting its economy, and securing its border to maintain control. Starting towards the 2010s, it became increasingly threatened by NATO's quick expansion, and it started to use its nuclear weapon program as a signalling tool. The invasion of Crimea in 2014 and President Putin's speech in 2018 both had the same goal. It is signalling to Western power and China that Russia remains a powerful player in the international system. Especially after President Obama's remark that Russia is a regional power rather than a global player.[138]

Therefore, it is easy to agree with the Constructivist argument that Russia uses its nuclear weapon program as a status-seeking and status-affirmation tool within the international system. Especially in the last five to ten years, Russia has increased its military activity with large-scale military exercises[139] and the targeted use of cyber-attacks[140].

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[135] Pu and Schweller, 'Status in World Politics'.
[136] 'U.S.-Russian Nuclear Arms Control Agreements at a Glance | Arms Control Association'.
[137] Arbatov, 'Mad Momentum Redux?'
[138] The Moscow Times, 'Obama Calling Russia a Regional Power Is "Disrespectful" - Putin', *The Moscow Times*, 12 January 2016, sec. news, https://www.themoscowtimes.com/2016/01/12/obama-calling-russia-a-regional-power-is-disrespectful-putin-a51414.
[139] 'Russia Stages Show of Force near Ukraine with Launch of Crimean Exercises', Reuters, 22 April 2021, https://www.reuters.com/world/europe/russian-defence-minister-oversees-large-scale-military-drills-crimea-ria-2021-04-22/.
[140] Nicu Popescu and Stanislav Secrieru, eds., 'Hacks, Leaks, and Disruptions: Russian Cyber Strategies', *European Union Institute for Security Studies*, Chaillot Papers, no. 148 (October 2018): 129.

Maybe sometimes the best defence is the offensive strategy? The 2014 Russia's Military doctrine states explicitly "the right to use nuclear weapons in response to the use of nuclear and other types of weapons of mass destruction." This willingness to use nuclear weapons in conflict seems to point towards NATO, which Russia named a top threat in the same document.[141] Nuclear weapons and the acquisition and active modernization of a nuclear arsenal are symbols of power and international prestige, and security by gaining them. The same can be said for choosing to give up its nuclear arsenal. It becomes then a signal of peace rather than aggression.[142]

The argument of gaining international prestige is not new. Epstein states that not only have nuclear weapons enhanced a state's status and prestige in the world. However, nuclear weapon states are given greater weight in foreign policy matters as well as top-level international discussions.[143] This argument, combined with the idea that nuclear weapons are the ultimate status tool, explains Russia's willingness to engage in debates and negotiations surrounding nuclear treaties. As New START is due to be replaced latest in 2026, Russia has signalled its willingness to negotiate with the United States. Even if further limitations on nuclear weapons are not favourable to Russia, the fact that they are sitting at the negotiation table as a critical party enhances their status among the NWS's. This acts as a status affirmation both to the Russian population as well as Russia's external allies.

It is crucial to recognize that New START, which has been extended to 2026, allows new nuclear weapons or delivery systems. The terms of New START do not cover several of Russia's newly unveiled missiles[144]. This is important, as it recognizes Russia's continued commitment to developing and modernizing its nuclear forces despite a treaty that has placed heavy restrictions on deployment and numbers on strategic and non-strategic nuclear forces since 2011.[145]

While it can be argued that participating in arms control agreements is a defensive realist strategy, this thesis argues that Russia actively participates in these as a status-seeking measure.

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[141] Isachenkov, 'New Russian Military Doctrine Says NATO Top Threat'.
[142] Scott D. Sagan, 'Why Do States Build Nuclear Weapons?: Three Models in Search of a Bomb', *International Security* 21, no. 3 (1996): 54–86, https://doi.org/10.2307/2539273.
[143] William Epstein, 'Why States Go -- And Don't Go -- Nuclear', *The Annals of the American Academy of Political and Social Science* 430 (1977): 16–28.
[144] Vaddi, 'Bringing Russia's New Nuclear Weapons Into New START'.
[145] Antony J. Blinken, 'On the Extension of the New START Treaty with the Russian Federation', Government Website of the United States of America, United States Department of State, 3 February 2021, https://www.state.gov/on-the-extension-of-the-new-start-treaty-with-the-russian-federation/.

By not only being at the negotiation table but attempting to influence the direction and boundaries of the treaties, Russia is both gaining status and power. It achieves status by being part of the leading parties and power by showing the way in which to go when it comes to nuclear weapons policy.

Therefore, it is easy to see that Russia has consistently pursued a nuclear weapon program and taken a proactive modernization approach to enhance its status within the international system.

Escalate to de-escalate?

Offensive realists argue that the maximization of power is the best way to ensure state survival. Not only is it in the state's best interest to rely on offensive tactics.[146] Nevertheless, states also always assume the worst motive from their opponent and should prepare accordingly[147]. Mearsheimer states that this balance of power is achieved through foreign, economic, political, and military policies. Many scholars argue that Russia is doing exactly this through their escalate to de-escalate strategy, despite the Russian government's denial of such a strategy. The main argument for such a strategy is the rapid modernization of Russia's nuclear forces, slowly updating its arsenal from the Soviet-style models and developing several new weapon systems, as revealed by President Putin in 2018[148]. Kristensen and Korda also note the increase in strategic and non-strategic[149] nuclear weapon systems in their annual nuclear weapon report[150]. The rapid increase in strategic nuclear forces[151] and Russia's statement of its willingness to pre-emptively strike to de-escalate further armed conflict[152] has led many Western scholars to argue that Russia is not only preparing for an arms race but is actively leading it.

While the Russian economy took a significant hit in 2008 and again recently with the pandemic, its nuclear modernization programme seems to be on track for completion in the latter half of the 2020s. The earlier focus from Putin's government is on domestic and regional stability

[146] Hans M Kristensen and Matt Korda, 'Russian Nuclear Weapons, 2021', *BULLETIN OF THE ATOMIC SCIENTISTS* 77, no. 2 (18 March 2021): 90–108, https://doi.org/10.1080/00963402.2021.1885869.
[147] Baev, 'Russian Nuclear Modernization and Putin's Wonder-Missiles: Real Issues and False Posturing'.
[148] Cordesman, 'Putin and Russia's New Nuclear Weapons: Whoever Dies with the Most Toys Wins?'
[149] Hans M Kristensen, 'RUSSIAN NON-STRATEGIC NUCLEAR WEAPONS', Non-Strategic Nuclear Weapons (Federation of American Scientists, 2012), http://www.jstor.org/stable/resrep18934.9.
[150] Kristensen and Korda, 'Russian Nuclear Weapons, 2021'.
[151] Schneider, 'Russian Modernization of Its Nuclear and Military Forces in 2021 | RealClearDefense'.
[152] Sokov, 'Russia Clarifies Its Nuclear Deterrence Policy'.

was a step in the right direction in once again achieving regional hegemony.[153] After the end of the Cold War and the collapse of the USSR, Russia had to find its place in the new regional geography. The best way for Russia to do this was to use its nuclear weapon programme both as a deterrent and as a security tool to achieve regional hegemony. As a result, both Belarus and Ukraine chose not to proliferate in the 1990s, clearing the path for Russia to become the dominant NWS in the region once again. Taking both Belarus and Ukraine under Russia's NU eliminated any future competition and secured its place within the region.

Markers of offensive realist theory can be seen in Russia's nuclear weapons doctrine throughout the last 20 years. One primary marker is the balance of power between states in the international system. During the Cold War, this manifested very clear in a bipolar international order. While the current arsenal of both US and Russia is significantly reduced through international treaties and arms control agreements, they remain the two key players internationally. This polarity has been highlighted again by the modernization of nuclear programs and increasing weapon development in the last ten years. Jervis summarizes this argument by stating, "the belief that an increase in military strength always leads to an increase in security is often linked to the belief that the only route to security is through military strength."[154]

This highlights that due to this inherent belief that military tools are more valued over diplomatic tools, arms races can become very intense. Each side attempts to outpace the other by developing better weapons to assure its state security on a local, regional, and global level. As a result, often armed conflict is widespread in escalated security dilemma situations. However, this becomes even riskier in nuclear weapons than usual due to the immense consequences a nuclear strike carries with it. Therefore, some cooperation is needed between states.

While the 2020 doctrine also states that it will continue to comply and seek the reduction of its nuclear arsenal, it also states it is willing to use nuclear weapons against nuclear and non-nuclear states in situations that threaten the state's survival.[155] This high-risk approach to the

[153] In his earlier terms of presidency, Putin argued that Russian domestic stability is a crucial concern, and he has achieved that by simply staying in power. Having a continued government guarantees inherent stability for a country. Therefore, it is advantageous for nuclear weapon states to implement policies on a long-term basis without worrying about a change in government every electoral cycle. Though Russia is not a dictatorship and still holds elections every cycle, it is not democratic

[154] Robert Jervis, 'Cooperation Under the Security Dilemma', *World Politics* 30, no. 2 (1978): 167–214, https://doi.org/10.2307/2009958. 183.

[155] Russian Federation, 'Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence'.

pursuit of the new status quo is due to the perceived risk-averseness of the West[156]. Furthermore, Russia is willing to pre-emptively strike to achieve de-escalation of armed conflict. It shows the power it has despite the multiple arms control agreements and treaties in place.

All is normal

In contrast to the escalate to de-escalate argument, instead, Russia uses a escalate to win strategy, supported by the modernization of its nuclear arsenal. The rapid modernization of its conventional and nuclear arsenal ensures both the newest weapon technology and the upper hand in any armed conflict. This allows Russia to maintain a second-strike capability while phasing out Cold War weaponry and develop newer and more efficient weapon technology.

This strategy follows a modernization cycle at an average speed, but it simply started much earlier than its competitors. Defensive realists argue that the arms control treaties are of high value to maintain a balance of power and security. During the Trump Administration's refusal to extend New START, President Putin repeatedly states that Russia is willing to extend New START by five years as is allowed in the treaty text. Even though the INF Treaty terminated in 2019, there still seems to be a willingness to engage in international nuclear treaties and arms control agreements.

Defensive realists also argue that conquests are often too costly and inefficient, even if Russia possesses a second-strike capability. Defensive realists believe that the advantage lies with the defender, not the offensive actor. Therefore, arms racing does happen, but security is achieved to a high enough level that each state is comfortable through cooperation and military alliances.[157]

Arms racing, such as during the Cold War, was mainly to achieve nuclear primacy and develop a first-strike capability and ensure a second-strike capability. Lieber argues that during the early 2000s, Russia did not have a second-strike capability due to a sharp deterioration of its nuclear arsenal. This ensured that the US held nuclear primacy and shifted the balance of power towards the US.[158] Lieber is a American political analyst, the fact that he argues that Russia does

[156] Bruusgaard, 'Russian Nuclear Strategy and Conventional Inferiority'.
[157] Lobell, 'Structural Realism/Offensive and Defensive Realism'. See also: Jervis, 'Realism in the Study of World Politics'.
[158] Keir A. Lieber and Daryl G. Press, 'The Rise of U.S. Nuclear Primacy', *Foreign Affairs* 85, no. 2 (2006): 42–54, https://doi.org/10.2307/20031910.

not have a second-strike capability suggests that there is some validity to his argument. Even if there is a discrepancy but if the Americans suspect Russia does, in fact, not have a second-strike capability, the Russian analysts have likely already reached that conclusion. This would be a considerable problem for Russian security and undermines its domestic stability as well.

The advantage of owning nuclear primacy is an offensive realist strategy that was rendered useless with MAD. Blair opposes Lieber and states that the estimation of Russia's vulnerable nuclear weapon arsenal is unable to be accurate. At this point, most Russian nuclear weapons were still leftover missiles from the Soviet era, and some even as old as the 1970s. Older weapons not only pose a higher risk of malfunctioning but are often not as reliable, and their software is vastly outdated and outpaced by newer models. Suppose one had the choice between a rifle or a semi-automatic gun. It is advantageous to have the semi-automatic one. The same principle applies to nuclear weapons. The old missiles can still inflict much damage, but it is better to have a newer model. There is often a 30% discrepancy between public records and classified records of the exact number of nuclear weapons.[159] MAD should not be seen as an operational policy rather than a deterrence strategy.

The fact that nuclear weapons are the ultimate deterrence tool against non-nuclear states is clear. Simply no other weapon can match a nuclear bomb in destruction. According to defensive realists, this is precisely why nuclear weapons are a defensive weapon only. The possession of a nuclear arsenal, especially as big as the Russian is mainly for defensive purposes, to carry out second-strike attacks when and if necessary. This second-strike capability is also emphasized in Russia's newest nuclear doctrine.[160]

Defensive realists favour a more balanced and moderate foreign policy than one that makes unnecessary waves by alienating specific defence and military industry sectors. The stability can also see this of the military doctrines. Despite amendments over the years, there has been no significant unexpected change. This approach favours a regular modernization cycle that tends to run over several decades. Even though Russia has turned out a significant number of newly developed weapon systems[161], this is not a matter of concern.[162] Bruusgard argues that the flexible approach of Russia in military operations allows it to use conventional weapons and

[159] Bruce G Blair and Chen Yali, 'The Fallacy of Nuclear Primacy', *China Security*, Autumn 2006, 51–77.
[160] Russian Federation, 'Basic Principles of State Policy of the Russian Federation on Nuclear Deterrence'.
[161] Kristensen and Korda, 'Russian Nuclear Forces, 2020'.
[162] Gottemoeller, 'Russia Is Updating Their Nuclear Weapons'.

nuclear weapons. This behaviour backs Russia's declaration of a lowered threshold for nuclear weapon use[163]. However, this reliance on nuclear weapons has some problems. First, it leaves itself wide open to the problem of only achieving deterrence through nuclear weapons and not by conventional means. Second, it destabilizes the system in a way that is hard to grasp until it is too late. Third, the added risk of a potential nuclear use heightens any conflict Russia could find itself in.

Nevertheless, the development and evolution of individual weapons systems and delivery vehicles is nothing out of the ordinary. In the past century alone, the weapon development cycle has boomed regarding all different types of weapons. Therefore, it seems normal that nuclear weapons have started to shift towards their second big evolution cycle of redevelopment.

Summary

In summary, especially in the first half of the 2000s, Russia used its nuclear arsenal to gain stability domestically via status affirmation.

Markers of offensive realism are present in many Russian military and nuclear doctrines, especially in the early 2000s. Russia places a high priority on being a regional hegemonic power. Towards the 2010s, Russia's doctrines shift to reflect the emerging 'threat' that NATO represents towards Russia's security. A state's security is a crucial marker for realist theory. It believes that the international system is anarchy, and the stability and security of a state should be its main priority.

Nevertheless, a shift starts in the later 2010s towards a more status-seeking approach which can be seen through constructivist theory. This was done by showing its status through nuclear tests, the emphasis on starting a new modernization phase, and the rhetoric Putin used. Through the 2010s, this shifted to using nuclear weapons to signal the West that Russia has maintained its status globally, not just a regional one.

Offensive realists argue that Russia is pursuing a escalate to de-escalate strategy mainly due to its rapid modernization cycle. While the exact motive behind this behaviour is not explicitly stated except for the perceived threat of NATO, it helps Russia secure due to the deterrent achieved by the lowered threshold of a nuclear use.

[163] Bruusgaard, 'Russian Nuclear Strategy and Conventional Inferiority'.

Defensive realists argue that Russia's modernization cycle is happening at an average speed. While they did start earlier than its primary opponents of the USA and China, its foreign policy has remained steady under Putin, with minimal surprises throughout the years.

All three arguments have in common that they hide Russia's nuclear weapon programme's real intentions behind mirrors, smoke, and secrecy. At the same time, limited declassified information is available concerning the types of weapon Russia can deploy. These numbers are only estimations, and the actual military budget spent alone on nuclear modernization is highly classified information. While this is not different from other NWS, it does add to the mystery and doubt. Due to this, it makes it hard to give concrete policy implications.

The evidence suggests that Russia is pursuing its nuclear weapon programme along the lines of the constructivist goal. Russia's quest for status affirmation by its Western opponents is a driving factor behind its programme these last two decades. Given the limitations in place, the only true path and goal of Russia's nuclear policy are only known to Russian political elites. However, given the evidence and the rhetoric that has come out of Russia the last few years. It is most likely that Russia is pursuing a modernization cycle at an average speed while seeking status affirmation from the West. It sees the maintenance of a second-strike capability of utmost importance, and while it states it is willing to pre-emptively strike, the other NWS also states this.

Conclusion

This thesis set out to fill the gap in the literature surrounding the Russian nuclear programme regarding the evolution of its modernization under Putin on a macro-level. The introduction laid out a general overview of the Russian nuclear programme, the reason why nuclear weapons are still of concern to policymakers today and stated the overarching research problem: How has Russia's nuclear programme changed under President Putin? Furthermore, building on this: How can the proactive shift in Russia's nuclear weapon programme be explained?

Before diving into the existing literature, this thesis established a historical analysis of Russia's nuclear policy from 1992-2020. The chapter focused on the three main pillars of the Russian nuclear programme: modernization, doctrine development, and international weapon treaties and arms control agreements. The historical analysis positions Russia as a nuclear power post-Cold War on a local, regional, and global level through a close analysis of its military doctrines and how they changed over time. Several themes are present in the historical analysis. For example, emphasizing the importance of nuclear weapons as a deterrence factor, the importance of nuclear modernization, and the adherence to international nuclear treaties. The historical analysis also showed that Russia has pursued an increasingly pro-active and assertive nuclear weapons policy in recent years.

The literature review outlined the main arguments and issues regarding Russia's nuclear weapons programme. Five general themes were identified. Regarding the motives and underlying sources of Russia's increasingly assertive nuclear weapons policy, three prominent positions were identified: One group of scholars argues that Russia is pursuing nuclear weapons as a prestige symbol and signalling its status globally. A second group holds that the current cycle of nuclear modernization is occurring at an average speed and technological advancement. The third group of scholars suggests that Russia has adopted an escalate to de-escalate strategy, which is to say that Russia has lowered the nuclear threshold and is willing to use nuclear weapons to deter and terminate armed conflict of all kinds. However, much of the existing literature remains piecemeal and does not provide a systematic test of the various arguments against the accessible evidence. The subsequent two chapters sought to fill this void.

Chapter 4 presented methodological and theoretical considerations. It argued for the application of a single case study approach that combined inductive thinking with a congruence

analysis approach. Moreover, it situated the major arguments in the literature in the landscape of existing IR theories. It became quickly apparent that the main arguments draw implicitly on arguments from the constructivist and realist perspectives, respectively. To set the baseline for a more systematic inquiry, a set of hypotheses about Russia's nuclear weapons policy were derived from the two perspectives.

The analysis chapter used the hypotheses to conduct a structured analysis, testing them against the accessible evidence to better understand the underlying drivers and ambitions of Russia's nuclear weapons strategy. There are, of course, limitations given the limited access to internal policy documents, transcripts of high-level meetings, and the like. However, given the available evidence and the public rhetoric that has come out of Russia the last few years, one can draw some conclusions. Specifically, the analysis chapter concluded that Russia is pursuing a modernization cycle at a normal speed while at the same time seeking status affirmation from the West. Moscow sees the maintenance of a second-strike capability of utmost importance, and while it states it is willing to pre-emptively strike, the other NWS also states this.

The analysis also showed that Russia is not pursuing one particular course of action for its nuclear weapon programme. While all three theoretical arguments have their merits, the constructivist and defensive realist ones are the more convincing ones. Russia is likely pursuing both at different levels. In its quest for status, Russia uses assertive nuclear rhetoric on the international stage. Russia's nuclear weapons modernization program, meanwhile, is primarily driven by security considerations.

For Western policymakers, this implies that they need to be flexible in their approach to Russia. While hard power tools have their advantage, it is also important to use softer power tools of diplomacy and arms control to signal a willingness to cooperate with Russia to avoid future nuclear conflict.

Since President Putin has been in power for so long and likely will continue for another term or two, this might be beneficial for Western policymakers and diplomats. They are aware of their partner across the negotiations table. He is no longer unknown, and while Russia has traditionally been very flexible in its nuclear weapons policy, Russia can be counted as a known actor. This flexibility in policy change seems to suit Russia very well, and policymakers should keep this in mind when looking to determine the best way to deal with Russia. However, one thing is sure: It would be unwise to dismiss Russia as a powerful nuclear-weapon state. Based on

the findings of this study, further research should explore the best ways to deal with a pro-active Russia and how this will affect the future negotiations surrounding a treaty that will replace New START in 2026.

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