DECLARATION BY CANDIDATE

I hereby declare that this thesis, “The changing role of the Nuclear Weapons in European security“, is my own work and my own effort and that it has not been accepted anywhere else for the award of any other degree or diploma. Where sources of information have been used, they have been acknowledged.

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The changing role of the Nuclear Weapons in European security

Master’s Thesis

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INTRODUCTION

When the Manhattan Project came to fruition in form of the world’s first ever nuclear detonation in Hiroshima, on August 6th, 1945, war as we know it was forever changed. The United States Air Force B-29 Superfortress bomber, dubbed Enola Gay dropped the first ever nuclear bomb, “Little Boy”. The bomb was released at 08:15 local time and took 44 seconds to fall from the aircraft flying at the altitude of 9.4 kilometres to its detonation height of approximately 580 meters. Due to crosswinds, “Little Boy” missed its designated target, the Aioi bridge, by approximately 240 meters and detonated directly above a surgical clinic. The radius of total destruction was about 1.6 kilometres, also causing fires across 11 square kilometres. On various accounts, around 30% of the population of Hiroshima, 70,000 – 80,000 people were killed by the blast and resulting firestorms. Three days later, on 9th of August, another nuclear bomb was dropped on Nagasaki. Another B-29 bomber, Bockscar, dropped “Fat Man” at 11:01 local time. It detonated 47 seconds later at the approximate height of 500 meters. As the city was protected by hills and the bomb detonated above a valley, the casualty count was smaller than in Hiroshima, even though the bomb was more powerful. However, death toll varies depending on sources, as it is estimated that the blast and resulting fires killed from 22,000 to 75,000 people, only 150 of whom were soldiers. Total estimations of casualties from both bombings and immediate aftermath vary from 129,000 to 246,000 and more.¹

Since then, during the Cold War, Nuclear Weapons steadily became more and more important both in strategic and tactical sense, as most military doctrines became centred on the possible uses of Nuclear Weapons. The evolution of these doctrines will be analysed, to see how and when the Nuclear Weapons were successfully incorporated into battle plans. While military doctrines focus heavily on the use of Tactical Nuclear Weapons, Strategic Nuclear Weapons were the ones dangerous to civilian population across the world, especially when the technology advanced and the Intercontinental Ballistic Missiles became the biggest threat, capable of carrying nuclear warheads halfway across the world.

¹ World Nuclear Association, “Hiroshima, Nagasaki, and Subsequent Weapons Testing”, 2010
This led to projects of defence systems against these missiles, known also as ICBM defence systems. These systems helped end the Cold War, and while the threats of ICBM attacks are significantly lower, ICBM defences still have a role and an impact on the international stage. The extent of that impact will be analysed.

The ICBM defences are relevant, because Eastern Europe is in conflict. Russian use of hybrid war tactics led to them annexing Crimea and successfully starting a war in Donbass, Eastern Ukraine. Because of these cases, hybrid war will also be analysed, as well as potential unorthodox uses of Nuclear Weapon in a hybrid war scenario.

These factors – the effect of the ICBM defence in international arena and the nuclear threat from a hybrid war that is going on right now, make this topic relevant. The role of Nuclear Weapons is changing; their effect on European safety is too.

The main question of this thesis will be: “To what extent does the changing role of Nuclear Weapons in the NATO/US and Russian doctrines, as well as in hybrid warfare, affect European Security?” Time period for the analysis will be from the end of the Second World War (1945), during the Cold War, until now.

The entire thesis will be divided into chapters, each discussing relevant parts and questions. The first chapter will contain theoretical framework. The second chapter will answer will discuss and answer these questions: “What was the history and evolution of the American and USSR/Russian military doctrines and how have they evolved over time?” and “What effect do the ICBM defence installations have in international arena?” The third chapter will focus more on Hybrid Warfare and will answer the following questions: “What is a Hybrid War and to what extent can it affect European Security?” and “What are the possible unconventional uses of Nuclear Weapons, including those in Hybrid War scenario?”

The primary theory used in this thesis will be Classical Realism, for numerous reasons: its main actor is the state; however Classical Realism still takes into account sub-state level. This is relevant, because several military doctrines are analysed in this thesis, so a sub-state (government, military) level is crucial. Besides that, Classical Realism also focuses on state security, interests and power, while also defining several key concepts, such as Balance of
Power, which are important, as part of this thesis will discuss doctrines of the Cold War. Methods to achieve the answers to aforementioned questions will be analysis of the sources, comparison of situations, outcomes and sources. Therefore, this thesis will focus on analysing military doctrines – both Russian and NATO, after the end of the Cold War. This will be done in order to see the changes in policies regarding Nuclear Weapons and the circumstances that they are allowed to be used in. Main focus in that will be on tactical use of Nuclear Weapons – using it to achieve tactical goals, decisive victories in battles, sabotage, etc., rather than starting the Armageddon. There will be analysis and comparing of relevant military doctrines of both Russia and NATO to see the changes after the Cold War.
1. THEORETICAL FRAMEWORK

The purpose of this chapter will be to establish a theoretical framework for this thesis. Several terms and the chosen theory will be introduced. The key terms relevant to the topic will be Notion of Power and Balance of Power. These terms can be linked to the changing role of the Nuclear Weapons in European security, as well as the role and impact of ICBM defences on international arena. ICBM defences, for example, are seen by opponents as attempts to shift the Balance of Power by defensive means. Hybrid war to prevent a state from leaving your sphere of influence is also relevant to Balance of Power; however in this case, status quo is being preserved. The theory that has been chosen for this thesis is Classical Realism, for the reasons mentioned above: focus on state and sub-state levels, emphasis on key concepts, such as Balance of Power, which will all be necessary throughout this thesis, as the analysis will look into both state and sub-state levels.

Realism, as an international relations theory is centred on four main ideas:

1. International system is anarchic. There is no actor above states to regulate and control them, states must resolve and maintain relations with other states themselves, there is no higher entity to serve as a referee, or a regulator. The whole international system exists in a state of constant antagonism.
2. The second point – the state is the most important actor in the international system.
3. All states within the system are unitary, rational actors, which pursue self-interest first and foremost.
4. The absolute primary and main goal focus and concern of every state is survival.²

The fact that, the International System is Anarchic does not imply the presence of chaos, or disorder. It simply refers to absence of a sort of overarching world government. With no such authority to provide security and stability in international relations, world politics is not hierarchically or formally organized. In contrast to domestic politics, which is structured by ‘hierarchy’, international politics is structured by ‘anarchy’. The international system is thus

defined in terms of an anarchic international structure.\textsuperscript{3}

The essence of Realism reduces political – ethnical principle to “might is right”. Theory has a long history indeed, being present in Thucydides’ *Peloponnesian War*. It was expanded further by Niccolo Machiavelli in his famous piece *The Prince*, and other authors, like Thomas Hobbes and Jean-Jacques Rousseau. Later, in the late nineteenth century realism underwent a new incarnation in the form of social Darwinism, according to which in the political and social struggles, only the fittest, or strongest states and cultures will survive. Realism is essentially a pragmatic approach to International Relations, describing the world “as it is, not as it should be”.\textsuperscript{4}

Classical Realism was chosen over the other branch of Realism – Structural Realism. Reasons for this are clear – while both Classical and Structural Realism focus on a state, as its main actor, only Classical Realism takes into account the sub-state level. Hans Morgenthau, one of the most prominent Realist scholars, recognised the plurality of influences upon state behaviour, such as popular support both domestically, and internationally, influence of nationalism, ideologies, etc.\textsuperscript{5} The scholars of Structural Realism were highly critical of this approach, namely Kenneth Waltz. Waltz maintained the importance of power politics and the centrality of the state however; he ignored the role of the domestic sphere attributing the ‘self-help’ nature of the international realm as the sole factor in deciding states’ behaviours. Therefore, Classical Realism is the more fitting choice for this thesis, as certain sub-state level factors will be important (military doctrines, military support for the regime, popular support).

1.1 The Struggle for Domination in International Arena

One of Realisms most renowned scholars, J. J. Mearsheimer, links struggle for power and domination with influence that International System has on states. This is made up of five main points. Firstly, the aim to dominate by the states is based on the knowledge of the fact, that states are the most important actors in the international system and that they function in the system that

\textsuperscript{3} Waltz, Kenneth N., ”Theory of International Politics”, Addison-Wesley Pub. Co., 1979, p. 88
\textsuperscript{5} Morgenthau, Hans, “Politics Among Nations”, New York, 1965, p. 272

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is anarchic.\textsuperscript{6} This argument is based on the fact, that international system is made up of international states, which are not connected by any supreme authority, therefore, a state can use its power to achieve its goals. Second point, explaining the quest of domination, is military readiness and preparation, which creates assumptions, that damage will be done to an opposing state.\textsuperscript{7} Mostly, the military readiness is gauged by the amount of weapons a state has and the quality of military preparedness, which can be used against other states at any given moment. Third point proves that states can never be sure of other states’ intentions. This argument is more orientated at the use of military force, expressing worry and fear over the intentions and actions of other state, which can be dictated by selfish interests. This is the reasons it is absolutely crucial for states to know if their opponents are prepared to use force to change the situation in the international system (revisionist states), or are they content with how things are at the moment (status quo states).\textsuperscript{8} The fourth argument is based on an idea that the main goal of the state is survival. This of course, is important, because if state is conquered and defeated, it will be unable to reach any other interests or goals. The last point, in explanation why states try to achieve domination, is that states are defined as rational actors.\textsuperscript{9} States aspire to, and are capable of maximally increasing the chances of their own survival, while keeping an eye on the priorities and interests of other states and being conscious of its actions.

\section*{1.2 Classical Realism}

Classical Realism, as an international relations theory, was established during the post-World War II era. One of the key points of Classical Realism is that international politics is a result of

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{7} J.J. Mearsheimer „The tragedy of great power politics“ University og Chicago, New York and London: W W Norton & Company. P. 31
\item \textsuperscript{9} J.J. Mearsheimer „The tragedy of great power politics“ University og Chicago, New York and London: W W Norton & Company. P. 31
\end{itemize}
\end{footnotesize}
human nature. Classical realism is an ideology defined as the view that the "drive for power and the will to dominate [that are] held to be fundamental aspects of human nature".10

Classical Realism puts the roots of international conflict and war as a consequence of an imperfect human nature. The core component of Classical Realism is power and survival. The state has to do anything and everything in its power to ensure its survival. That cannot be done without power. One of the most prominent scholars of Classical Realism, Hans Morgenthau writes: “Power may comprise anything that establishes and maintains the power of man over man […] from physical violence to the most subtle psychological ties by which one mind controls another.”11 For Morgenthau, the most important material aspect of power is armed forces, but even more significant is a nation’s character, morale and quality of governance.12 “Power […] tends to be equated with material strength, especially of a military nature, I have stressed more than before its immaterial aspects.”13

One of the most important concepts of Classical Realism is balance of power. States attempt at all costs to increase their own power in order to not fall behind other states and put itself in danger. According to Hans Morgenthau, the balancing process can be carried out by diminishing weight on the heavier scale, or by increasing the weight of the lighter one, by preserving status-quo, or by seeking change. Balance of power can be established, changed, or re-established, per Morgenthau, in four main ways. The first way is to make hostile opponent state weak by dividing it, or keeping it divided. For example, the French politics towards Germany, be it supporting particular monarchs, division among small kingdoms, or opposing unification of Germany. Another example is the politics of Soviet Russia from 1920s – the fear of unified Europe into a “Western European bloc”, which could rival Soviet Russia in power and threaten the very existence of the latter. In other words – divide and rule.14

The second way is compensations, primarily of territorial nature. During the "later part of the nineteenth and the beginning of the twentieth century, the principle of compensation was again

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12 Ibid., p. 168
13 Ibid., p.9
deliberately applied to the distribution of colonial territories and the delimitation of colonial or semi-colonial sphere of influence". Although this particular form of maintaining the balance among European powers (and their dominance in the world) worked for a while, it soon led to the First World War, because of fundamental conflict of interests among European powers. One could even argue that a similar attempt to re-establish the balance, after the First World War, actually led to the Second World War.\(^15\)

The third method is armament. In this instance, states try to keep up and possibly overtake each other in arms production and equipment, expanding their respective military. This is primarily used to attempt the creation of a stable balance of power. However it rarely succeeds, as mounting production of arms constantly increases the burden of military preparations, fears and morale grows. In some cases, like in Europe right before World War I, morale and/or fear get so high, people and especially military personnel, start to look forward to war. In other words, preparations and forces are too big and too complicated, to simply stand down. This was the case in World War I. And it was one of the greatest fears during the Cold War. This method can also be used in sort of a reverse – reduction of armament. States can sing disarmament treaties and balance that way.\(^16\)

The fourth method described by Morgenthau is arguably the most common – alliances. States use alliances to balance and, in some cases, bandwagon. Balancing with the help of alliances is done by forming, or joining an alliance to counter one strong state, or a stronger alliance, thus, hopefully, preventing war. Contrary to balancing, states can also choose to bandwagon. Bandwagoning is essentially an opposite of balancing – joining a stronger state, or a stronger alliance and hoping that when the situation escalates down to war, the bandwagoning state will be sided with the winner, thus protecting its security. Bandwagoning is mostly used by weaker states which have stronger and potentially aggressive neighbours.\(^17\)

\(^{15}\) Ibid., p. 199  
\(^{17}\) Ibid., 201
States are constantly competing for domination in international politics. „There are no constant friends and foes in international politics, there are permanent interests. Today’s friends can be tomorrow’s foes and today’s foes can be tomorrow’s friends“.

Because of that, the more power a state has the more chance it has to be the one dominating. In Structural realism theory, the concept of power is related to influence that the international system has on a state. This suggests, that states that have more power, can control the actions of other states that have less.

The international system is defined as an anarchic entity, made up from selfish states that cooperate only as much as it is useful to them, in order to achieve their national interests. Scholars of various schools of realism mostly emphasize the anarchy, and the lack of hierarchic structure in international system, states have different capabilities to perform same functions and tasks. This is caused by uneven division of power among states and display of said power to the weaker states. Because of that, weaker states try not to become dependent on strong states. As said by Thucydides, the strong ones do what they can, the weak ones do what they must. This is most often reflected in international unions and alliances.

The focus of this thesis is on Nuclear Weapons, therefore terms like Power, or Balance of Power will be looked at through the lens of Classical Realism. Analysis of the sources will be used, as well as comparison of situations, changes and outcomes, such as evolutions of military doctrines in different countries.

Besides focusing on international security, this thesis analyses some military aspects as well, such as military doctrines, hybrid warfare, etc. Therefore, Classical Realism serves best to be used as a lens and a framework to achieve answers to the questions listed above, because it focuses on state as the main actor, while still taking sub-state level into account, as well as defining such core concepts as Balance of Power. These points, among other written earlier, are the reason Classical Realism was chosen to be the main theory for this thesis.

Next chapter will take a look at Russian and NATO/American military doctrines during the Cold War and now, as well as what role did the Nuclear Weapons have in them. It will also analyse how the role of Nuclear Weapons changed during the Cold War and up until now. After the doctrines are analysed, the role and impact of ICBM defence will be analysed.

2. NUCLEAR WEAPONS: CHANGING DOCTRINES AND ICBM DEFENCE

When World War II officially ended on 2nd of September, 1945, with formal surrender of the Empire of Japan, the world was forever changed. When the smoke cleared, every state realised what tremendous power helped end the war. A Nuclear bomb was used by the United States of America to hurry up the conclusion of the conflict. The new wonder weapon which forced the fanatic Japanese finally lay down their arms was something never seen before. This chapter will analyse and review the impact Nuclear Weapons had on military doctrines of the Soviet Union and the United States of America, as well as NATO. It will also look into how these doctrines and the role of the Nuclear Weapon in them changed during the Cold War. Afterwards, focus will be shifted towards ICBM defence as well as its role and the affect it has on international arena.
2.1 Nuclear Weapons in Doctrines during Cold War

Having seen the overwhelming power of the atom unleashed, other countries began working furiously in order to catch up to Americans and their new revolutionary weapon that could solve and win wars in an instant. When other countries, like the Soviet Union caught up to the United States, the new weapon began changing their doctrines and approach to war completely. In this chapter doctrines will be the main focus. Their changes throughout the Cold War will be analysed and examined.

2.1.1 Soviet Military Doctrines in Early Stages of the Cold War

The roots of the evolution of Soviet Military Doctrine can be found in both World Wars. Firstly, after the Tsarist Russia’s military was defeated in the World War I and ultimately lost the Russian Civil War, there were no roots and loyalty to older traditions. Therefore, after the newly formed USSR started forming its own military doctrine in the 1930s, they did not stick to WWI tactics, separating themselves from the last war. The countries that won WWI, mainly France and Great Britain however, stuck with the same tactics of positional warfare, which proved near fatal for them. Soviets, meanwhile, felt no loyalty or burden of tradition in their military thought, as they had neither intention, nor desire to continue the traditions of Imperial Russian military, which proved inadequate during World War I. Because of that lack of tradition they saw themselves as unique – they were starting from scratch and could shape their military thought and doctrines to fit together with rapidly advancing technology. In other words, the Soviet military leaders were keen to prepare for the new kind of war without being burdened by obsolete tactics of the previous one. In this sense, the forming Soviet military could have been considered parallel to the rebuilding German Wehrmacht of the 1930s. The similarities lie in the fact that both these military forces, while vastly different in so many aspects, were being built from scratch – tradition gave way to technology and development. While Germans were perfecting their combined arms tactics of working together with air force to create breaches in enemy front and exploit them with armoured units, a tactic later dubbed the ‘Blitzkrieg’, Soviets worked on their own tactic, known as ‘Deep Battle Doctrine’. They used it to great effect in the closing stages of the war, when the Red Army had superior numbers and equipment advantage over the weakened Wehrmacht.

After the World War II, the Soviet doctrine remained rather unchanged, neither accounting for military blunders of 1941 and 1942, nor including more technically advanced weapons, like rockets or Nuclear Weapons, which were used by the end of the war. However, by then, the USSR had not yet developed a Nuclear Weapon of its own. The first successful Soviet nuclear test took place in Semipalatinsk, Kazakh SSR, in August, 1949.\textsuperscript{24} The detonation of RDS-1, also known as Izdeleiniye 501 (device 501), or First Lightning (Pervaya Molniya), surprised Western countries, as they did not expect the USSR to be able to create a nuclear weapon until 1953, the first successful test was not expected until 1954.

After successful testing, Soviet military doctrine did pay some theoretical attention to nuclear warfare, as Soviets were developing methods of military operations using nuclear weapons and troop movements and operations following nuclear strikes to capitalise and overwhelm the shell-shocked enemy. However, Soviet leaders and military doctrines still emphasised conventional land war over a possible nuclear war.\textsuperscript{25} Soviet Military Doctrines of early 1950s believed that major war would begin either by a surprise attack conducted by the Western powers on Soviet Union, or a local proxy war would gradually escalate into a major conflict. If the war was initiated by a surprise attack, Soviet leader Iosif Stalin believed many factors would determine the ending, nuclear weapons not being one of them: “Now the outcome of the war will be decided not by such an attendant moment as the moment of surprise but by the permanent operating factors of war as the stability of the rear, morale of the army, quantity and quality of divisions, armaments of armed forces and organizing ability of commanders.”\textsuperscript{26} According to Stalin, these factors would be essential in a lengthy and intense war, which Soviet Union would undoubtedly win.

Stalin’s influence was immense to Soviet doctrines of 1940s and early 1950s. As an absolute leader of state, his word was deciding in any military decision. Having such an absolute power and being paranoid nearly to death, Stalin rarely relied too much on greatest military minds of Soviet Union. For example, in 1946, right after the World War II ended, he demoted Marshal Georgy Zhukov, then commander-in-chief of the Red Army, to command Odessa Military

\textsuperscript{24} Peslyak, Alexander "Russia: building a nuclear deterrent for the sake of peace (60th anniversary of the first Soviet atomic test)", 2009
\textsuperscript{26} Stalin, Iosif, "O velikoi otechestvenoy voine Sovetskogo Soyuza", 1950, p. 43-44
District, stripping him of command of the entire Red Army and occupied Germany. Stalin saw Zhukov as a potential threat, after all, Zhukov was a four time Hero of the Soviet Union, hugely popular with military, as well as being a gifted strategist, responsible for many key victories over Germany during the war. Stalin claimed the credit for the victory over Nazi Germany for himself, and crafted the new doctrine to his liking. In it, Stalin disregarded the technological advances, the factor of surprise, development of foreign armies and enemies, and early war failures made by the Soviet command, dismissing all these elements as irrelevant to achieving victories. He did, however, promote a major nuclear development, as insurance against future developments.

As well as Stalin’s influence, another two key factors for doctrines were international military and political environments. As for international military environment – it was rather simple. Based on the Balance of Power logic, the United States had a clear advantage in regard to air force and strategic nuclear weaponry, right after the war. In other words, U.S. had a weapon of mass destruction and more than ample means to deliver it pretty much anywhere. As for the international political environment, the USSR was in a rather good-news-bad-news situation. On one hand, it gained territory in Europe, controlling Eastern and Central Europe, with prime position for attack or counter-attack further into the continent. Also, China greatly strengthened Soviet positions, as they had a fellow communist state behind their backs, thus avoiding being encircled by enemy states. On the other hand, the US emerged as a superpower, relatively unharmed by the war, armed with a new and terrifying weapon of never before seen capabilities. Entire Western Europe was under the influence of the US. This was a new very dangerous threat to the Soviet Union. Given the military and political conditions, it was only logical to favour a defensive stance for the USSR. To achieve their defensive goals, military leaders of the USSR called for strong conventional defences and a reserve capable of a swift counter-attack into Western Europe from prepared advantageous positions. Active defence was the answer for the time being, at least until the USSR caught up to US in air force and strategic nuclear weapons.

Until Stalin’s death in 1953, his view on military decisions was through a frame of World War II. The “Great Patriotic War” was his reference point; therefore he was not an advocate for any ground breaking innovations and changes in primary tactics.

This straitjacket of military thinking was removed when Stalin died in 1953 and Nikita Khrushchev became *de facto* leader of the USSR. The status-quo changed together with the leader of the state. The new dominant element, new axis for the military during this period was recognition of the new super weapons – nuclear weapons and missile systems, and their emergence. This example served to display how sub-state level can be relevant and affect the behaviour of a state. During the next five years after Stalin’s death, there were some heated debates among military leaders as to what the future war will be and what it will look like. According to one of the military men, Major General S. Kozlov, there was an “agonizing reappraisal of previous experience and, mainly, an adaptation of new weapons and means of conflict to old views and concepts.”28 The war had changed forever; the very concept of it was now different than it was ten years ago. The Soviet leaders, Khrushchev included, now declared that the war between socialism and capitalism was no longer inevitable. This statement would have been impossible when Stalin was still alive, as he believed that clashing of capitalism and socialism is all but natural and inevitable. Also, if the war came, it would no longer be a prolonged war of attrition, exchanging blows and throwing millions of soldiers into the grinder until one side breaks. The clashes of massive ground forces in Europe would not be the image of the new war. Instead, the Soviet leaders believed, as the war would escalate further and further, it would reach a boiling point, a nuclear threshold. Then, sudden, short, yet immensely powerful nuclear exchanges by missiles or air force would dominate the war. 29

This conclusion heavily influenced the Soviet military philosophy. Infantry, the queen of all weapons in all the previous wars, was no longer the focal point. The airborne forces, armoured forces, mechanised forces and particularly the Strategic Rocket Forces (SRF) gained prominence and priority at the expense of the infantry. The Strategic Rocket Forces became the dominant branch of the military in the 1960s. Major General V. G. Reznichenko and Colonel A. Sidorenko clarified the changing nature of war and adaptation required in their statement: “There will also be a different way of breaking through the enemy's defence. The method used will no longer be that of "gnawing through" as was the case in past wars. The defence will be dealt nuclear strikes and will then be attacked from the line of march, at high tempo, by tanks and mechanised troops. The use of nuclear weapons will create favourable conditions for the rapid advance of troops.

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29 Major General Kozlov, S. “Officer’s Handbook”, 1971
They should be able to utilise quickly the results of nuclear weapons, penetrate boldly through breaches in the enemy's combat formations, avoid both frontal attack on strong points and straight line movements, carry out flexible manoeuvres, and deal decisive blows to the enemy's flank and rear.\(^{30}\)

It can be seen, that nuclear weapons were rapidly making their way into military doctrines. Leaders changed in the Soviet Union, and with them, the attitude towards technology and innovation changed too. Power and potential of nuclear weapons could no longer be overlooked. Leadership is also a very important component in any doctrine, and this is a prime example of it. When a new, more open minded and forward-thinking leader came into power, the focus shifted almost suddenly. Leadership, as well as military planning, deployment, readiness, and all other key elements in a military doctrine, is essential. Yet it sometimes remains overlooked, even though understanding what kind of leadership is in place is essential to understanding military doctrines.

\[2.1.2 \text{ Soviet Military Doctrines in Mid-Late periods of the Cold War}\]

Nearing the end of the Cold War, in the 1980s, a new trend surfaced in Soviet military thinking. Emphasis was placed on an idea, that in order to achieve a decisive victory in a military theatre, the use of nuclear devices is inevitable. The reason behind this logic is the fact that conventional defence measures, particularly anti-armour, had reached never before seen quality and quantity as well. Therefore, breaching a well prepared defensive position, which had been held and reinforced for years, became nearly impossible with conventional offensive weapons. To have even a remote chance of achieving a breakthrough, the attacker would have to sacrifice overwhelming numbers of troops and equipment. Even if the breakthrough would somehow be achieved, due to extreme cost claimed by the original assault, exploiting the breach would be difficult, if at all feasible. All of these factors made such an attempt not worth the effort and casualties. In other words – the stalemate was too strong; the defences were too developed on both sides of the potential front between NATO and USSR forces. In 1982, Soviet Chief of Staff,

Nikolai Ogarkov illustrated this problem in his statement: “At the present time, as is known, there is rapid development of diversified means of combating tanks, including airborne (antitank) weapons. Moreover [these weapons] have already achieved such qualitative and quantitative levels that this urgently demands attentive study of tendencies and consequences of their development. It is dangerous to ignore this tendency.” This line of thought persisted in various Soviet military publications. It was illustrated by military leaders ignoring conventional weapons as a means to achieve victory, and stressing massive use of nuclear weapons on a theatre level in order to achieve victory.

One of the military journals, “Voennyi Vestnik” (“Military Herald”), stated, that the warfare has indeed changed, and the planning should change too: “in order to break through enemy defenses it is necessary to first overwhelm the enemy with nuclear strikes, aviation, and artillery fire and to complete annihilation with a steadfast attack by tanks and motorised, infantry units. …Pre-emption was always crucially important, but nowadays minutes and seconds can determine the fate of battle. A small delay in destruction of a nuclear-capable missile or artillery battery [can cause] the entire intelligent purposeful combat decision to become an empty venture. Moreover, delay will cost massive losses of personnel, weapons and equipment.” As can be seen here, the dominant line of thinking was that pre-emptive strikes using nuclear weapons, if conducted swiftly and suddenly, could ensure a relatively easy victory.

In the 1980s, as the Strategic Rocket Forces were becoming the most important and one of the most staffed services in the military, the doctrine gave significantly more attention to Nuclear Weapons, among other Weapons of Mass Destruction, such as chemical or biological weapons.

In a field manual for US soldiers, called “The Soviet Army: Operations and Tactics”, which was based off various intelligence reports and unclassified information, released in 1984, attention was given to Soviet use of nuclear weapons. Every operation starts with planning and doctrines also have specific directives for specific circumstances. According to this manual, “the opening stages of Soviet offence would likely be conventional, refraining from use of nuclear strikes, a plan would definitely be in place to counter the enemy strikes with nuclear weapons and maintain fire superiority, while pre-empting the enemy. Operational plans for divisions and every

32 Voennyi Vestnik, editorial comment, January, 1982
higher level from that would have contingency plans for nuclear strikes.” While, as mentioned, it is likely that nuclear weapons would not be used in the opening stages of the attack, all available means of delivering a nuclear weapon would be surveying the action and have assigned targets, ready to unleash hell on a moment’s notice. “When the time came, decision to initiate a tactical nuclear strike would be made at the highest level of the government. The planning for the massive initial strike would be done by the Supreme High Command, as it undoubtedly would involve SRF. Any following nuclear strikes would be delegated to Soviet front, or even army levels. In deliberately planned massive operations, nuclear strikes are planned with great detail, in other, more mobile situations, such as pursuit, exploitation, and meeting engagements, some nuclear weapon systems would be kept in high readiness for any targets of opportunity.”

There is a contradiction between the editorial comment for “Voennyi Vestnik” and the field manual for US soldiers quoted above. “Voennyi Vestnik” wrote that Nuclear Weapons would be used pre-emptively to effectively win the war there and then, while the field manual for US soldiers stated that at early stages of the war, the USSR would refrain from using Nuclear Weapons, relying on conventional armament. This shows, that “Voennyi Vestnik”, a Soviet military magazine, was speculating that Nuclear Weapons could win the war during with the first strikes, if conducted swiftly and accurately enough. However, it did not go into detail about what would potentially happen, should these strikes fail to completely wipe out the enemy’s nuclear capability. The field manual “The Soviet Army: Operations and Tactics” meanwhile, states that the Soviet commanders would first take a more cautious and safer approach – use primarily conventional forces, while keeping Nuclear Weapons combat ready. Keeping in mind that “Voennyi Vestnik” was a military magazine fully available to the public, it is highly likely that this editorial comment was merely a speculation, a thought about how Nuclear Weapons could be used for tactical advantage, rather than an actual operation plan.

When it comes to targeting and delivery, the Soviet Army has ample measures to deliver the payload: intermediate-range ballistic missiles (IRBM), medium-range ballistic missiles (MRBM), stationed in Soviet Union, as well as the assets of strategic and frontal aviation, rockets, surface-to-surface missiles, ranging from 70 to 900 kilometres in active range, 203-mm

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howitzers and 240-mm mortars. As for targeting, these are considered worthy targets for nuclear strikes: enemy nuclear delivery means – air, artillery, missiles and rockets (the highest priority target); headquarters from division level on up; prepared defensive positions and installations; reserve troop concentrations; supply installations, especially nuclear ammunition storage points; communication centres. 34 Usually, one nuclear device per target, as weapon is considered highly reliable and effective. If a specific target is considered to require more than one device, coverage will be overlapping. The target lists are based on priorities, on-going missions, current tactical situation, and available nuclear weapons. 35

Once a decision to employ nuclear weapons for a sudden strike, while no war is declared, is made, two principles govern their use: surprise and mass. The initial strike will be carried out suddenly, throughout the depth of enemy’s combat deployment and in as close coordination as possible with non-nuclear strikes. Main objectives for an initial nuclear strike are: destruction of the enemy’s main combat formations and his command and control system; destruction of enemy’s nuclear weapons; isolation of the battlefield; breaching of the enemy’s main line of defence, thus defining the main axes of attack. 36 Nuclear strikes support the main attack, while non-nuclear fire support assets support secondary attacks. Instead of bypassing and avoiding enemy’s forward defences, they are targeted and destroyed. In effect, the nuclear strikes are the main offensive. These initial strikes are followed by high-speed air and ground offensive. Any subsequent nuclear strikes are to be integrated with manoeuvre and fire support plans, and employed to reinitiate a stalled offensive that has been slowed down, or encountered organised forms of resistance. Nuclear strikes also may be used to eliminate any threat of a counter attack, thus maintaining the initiative. In the case where the offensive would have to ford a river and the opposing bank is heavily defended, nuclear strikes can be used to clear the defensive fortifications. In pursuit of routing enemy, nuclear weapons would likely be employed on “choke points” when retreating enemy forces present lucrative targets. 37

34 Ibid.
37 Ibid.
As for possible defensive employment of nuclear weapons, their use is all about striking quickly, stunning the attacking forces to re-take the initiative. The USSR felt that the Warsaw Pact’s conventional military forces were at a disadvantage compared to NATO, and relied on Nuclear Weapons more in both defensive and offensive scenarios. In Soviet doctrine, defensive use of nuclear devices is designed to severely shock and awe the offensive forces, giving the defenders a chance to go forward and switch their role to offensive. Use of nuclear weapons drastically changes the correlation of forces on any theatre, and it would be without a doubt, a momentum changer if used against attacking enemy forces. Main uses and objectives for nuclear devices on defence would be: destruction of enemy nuclear delivery means; destruction of main attacking groups, thus blunting the enemy assault and breaking the attackers’ morale; counter preparations (targeting enemy before he attacks, in attempt to weaken and disorganise the attack, or foil it before it starts altogether); elimination of penetrations, acting as the last line of defence against penetrations, preventing exploitation which could lead to potentially disastrous consequences; support of the counter attacks; denial of areas to enemy using surface burst (detonating the nuclear device on the surface, or above it, but no more than maximum radius of the explosion, thus damaging the terrain and making it impassable). The radioactive fallout that results after the explosions can be used to seal off territory from the attacking forces, or to cut off slower elements of the enemy force.\(^{38}\)

In conclusion, it is clearly visible that nuclear weapons became increasingly more important throughout the years since the very invention of this ground-breaking technology. The doctrines that governed the use and application of nuclear devices were heavily influenced by the current leaders of the state. However, as Iosif Stalin died, the doctrines were being modernised, and by late Cold War nuclear weapons and Strategic Rocket Forces were among the most important in Soviet military planning.

2.1.3 Contemporary Russian Military Doctrine

On 26\(^{th}\) of December, 2014, Russian president Vladimir Putin signed Russia’s newest military doctrine.\(^{39}\) The new doctrine uses rather strong language and is significantly more aggressive

\(^{38}\) “The Soviet Army: Operations and Tactics”, Department of the Army Headquarters, Washington DC, July 16, 1984; point 16-3

\(^{39}\) “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)”, 2015
towards NATO and the US, naming NATO as the main threat and blaming the Alliance for undermining global stability and violating the balance of power in the nuclear-missile sphere. It also focused more on cooperating with BRICS (Brazil, Russia, India, China and South Africa) countries, particularly India.

As mentioned above, NATO is indicated as one of the main threats. That is very clearly illustrated in article 12 of the doctrine “The Main External Military Dangers (опасности)”. The very first sub-article, 12.a states, that among the main threats is “Increasing potential of power of the North Atlantic Treaty Organization (NATO) and it obtaining global functions, which would be realised and carried out in violation of the international law; approach of increasing military infrastructure in countries – members of NATO at the borders of Russian Federation, including further expansion of the block”. 40 Russian doctrine rather bluntly defines NATO expansions and strengthening member – states on Russian borders, as the main threat. As deployment, or buildup of international military contingents in states and territories bordering Russian Federation, as well as its allies, is listed under point 12.c, of the same article. 41 Point 12.d states that another external military threat is “the creation and deployment of strategic missile defense systems that undermine global stability and violate the balance of forces in nuclear-missile sphere, implementation of the concept of "global strike ", the intention to place weapons in space, as well as deployment of strategic non-nuclear systems, precision weapons”. 42 This article is clearly referring to NATO and the aims to establish a missile-shield in Eastern Europe, namely Poland and Romania, geographically close by to Russia.

Throughout the new doctrine, it is mentioned, that in every state of readiness – potential aggression, peace-time, or even opening states of a conflict – armed forces of Russian Federation have a task of maintaining strategic deterrence (both nuclear and non-nuclear). Nuclear Weapons are prioritised, as around 30% of the entire Russian defence budget is spent on them, with plans to increase that to roughly 50-60%. Besides, Nuclear Weapons are being modernised, new systems are being introduced as well. Also, strategic nuclear forces, together with any auxiliary units needed for their operation and use are to maintain operational readiness at all times, being

40 “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)”, 2015, point 12.a
41 “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)”, 2015, point 12.c
42 “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)”, 2015, point 12.d
prepared to deal unacceptable amounts of damage to any aggressor as soon as called upon.\textsuperscript{43} In other words, strategic nuclear forces and any units needed to ensure their full and successful operational readiness are to always be on a certain degree of readiness for action.

One other key point is the article 27 of the doctrine, which states, that “the Russian Federation reserves the right to use nuclear weapons in response to nuclear, or other kind of weapons of mass destruction being used against it and (or) her allies, as well as in the case of aggression against Russian Federation with conventional weapons, when very existence of the State is under threat. The decision to use nuclear weapons is made by the President of The Russian Federation.”\textsuperscript{44} First, this means that the new doctrine enables Russia to use nuclear weapons first, not as retaliation, carrying on the similar tone to the last doctrine, which was approved in 2010.\textsuperscript{45} Also, the decision to use nuclear devices is made by one man.

In conclusion, nuclear weapons steadily received larger and larger role throughout the years in Soviet and then Russian military doctrines. At the very beginning of the nuclear era, in late 1940s and early 1950s nuclear weapon, immensely powerful and groundbreaking as it was, was still an afterthought in Soviet doctrines. Stalin is mainly responsible for that, as his reference point on all military things and issues, his frame for that was World War II. Therefore he was reluctant to change things up and scrap the strategy that saved him and the entire USSR from the brink of extinction in World War II. However, after Stalin died in 1953, new winds could be felt in Soviet military thinking, as Khrushchev took nuclear potential much more seriously and saw it as an overwhelming force and a great asset, as Soviet scientists started to work on their own bombs heavily, even reaching the point of biggest and most powerful artificial explosion in human history. It was caused by a thermonuclear hydrogen bomb, nicknamed “Tsar Bomba”, or “Tsar of Bombs”, on 30\textsuperscript{th} of October, 1961.\textsuperscript{46} This was proof that priority had very much shifted onto Nuclear Weapons in USSR. Later in the Cold War, nuclear weapons took over, as Strategic Rocket Forces (responsible for delivering nuclear payloads using rockets and missiles), became the most popular, most well-funded and prioritised branch in the military, overtaking infantry, which for centuries had been “queen of the battle”. This sub-chapter displayed how

\begin{thebibliography}{99}
\item \textsuperscript{43} “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)”, 2015, point 32.b
\item \textsuperscript{44} “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)”, 2015, point 27
\item \textsuperscript{45} “Военная доктрина Российской Федерации (Military Doctrine of Russian Federation)” 2010, point 22
\item \textsuperscript{46} Suvorov, Viktor, “Kuz’kina Mat’. A Chronicle of Great Decade”, Moscow, 2011
\end{thebibliography}
Soviet/Russian doctrines originated and evolved up until now. And now, more than 20 years after the end of the Cold War, the nuclear weapons still play a big role, which is still being increased, in Russian military doctrine.

2.1.4 American doctrines during early Cold War period

Right after the World War II ended the tensions between the Western Allies and the USSR rose rapidly. Formerly united against Nazi Germany, both sides now saw each other as the biggest threat to their security and the peace in Europe. The Americans, at least for a while, definitely had the advantage, having strategically used nuclear devices for the very first time, to great effect, forcing Japanese Empire to surrender. Aside from that, Allies had a lot of combat tested and experienced troops in Europe, formerly aggressive and decorated units now given garrison and occupation objectives.

However, Allies were outnumbered in Europe, as the Red Army had thrown its entire force into capturing Berlin and ending the war. Allies were outnumbered roughly 4:1 in servicemen and 2:1 in tanks. British Prime Minister, Sir Winston Churchill feared that having all these combat ready and motivated men would enable Iosif Stalin to boldly advance westwards and annex the rest of Europe. Churchill saw Stalin as a power hungry, unreliable manipulator; therefore he assumed Western Europe was under threat. Thus, immediately after the World War II ended, he ordered his staff to create a plan so bold, it was named “Operation Unthinkable”. It was a plan of a joint surprise attack on USSR by Allied forces. The logic behind the plan was that status-quo favoured USSR, as they had the Allies outnumbered. Therefore, a pre-emptive strike would be launched on July 1st of 1945; first breaches and contact would be made in the Dresden area, in the middle of the Soviet lines. 47 allied divisions, out of roughly 100 divisions available to Allied headquarters (approximately 2.5 million men) would launch the surprise assault. Aside from Allied divisions, primarily American and British men, available Polish, and even 100 000 German Wehrmacht soldiers would take part in the assault. The whole operation would very much depend on surprise and ability to exploit it. Any early gains would be based on the surprise

48 Gibbons, Joel Clarke, “The Empire Strikes a Match in a World Full of Oil”, Bloomington, 2009, p. 158
factor alone, as there would be no chance to mass forces for the attack without the enemy noticing higher troop concentration. If the surprise factor would not be achieved, or it was insufficient, Allies would be drawn into another protracted total war. And the USSR would win the war of attrition. In May of 1945, the whole operation was deemed “hazardous”, as it was highly ambitious and opportunistic, and any mistake or even misfortune could have potentially catastrophic consequences for the Allies. Conclusion could be made, that planning of the “Operation Unthinkable” confirmed fears of the Allied commanders, namely fears, that if the status quo does not change, conventional forces would not be enough to force the Red Army out of Europe. The Soviet armed forces had the Allies outnumbered, were experienced, battle hardened troops, and Allies would have to rely on the surprise factor too much. Therefore, it became apparent, that if any attempt will be made to throw the Soviets out of occupied Europe, conventional forces would likely be insufficient.

During the early period of the Cold War, United States’ military was reorganised. In 1947, The National Security Act of 1947 was signed. The act was of great significance, as it basically reorganised the United States Armed Forces. Under this act, the Department of War, renamed as Department of the Army, was merged with the Department of the Navy into the National Military Establishment (NME), which was headed by the Secretary of Defence. The act also created the Department of the Air Force, thus separating Army Air Forces into its own service. Initially, all three services maintained their quasi-cabinet status; however that was changed when the act was amended in 1949, ensuring their subordination to the Secretary of Defence. The NME was also renamed to Department of Defence. The purpose of the act was to unify the Army, the Navy and the Air Force into a somewhat federated structure.50

The generals of the newly formed air force wasted no time and proposed their new doctrine, or technically, an old doctrine with a critical new twist – strategic bombing, the critical new twist being nuclear capability. The generals argued that effective strategic bombing, particularly with Nuclear Weapons, was the sole decisive element necessary to win any future war, or deter any opponent from starting one. With memories of surprise attack in Pearl Harbour still very much alive, generals felt having such extreme capabilities to conduct overwhelming strategic bombing

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50 National Security Act of 1947; July 26th, 1947, introduced by Senator John Gurney
would deter any and all potential enemies from launching a similar surprise attack. The Air Force and its supporters claimed that the implementation of this doctrine was the main, highest national priority. Therefore, the Air Force pushed the Congress to order large numbers of modern, based, strategic heavy bombers. This, naturally, required immense amounts of funding, as the Air Force generals argued for complete support and modernisation, beginning with the aircraft that was seen as the ideal option for this doctrine – B-36 Peacemaker intercontinental bomber. B-36 was an amazing aircraft, at least on paper and in its featured role – long range strategic bombing. It was capable of carrying four times the payload of B-29 (the first aircraft to drop a nuclear bomb), as well as twice the range of its predecessor. The Air Force planned that ideal operational setting for this new weapon would be deep raids into enemy territory, using the aircraft’s amazing range, and its ceiling altitude – 40 000 feet, or approximately 12,2 kilometres. For the newly formed Air Force B-36 was the perfect aircraft to conduct effective long range strategic and nuclear strikes.

The Navy, however, disagreed with this approach. Navy admirals argued that the Navy’s aircraft carrier groups impacted the outcome of the war in the Pacific. They argued that naval power and carrier aviation were absolutely essential to maintaining national defence. Navy leadership did not believe that a full-scale war could be won by strategic bombing alone, with or without the employment of nuclear weapons. The Navy also expressed moral objections to relying upon widespread destruction of major population centres of an enemy homeland using nuclear weapons in order to win the war. The Navy also pointed out that with the ships it hoped to build in the future the naval aviation would be able to continue its tactical role as close air support using newest modern aircraft, and in addition would be able to take on the role of nuclear deterrence. The Navy was planning ahead, as the new aircraft carrier, the USS United States (CVA-58) was designed to handle much bigger and heavier aircraft than its predecessors – enabling it to work with the newest and cutting edge jet powered planes. These planes were also able to carry nuclear weapons. Plans for this new carrier class had them carry at least 14 heavy bombers and enough fuel for eight bombing raids per plane. This would enable a single aircraft carrier of this class to conduct 112 nuclear strikes before needing to refuel and rearm, thus

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enabling it to carry out the nuclear deterrent mission. The admirals requested for a rather ambitious plan – building eight United States class aircraft carriers in five years.54

The keel was laid for the first carrier of the new United States class. However, the new Secretary of Defence, Louis A. Johnson cancelled the construction of United States. This new vessel was seen as a symbol and hope for Navy’s future and prosperity, and its cancellation demoralised the service greatly.55 It seemed that the Department of Defence went with the approach suggested by the Air Force, as military budget prioritised the development of new heavy bomber designs and production, accumulating a total of over 1000 combat ready long range strategic bombers capable of supporting and carrying out nuclear strikes. These planes were deployed all over the country and in bases overseas. As the Air Force part of the military budget grew, the Navy’s portion of the budget was reduced.56

This new direction was soon put to a very serious test, as on 25th of June, 1950, the Korean War broke out and U.S. was forced to fight back an invading army with the forces it had on hand.57 President Harry S. Truman and his administration wanted to avoid using nuclear weapons and beat the North Koreans back using conventional military. As immediate response to the surprise attack by the Democratic People’s Republic of Korea Truman ordered a naval blockade. However, to his shock, he found out that the Navy no longer had such capabilities, not enough combat ready capital ships were present and this order could not be followed.58 The reality was grim: because of the extensive budget and defence cuts in favour of the new Air Force and its new strategic-nuclear bomber force, on which the emphasis was so recently placed, none of the military services were able to make a rapid and robust response using conventional military strength. Shortly after the war broke out, Secretary of Defence made requests to increase the Navy’s funding. The Navy eventually got the approval for its “supercarrier” project. Louis A. Johnson, however, had lost the Navy’s trust and within three months of the conflict beginning

55 Ibid., p. 56
57 Ibid., p.62
was replaced. He was held responsible for the limited recourses the Navy had, even though it was now carrying the main burden of fighting overseas.\(^{59}\)

Meanwhile, the new focus of the military, the Air Force and its heavy bombers were struggling greatly. The highly touted B-36 had little place in the conflict. This could be attributed to two factors, which showed that strategic bombing by itself was not enough to win a war: enemy fighters and enemy airfields. Enemy fighters that B-36 and other bombers faced in Korea were USSR made MiG-15s. These jet powered fighters were purpose built as interceptors capable of bringing down American heavy bombers. At the end of World War II, an American B-29 was forced to land in Soviet territory and the plane was taken by the Soviets. They analysed it to bits and came up with a response to future variants of the B-29. That answer was MiG-15 and it was more than capable of dealing with the new heavy bombers. Armed with a 37 mm cannon and two 23 mm cannons it had enough hitting power to destroy the heavy aircraft. It also had a higher ceiling altitude than B-36 – 50 000 feet, or ~15 kilometres, which enabled the faster MiGs to attack from above as well as from below.\(^{60}\) The second factor was the airfields in North Korea, which MiGs used as bases. They were not under constant pressure and surveillance like German airfields during World War II, and Americans did not have total air superiority. This enabled MiGs to be able to patrol daily without constant pressure. All these factors reduced B-36, who was found to be unreliable in combat situations, prone to mechanical failures and fires, to night operations. Most of the missions it flew during the Korean War were reconnaissance, instead of strategic bombing.\(^{61}\)

The strategic bombing doctrine looked good in theory, but the thinking behind it was heavily related to World War II, where Allies had overwhelming air superiority in the second half of the war in pretty much every theatre. This enabled their bomber corps to work relatively unhindered and the casualties were still high on average when compared with other services. In Korea, the weaknesses of this doctrine were shown, the situation had changed and the conditions were very much different from what the Air Force command had expected. If nuclear weapons are not used and war is fought using conventional weaponry, strategic bombing will not win a war. During

\(^{60}\) "Mikoyan-Gurevich MiG-15 (JI-2) Fagot B", Smithsonian National Air and Space Museum. Found: http://airandspace.si.edu/collections/artifact.cfm?id=A19860066000  
and after the Korean War, United States Navy with its most modern carriers and nuclear submarines was clearly still the primary means of projecting the force and enforcing U.S. foreign policy.

### 2.1.5 American doctrines during mid – late Cold War

After the US Navy settled as the primary branch of the US armed forces, military doctrines took a passenger’s seat to political doctrines, as the main difference makes in the Cold War. When Harry Truman was elected President, he chose to use containment doctrine to stop the spread of communism. After British gave up on “Operation Unthinkable” as being too risky and hazardous, no other significant operation was being planned. It became apparent, that without Nuclear Weapons, attack against the Red Army in Europe would prove disastrous and costly. Instead, under the doctrine of containment, the US used proxy wars in Asia and Africa in order to diminish the Soviet influence, as well as funding resistance fighters in countries where communists were in charge. The goal was to contain communism without having to use Nuclear Weapons.62

A new doctrine – Mutually Assured Destruction (MAD) came into full effect in 1962. By then, both the US and the USSR had developed the capability of launching missiles with nuclear warheads from their submarines. This completed the third leg of the “nuclear triad”. This meant that both the US and the USSR now were capable of delivering nuclear payloads by three different and separate means – silo, or ground based Intercontinental Ballistic Missiles, strategic bombers, and submarine-launch ballistic missiles. Such development, a three-branched nuclear capability, eliminated the possibility that the enemy would be able to destroy all of the nuclear forces in a surprise attack. Therefore, a devastating retaliation became inescapable. Under MAD, a swift victory, with the help of Nuclear Weapons and no losses, became impossible.63

This daunting doctrine was one of the main factors in creating a new organization in the U.S. – Strategic Defence Initiative, or SDI. It was introduced by President Ronald Reagan on 23rd of March, 1983.64 It was a dramatic switch from a previous offensive doctrine of Mutually Assured

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Destruction (MAD), as SDI was largely a defensive project. That is what it was at that time – a Research and Development project. It was imagined to act as a shield from incoming ballistic missiles carrying nuclear weapons, using satellites in space to first detect the missile, and then destroy it. Because of this seemingly sci-fi fuelled idea, the public media shortly dubbed the initiative as “Star Wars Project”. This new twist was a significant one indeed – the USSR felt threatened and was unsure about how to deal with this new doctrine of the Americans. Before, when both superpowers followed MAD doctrine, tensions were somewhat frozen, as both parties of the conflict knew exactly what would happen should one of them choose to strike. SDI was criticised for changing the MAD doctrine. Because of SDI, attacker would potentially face a significantly smaller retaliating blow, and therefore would be encouraged to unleash the first strike. Proponents of the SDI argued that MAD covered only full scale international exchanges between super-powers, potential Armageddon, in other words – rational, intentional, non-suicidal opponent with similar values. SDI, meanwhile, covers and takes into account accidental launches, limited launches, launches by non-state elements, or even rogue launches.

Soviet response to SDI initially was mixed, as they saw it as a threat, as well as an opportunity to weaken NATO. SDI was not only seen as a threat to the physical security of the Soviet Union, but also an attempt by the United States to seize the strategic initiative in the arms race and arms control, neutralizing the all-important military component of the Soviet strategy. Some of Kremlin’s politicians expressed their concerns that a missile defence system with some components of the system based in space, would inevitably lead to a nuclear war.65

SDI had numerous programmes in place: ground-based, space-based, sensor, even direct energy weapons. It was designed and planned for a sophisticated attack by a sophisticated enemy, such as the U.S.S.R., an attacker that would have sufficient recourses and expertise to use decoys, shielding, warhead manoeuvring, suppressing defences, and any other countermeasures available to him. The main countermeasure, of course, being increased number of ICBMs, the SDI had to account for that as well. The Initiative also had to be relatively affordable, because if it would be significantly more expensive than just adding more nuclear warheads to one’s arsenal, an enemy

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of similar economic power could just out produce the defender and overpower him with sheer volume of rockets.\textsuperscript{66}

When Strategic Defence Initiative was launched it marked a change in strategy and doctrine for the U.S. SDI was a path from Mutually Assured Destruction, recognizing the threat of an accidental, or in other circumstances non-intentional launch. It also played a part in the downfall of the Soviet Union, as it forced the already strained Soviet economy to invest more into arms and strategic weapons. While SDI was criticised for not being able to account for strategic bombers, cruise missiles, or any other weapon delivery systems that did not launch the payload through space, it was never designed for that. Its main goal was to prevent, and if necessary, to protect from a potential deliberate outbreak of a nuclear war.

Argument could be made, that SDI, while covering North America, left Western Europe vulnerable. However, the US, even after switching its focus on SDI, still had huge stockpiles of Nuclear Warheads, and if Europe was attacked, nuclear retaliation would surely be swift. Therefore, the European theatre, while not covered by SDI, was protected by sizeable conventional forces and MAD. After the collapse of the Soviet Union in 1991, the greatest threat to United States was gone and SDI was no longer essential and necessary. Therefore, Strategic Defence Initiative was in effect dissolved, when its name was changed by Clinton administration in 1993. It was renamed to Ballistic Missile Defence Organisation. For all the criticism that was piled on SDI, it gave the United States a significant advantage in the field of ICBM defence, as plenty knowledge from extensive research and testing had been accumulated from SDI.\textsuperscript{67}

It is visible that focus of the United States’ military doctrines shifted several times during the Cold War – to military aviation, then to Navy, and in the latter stages – to ICBM defence as opposed to Mutually Assured Destruction. The switches were made caused by need – a powerful Navy proved necessary to enforce policies and help allies overseas in Korea, and, if needed, in Europe. SDI forced the Soviet Union to improve their ICBMs and build more of them, putting even more strain on the already encumbered economy. These switches in military focus helped US and NATO eventually win the Cold War.

\textsuperscript{66} Berger, Marilyn “Paul Nitze, Cold War Weapons Expert”

\textsuperscript{67} Abrahamson, James A., Henry F. Cooper “What Did We Get For Our $30-Billion Investment In SDI/BMD?” September, 1993
2.2 ICBM Defence

Ever since the “Star Wars Project”, as Strategic Defence Initiative was called, ended, public interest in ICBM defence installations, initiatives and organisations dipped significantly. Most contemporary ICBM defence systems are not as futuristic, or ultra-complicated as SDI with its projected orbital lasers and mirrors. They all follow mostly the same principle – hitting a ballistic rocket with another, smaller rocket, thus destroying it and its payload before it reaches its target and detonates. Typically there are three types of missile defence categories – strategic, theatre and tactical. Tactical cover short ranged ballistic missiles, theatre is designed for covering a theatre of action, or localized region for military actions. It is also used in protecting designed regions, like specific cities. Strategic missile defence is designed to protect from long range Intercontinental Ballistic Missiles that travel through the orbit to reach its target and almost exclusively carries a WMD for payload. This chapter will focus on Strategic missile defence and ICBMs.

The main and only objective of any missile defence system is to intercept the missile before it reaches its target. For ICBM defence, the missile can be intercepted in one of its three stages of flight – boost phase, mid-course phase and terminal phase. Boost phase is the very first phase of the flight; the missile’s rocket motors are still firing and it usually is still above the launch territory. Pros of attempting to intercept the missile in this phase are that the missile is easier to target because its exhaust is very bright and hot, making detection easier; at this stage the missile is still full of extremely flammable propellant, which makes it highly vulnerable to explosions, and finally – missile cannot use any decoys during boos phase. Disadvantages of such strategy are few, but significant – geographical positioning of the interceptors is difficult, as they need to be close enough to intercept the missile during boost phase, might be impossible without regular and frequent reconnaissance flights over hostile territory. The second disadvantage is that the interceptor (usually a missile) must have great amounts of speed, rapid launch sequence and extreme acceleration, because the window of interception is maximum 300 seconds, but could be less than 180 seconds.

Interception during the mid-course phase targets the missile in space after the rocket engines burn out. The entire process of interception would take place in space. The advantages of such approach are that there is significantly more time to make a decision and launch the interceptor,
as the period during which the missile is in space, or its coast period, is several minutes, and up to 20 minutes for ICBMs. Also, defensive system that focuses on intercepting missiles during mid-course phase can deploy geographically very large defensive coverage, potentially shielding an entire continent. However, there are drawbacks – this approach requires large and heavy anti-ballistic missiles for interception and sophisticated, powerful radars, which often have to be augmented by sensors based in space as well. Also, a modern, sophisticated ICBM will be carrying decoys to defeat interceptors during mid-course phase therefore the interceptor must be capable of dealing with space-based decoys.

Lastly, interception when missile enters terminal phase would intercept the missile when it re-enters the atmosphere and is bearing on approach to its target. This tactic requires a lighter and smaller intercepting missile than mid-course phase variant and ICBM is unable to use balloon decoys during re-entry phase. The radar also can be less sophisticated and does not require space-based sensors. That said, this approach is very risky, as the window of interception is extremely short – possibly even less than 30 seconds, defence system can only cover a significantly smaller area and even after successful interception, target area can be blanketed with hazardous materials, in case of detonation during the actual interception.68

Most defence systems focus on intercepting incoming missiles during the mid-course phase, as it appears to be the most balanced and safe option, giving more time to make a decision and take action. Also, if detonation occurs during interception, it happens in space, minimising the damage to area below.

Intercepting a missile traveling at speeds of several miles per second is no simple task. Attempting to intercept a ballistic missile with a “kinetic kill vehicle”, or a rocket, which aims to actually hit the missile in mid-air can be compared to hitting an oncoming bullet with another bullet. Almost all defence systems use anti-ballistic missiles, or ABMs that are either purpose built for that very cause, or are converted SAMs (Surface to Air Missiles).

2.2.1. NATO Missile Defence

It was in 2004, during the Istanbul Summit that leaders of the Allied NATO countries came to a conclusion that work must be taken forward on the new theatre missile defence system, as soon as possible. Further reasoning for this, among any other, according to NATO website: “Proliferation of ballistic missiles poses an increasing threat to Allied populations, territory and deployed forces. Over 30 countries have, or are acquiring, ballistic missile technology that could eventually be used to carry not just conventional warheads, but also weapons of mass destruction. The proliferation of these capabilities does not necessarily mean there is an immediate intent to attack NATO, but it does mean that the Alliance has a responsibility to take this into account as part of its core task of collective defence.”

NATO commanders are worried about proliferation of missiles and their technological advances that enable missiles to be launched quicker and easier.

Prior to the actual initiative, two studies were launched in 2001-2002 to determine if missile defence would actually be feasible and possible. Results were positive – the study concluded that missile defence was technically feasible and it provided a technical basis for on-going political and military discussions regarding the desirability of a NATO missile defence system.

The work is still very much in progress since formal NATO Ballistic Missile Defence (BMD) was formally established in September 2005 as the Active Layered Theatre Ballistic Defence (ALTBMD) Programme, for the protection of the deployed forces. The purpose and aim of ALTBMD is protection of deployed NATO forces from short- and medium-range ballistic missile threats. This means missiles with ranges up to 3000 kilometres. In order to manage risks associated with such a complex system, ALTMBD is being fielded in several phases. Eventually ALTBMD will merge with the capabilities of territorial BMD, which are being developed in parallel. Once it is completed and merged, the capability will consist of a whole system of systems – low- and high-altitude defences (also called lower- and upper-layer defences), including battle management capabilities, communications, command and control and

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70 Mettler, Simon A; Reiter, Dan "Ballistic Missiles and International Conflict", Journal of Conflict Resolution 57: 854-880, October, 2013
71 Ballistic Missile Defence Programme, NCI, found: https://bmd.ncia.nato.int/Pages/default.aspx
intelligence modules (BMC3I), sensors, and of course, various interceptors. NATO countries will contribute and provide the sensors and the weapons systems, while NATO will further develop the BMC3I, or the battle management, command and control and intelligence segment of the capability, as well as the integration of all these components into a coherent and effective system.72

The ALTBMD programme itself was launched in 2005 and is currently managed by the NATO Communications and Information Agency, or NCIA and its BMD Programme Office. The initial activities mainly were focused on system engineering and integration work, as well as development of an integration test bed hosted at the NCIA facilities in The Hague, the Netherlands. The aforementioned integration test bed is essential to validate development work. In early 2010, the first operational ALTBMD capability was launched, it was called Interim Capability. During 2012 Chicago Summit, Allied commanders declared Interim Capability operational, a significant first step, offering maximum coverage with available means, mainly in Southern Europe. Interim Capability means that basic command and control capabilities have been tested and installed at NATO Headquarters Allied Air Command in Ramstein, Germany. Meanwhile, NATO Allies provide sensors and interceptors to connect to the system. It also means that U.S. Navy ships with anti-missile capabilities in the Mediterranean Sea and a Turkey-based radar system have been put under NATO command in the German base.73 NATO Secretary General Anders Fogh Rasmussen said: “Our system will link together missile defence assets from different Allies – satellites, ships, radars and interceptors – under NATO command and control. It will allow us to defend against threats from outside the Euro-Atlantic area.”74 This means that a significant first step in creating an operational ALTBMD has been made and the very foundation of it has been put in place. The next phase will take place in 2016-2017 timeframe, when the next, updated and improved version will be delivered. After that is completed, ALTBMD will be merged with the territorial BMD efforts and a significant step towards completion will be made.

74 “NATO Declares Missile Defence System Operational”. www.missilethreat.com; a project of the Claremont Institute. 20 May 2012
The aforementioned territorial BMD efforts and capabilities are various components of a not yet finished ALTBMD system. Some of them were operational and working before the Interim Capability was declared operational, but only after that they were connected into one somewhat coherent system. Most of the territorial BMD capabilities, however, are still in the works; some are still only existent on paper. Since Interim Capability so far covers mostly Southern Europe, most of the projected territorial BMD capabilities will be responsible for Eastern and South Eastern Europe. These include Turkey, which announced in autumn 2011 its decision to host US-owned and US-operated BMD radar at Kürecik. Romania and the United States agreed in the same year to base Aegis Ashore (BMD system consisting of several radars and a battery of interceptor rockets) capabilities at Deveselu airbase in Romania, in 2015 timeframe. Similar basing agreement between United States and Poland was announced in 2011 as well. Agreement would have the Polish host same Aegis Ashore capabilities as the Romanians, at the Redzikowo military base. Timeframe for this project is 2018. In the same 2011 U.S. agreed with Spain to base four Aegis missile defence ships in Rota, Spain. All these assets are national contributions, as well as being integral parts of the NATO BMD capability.\(^75\)

Several other members of the Alliance currently offer their ground-based air and missile defence systems, like anti-air and anti-missile SAM systems Patriot, or SAMP/T, as well as complementary ships for anti-air defence role. Other countries, meanwhile, are developing or acquiring BMD assets, like radars, or SAM batteries, that could eventually be made available to and make it into the NATO BMD capability. For example, the Netherlands in 2011 and Denmark in 2014 announced their plans to contribute to NATO BMD with military vessels. Dutch announced their intentions to upgrade their four anti-air frigates with long-range missile defence early-warning radars, and Denmark announced their plans of acquiring a frigate-based radar system to enhance NATO BMD.\(^76\)

In total there will be four phases of development until ALTBMD is fully operational:

Phase One (2011 timeframe) already addressed the short- and medium-range ballistic missile threat by deploying most current and proven missile defence systems. It called for the

\(^75\) Ballistic Missile Defence, North Atlantic Treaty Organization, found: http://www.nato.int/cps/en/natolive/topics_49635.htm

\(^76\) Ibid.
deployment of Aegis Ballistic Missile Defence-capable ships, equipped with proven SM-3 Block IA interceptors. The aforementioned radar in Turkey is also a part of Phase One, as it requires deployment of land-based early-warning radar.

Phase Two (2015 timeframe) will expand the already addressed threat of short- and medium-range missiles by fielding land-based SM-3 (part of Aegis Ashore system) missile defence interceptor site in Romania and upgrading several batteries with the more capable SM-3. The BMD battery in Romania, as mentioned above, will be built, maintained, and operated by United States.

Phase Three (2018 timeframe) will improve coverage against medium- and intermediate-range missiles with the addition of another Aegis Ashore BMD system in Poland as well as a more advanced SM-3 interceptor rocket as a part of it.

Phase Four (2020 timeframe) will enhance abilities to counter medium- and intermediate-range missiles, as well as potential ICBM threats to the United States and the Middle East through further development and deployment of SM-3 ballistic missile interceptor batteries. Each phase will include upgrades to the BMD command and control system, optimising and modernising it.77

These examples just serve to prove how common, unified and joint this project really is. Every member state is trying to contribute to NATO BMD capability as much as they can. Of course, capabilities of states differ greatly, and so do their contributions. However, it is the commitment that is crucial and essential in a joint grandiose project as this. Since the capabilities used in ALTBMD are national contributions, weaknesses might surface. Some members simply might not be able to field as much, or as expensive equipment as others. In any defensive system, asymmetry is dangerous. If an enemy finds out about any weaknesses, and in a project as grandiose as this it is entirely possible, then the potential attack will be targeted precisely at that weak point. Nevertheless, the project is not complete yet, and won’t be completed for at least five years. So far NATO members show that they care about their safety and are willing to work

77 "Fact Sheet: Implementing Missile Defense in Europe". Office of the Press Secretary. The White House. 15 September 2011
together to achieve a fully operational and impregnable ALTBMD shield under which their deployed troops, as well as civilian populations could feel safe.

2.2.2. The Impact and the Reactions

Decision to have a joint ballistic missile defence capability, the ALTBMD, was a big step for NATO. The fact that the Alliance is actually coming through and have already fielded the Interim Capability back in 2012, serves as a firm reassurance for the members of the Alliance as well as a signal of unity and strength for any potential opponents. One of the non-member states that had voiced its opinions very firmly and loudly was Russian Federation.

NATO leaders have repeatedly and consistently stated that ALTBMD was not targeted against Russia, and even invited Russia to co-operate in its installation and creation. That, however, was not meant to be, as Russian leaders maintained that they will oppose NATO’s BMD deployment and development, even including retaliatory measures if their concerns are ignored and not heard. Then-President of Russian Federation Dmitry Medvedev, in 2011, even threatened to deploy offensive weapons in Southern and Western parts of Russia.\(^78\)

Among these weapons he mentioned the short-range missile complex Iskander (full designation 9K720 Iskander, NATO reporting name SS-26 Stone). Iskander is a descendant and a replacement for the infamous SCUD missile complex. Iskander is a tactical missile system designed to be used in theatre level conflicts and use conventional warheads for engaging small and area targets, which can be both mobile and stationary. Possible and preferred targets include: hostile fire weapons, air and antimissile defence weapons, command posts and communications nodes and troops in concentration areas, among others. The system can therefore destroy both active military units and targets to degrade the enemy's capability to wage war. It is a highly mobile system, consisting only of one special purpose truck which serves as a carrier and launch pad for the missile. It can carry a number of different warheads, including nuclear payload.\(^79\) The most recent version of the system, the Iskander-M is equipped with two solid-propellant single-stage guided missiles. Each one is controlled through its entire flight path and is fitted with an

\(^78\) Cirlig, Carmen Cristina, "Russian reactions to NATO missile defence", Library Briefing, Library of the European Parliament, 2012

\(^79\) “РАКЕТНЫЙ КОМПЛЕКС "ИСКАНДЕР" (Rocket Complex "Iskander"), found: http://dokwar.ru/publ/vooruzhenie/pvo_i_rvsn/raketnyj_kompleks_quot_iskander_quot/16-1-0-82
inseparable warhead. Each missile in the launch carrier can be independently targeted in a matter of seconds. This versatility and mobility of the Iskander launch platform makes launches extremely difficult to prevent. Iskander-M has an operational range of 500 kilometres and hits no further than 5 – 7 metres from the original target, as well as carrying a warhead of 710 – 800 kilograms. The missiles can be re-targeted during the flight, thus enabling them to hit mobile targets.\textsuperscript{80} As mentioned, Iskander-M can fit various warheads, including cluster munitions warhead, a fuel-air explosive enhanced-blast warhead, a high explosive-fragmentation warhead, an earth penetrator for bunker busting purposes, as well as an electro-magnetic pulse device for anti-radar missions. Its nuclear payload is 50 kilotons. The missile never leaves the atmosphere, hence the flat trajectory. Also, in the terminal phase of the flight, the missile performs evasive manoeuvres and launches decoys to defeat interceptors and penetrate defences. During the actual flight it can manoeuvre at different altitudes and trajectories, as well as turning at up to 20 to 30 G to evade anti-ballistic missiles. The missile is controlled in all phases of the flight.\textsuperscript{81}

Deployed to Kaliningrad, the Western exclave of Russia, Iskanders could be a real headache and a potential danger. Their missiles fired from Kaliningrad could reach all of Eastern European countries and possibly – Berlin. Even though it has not been confirmed that Iskanders will be deployed to Kaliningrad, threats have been made. According to one discharged Russian general, Iskanders were to be deployed in every defence district in Russia, but not Kaliningrad. Reportedly, Iskanders have been deployed to Western Military District, which covers Western-most part of Russia, including Kaliningrad. According to numerous reports in various media sites, Iskanders have been deployed in Kaliningrad after all.\textsuperscript{82,83}

Russian concerns are mainly fuelled by the fact that Russian leaders see a clear link between strategic offensive and defensive forces. Therefore, for them, it seems that NATO’s BMD is an attempt to alter the strategic balance by undermining Russia’s strategic deterrent. By doing so, NATO is fostering a new arms race. The United States is accused of using NATO’s BMD to

\textsuperscript{80} 9K720 Iskander-M (SS-26 Stone) – Program; Globalsecurity.org, found: http://www.globalsecurity.org/wmd/world/russia/ss-26-program.htm
\textsuperscript{81} Kedrov, Ilya “Асимметричный запуск “Искандера”” (Asymmetrical launch of the “Iskander”), “Военно-промышленный курьер” (“Military-Industrial Courier”)
\textsuperscript{82} Marcin Goettig, “Poland and U.S. Army hold joint air defence exercises near Warsaw”, Reuters, found: http://uk.reuters.com/article/2015/03/21/uk-poland-usa-missiles-idUKKBN0MH0N620150321
\textsuperscript{83} Igor Konashenkov, “Russia Confirms Tactical Missile Deployment on NATO Borders”, Sputniknews, found: http://sputniknews.com/military/20131216/185614387.html
acquire a dominant position and impunity in world affairs, by helping and manipulating other NATO member states. Russia is particularly worried about the final phases of ALTBMD deployment, when most modern Aegis Ashore systems, together with their advanced SM-3 interceptor missiles would be deployed more widely. These interceptors could seemingly annihilate any Russian ICBMs and destroy ballistic missiles in every stage of flight. Russia also fears potential offensive capabilities of these primarily defensive weapons. The fact that elements of the BMD will be positioned relatively close to Russian borders is also worrying. This positioning threatens Russian strategic arsenal. Also, the relative open-endedness of ALTBMD plan is also worrying Russian leaders.²⁴

### 2.3 Conclusions of the Chapter

When United States and Soviet Union, as well as few other NATO members (France, United Kingdom) were capable of fielding numerous nuclear weapons, they quickly seized main priority in each country’s military doctrine. Even though American doctrine remained focused on the Navy after briefly switching to the Air Force, it was mainly because of new generation aircraft carrier vessels, capable of carrying jet-powered planes that were capable of carrying nuclear weapons. For Soviets, meanwhile, it took until Stalin’s death in 1953 for nuclear weapons to gain significant traction among military leaders. With time, Soviet doctrine focused more and more on Strategic Rocket Forces, and SRF even overtook infantry and armoured units as the most prestigious and prioritized military service branch. Both Soviet and American stockpiles of nuclear weapons grew and grew, as the arms race went on and on. This lead to a stalemate, a situation in which faith of the entire planet depended on Mutually Assured Destruction. Then, United States sought to change this grim reality and started working on the Strategic Defence Initiative, as an effective means to counter and defeat an attack of ICBMs carrying nuclear warheads. This forced Soviet Union to further improve their ICBMs in both quality and quantity, further hamstringing its economy. After the Cold War ended, and the U.S.S.R. crumbled, Russian Federation maintained nuclear weapons will be used as a deterrent. However, several last doctrines showed that circumstances in which a nuclear weapon can be used were being

widened in almost every new doctrine. Main use for nuclear weapons of both countries after the Cold War ended, however, is that of a deterrent.

When NATO announced the project of a joint Ballistic Missile Defence capability and started taking steps to completing it, Russia reacted and felt threatened. Therefore, they have made threats that countries hosting elements of the new NATO BMD will become main targets in case of an offence. Russian leaders also threatened several times to move strategic and tactical rocket systems and bombers to Western parts of the country, including Kaliningrad, which is nestled right next to Baltic countries and Poland. Rockets fired from there could reach any capital in Eastern Europe, as well as Berlin. Completing the Active Layered Theatre Ballistic Defence, or ALTBMD, as this joint effort has been called, is a priority for NATO. Completing it would prove that the Alliance is unified, that it stands together in the face of adversity and that every member is valued. Even though it raised quite a few threats from Russia, NATO Allies chose short term danger in order to achieve long term security. It is worth mentioning, that European security will be nigh impossible to achieve without cooperative Russia, and since the end of the Cold War Russian position in the architecture of the European security remains unresolved.
3. TACTICAL APPLICATION

Tactical nuclear weapons (TNW), also known as non-strategic nuclear weapons, have always seemed to be an afterthought among other types of weapons of mass destruction. Tactical nuclear weapons are purpose built to be used on a smaller scale, to assist in achieving victory in battle. They are significantly smaller and can have many different forms: gravity bombs, short-range missiles, artillery shells, land mines, depth charges, and even torpedoes. Various variants have been developed, making devices small, two-man or truck portable, developing nuclear SAM missiles, etc. There is no precise definition for range, or yield (the amount of energy discharged during detonation, measured in kilotons or megatons). The yield of TNWs is generally lower than that of its strategic counterpart; the larger TNWs can still be extremely powerful, with some modern warheads suited for both roles. Modern tactical nuclear warheads have yield up to tens of kilotons, or potentially even up to hundreds. These numbers make them several times more powerful than nuclear bombs dropped on Hiroshima and Nagasaki. These developments make TNWs particularly flexible – they are relatively light, can be transported more easily enough without causing suspicion (i.e. in a regular truck). Combined with the fact, that these weapons have yield big enough to level entire cities, it becomes a legitimate problem for European security.

This chapter will take a deeper look into hybrid warfare (explained below) and how it was applied in Crimea and Donbass, as well as how it could potentially be dangerous for NATO. Hybrid war conditions could even be favourable for unconventional and unorthodox uses of Tactical Nuclear Weapons. These possibilities will also be analysed in this chapter.

3.1 Hybrid Warfare

Hybrid warfare is a military strategy, which blends together elements conventional warfare, irregular warfare and cyber warfare. This strategy also uses attacks by nuclear, chemical, or biological weapons, improvised explosive devices and information warfare. Hybrid warfare is a very complex, potent approach to warfare, combining elements from a lot of different doctrines and strategies. By combining lethal (also known as “kinetic”) military operations and subversive

efforts, like propaganda, cyber-attacks, informational warfare and guerrilla tactics, the aggressor’s goal often times is to avoid retribution, or attribution all together. United States Marine Corps (USMC) Lieutenant Colonel Bill Nemeth defined hybrid warfare as “the contemporary form of guerrilla warfare, which employs both modern technology and modern mobilization methods.”

The term “Hybrid Warfare” was made famous by events in Crimea and Ukraine, but it was not the first use of hybrid warfare. Russian researcher, Vladimir Voronov claimed that the very concept of “hybrid war” was if not invented, then definitely employed by the Soviet Union in 1920s and 1930s. According to him, hybrid warfare tactics were used in military operations and other activity in Poland, the Chinese Eastern Railway and Korea. While war in Donbass and annexation of the Crimean peninsula are the most famous cases that popularized the term, these cases are not the only uses of hybrid warfare in recent memory.

Another successful case of hybrid warfare was the 2006 Lebanon War. Hezbollah reportedly used hybrid warfare tactics to repel the Israeli Defence Force (IDF). During the war, Hezbollah managed to fight the IDF to a standstill, by constantly engaging the enemy either from concealed and fixed positions and underground tunnel complexes (emulating the highly successful use of tunnels by the Viet Cong during the Vietnam War), or by conventional and traditional infantry combat manoeuvres in Lebanese villages. The outcome was that the IDF, viewed as a heavy favourite, failed to capture a single village on the Israeli – Lebanese border during the two weeks of fighting. Greatest strengths of the Israeli military, namely, modern and capable armoured corps and air force were effectively nullified by Hezbollah’s tactics – focusing on taking away the strengths of the enemy as much as possible. Against internationally renowned IDF’s Mark III and Mark IV Merkava Main Battle Tanks (MBT) Hezbollah used modern Russian made Anti – Tank Guided Missiles (ATGM) and Rocket Propelled Grenades (RPG). Reportedly, Hezbollah had access to advanced weapon systems, among which were Russian made RPG-29 “Vampir”,

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87 “Hybrid vs. Compound War”, Armed Forces Journal, 2009
88 Goble, Paul “Stalin Invented Hybrid War, Not Vladimir Putin, Archival Record Shows”, the Interpreted Magazine, 2014
AT-5 “Konkurs”, AT-13 “Metis-M” and even laser-guided AT-14 “Kornet” HEAT (High Explosive Anti-Tank) missiles.\(^8^9\)

With an anti-tank arsenal like this, even then brand new Mark IV Merkavas were in dangerous. Knowing, that IDF chooses quality over quantity in their armour, every tank that was taken out of action was a step forward. At one point Hezbollah even used a C-802 anti-shipping cruise missile to severely damage Israeli Navy corvette INS “Hanit”, killing four sailors on board.

All this effort was combined with successful efforts in hacking into Israeli communications and Israeli soldiers’ mobile phones to retrieve first-hand knowledge about enemy troop movements, communications, casualties, and general mood among enemy troops.

By using this combined approach, Hezbollah managed to mount a surprisingly effective defence and fight the IDF down to a stalemate and in result – end the war with what could be called a marginal victory for Hezbollah.

The most dangerous part of Hybrid Warfare is that TNWs can be used with it. It is the perfect approach for use of Tactical Nuclear Weapons – chaos and disorder caused by successful Hybrid Warfare campaign can cover up the preparations to use a TNW. It also lowers the nuclear threshold – with Hybrid Warfare and Tactical Nuclear Weapons, every conflict can turn nuclear and risk to escalate to an all-out nuclear war.

3.1.1 Hybrid Warfare in Crimea and Donbass

After Euromaidan revolution ousted pro-Russian Ukrainian President Viktor Yanukovich, several military and political scholars and experts voiced their opinions, that Crimean peninsula might be in danger. Because of its unique demography, geographical positioning and relations with Russia (Russian Navy Black sea fleet was stationed in Crimea), it was viewed as a jewel of the Black sea, that Russia would seek to acquire should an opportunity present itself. The opportunity did present itself when the violent change of government occurred in Ukraine.

Russia heavily supported separatist political factions in Crimea, so when Yanukovich was ousted and interim government was put in place this sparked a political crisis in Crimea. It initially

manifested as demonstrations against the interim government, but rapidly escalated due to the aforementioned Russian support to certain factions. Not long after, one of the Crimean cities, Sevastopol city council had already set up “self-defence units”. The situation, however, escalated further at a rapid pace, as the first “little green men” appeared.90 “Little green men” (зелёные человечки in Russian) – this name was given to armed men in camouflage uniforms, not wearing any markings or insignia. They were carrying Russian made weapons and hid their faces under masks. These men focused on capturing key buildings in Crimean cities, mainly Sevastopol and Simferopol, such as Crimean parliament building, various communication buildings, Ukrainian military forces’ bases, etc. They also wasted no time in setting check points at crucial points as well. They surrounded the Crimean parliament building and erected barricades around it while it held a special session, after which it was decided to claim independence for Crimea. After that, a referendum was held and people of Crimea allegedly chose to join Russian Federation. The “little green men” were believed to be Russian Spetsnaz (Special Forces) or VDV (Russian airborne ranger troops, paratroopers) soldiers. They took over all of the military bases from Ukrainian soldiers without any significant resistance. Allegedly, quite a few officers of the Ukrainian military forces defected to Russian military when they had the chance.

It all seems rather simple at first glance, but it was a very complex situation, and a lot of planning went into it. Circumstances had to be just right and the execution had to be flawless – Ukrainian soldiers had to mount no resistance and quietly lay down their weapons; propaganda and information campaign had to swing public opinion in Crimea into the favour of separatist factions at least for the time being. One of the key elements was swiftness of the entire operation. If “little green men” had to fight for every Ukrainian held military base in Crimea it is highly doubtful if the operation would have been a success.

This showcases one of the essential components in this whole process, which served as a fulcrum of success for Russia – inactivity of Ukrainian interim government and military. Most Ukrainian soldiers, after being escorted out of their own military bases, leaving their arms and equipment behind, stated that the reason why they did not resist was a lack of orders from the military.

90 Babiak, Mat “Is Russia Opening a ‘Crimea Front’?”, Ukrainian Policy, the magazine of independent Ukrainian politics, 2014
command. Allegedly these men received no orders as to how to deal with this new threat. Another fact that must be taken into account is that there were widespread defections from Ukrainian side. Numerous officers switched allegations even before the complete annexation. Highest ranking of the defectors was a former Ukrainian Navy commander, Rear Admiral Denys Berezovski. He defected to Russian side before the annexation. After the annexation, however, many more switched sides. In a press conference, Oleksandr Rozmaznin, deputy chief of the Ukrainian armed forces’ general staff said: "We know the names of almost all the commanders who have signed a contract with the Russian Federation. I won't tell you their names as they don't deserve being mentioned, but they represent around 50 percent."\(^{91}\) This just serves to display that staggering numbers – around a half – of all Ukrainian officers in Crimea defected.

A lack of orders only made the defection easier for them and regular soldiers were confused and scared to fight back, often abandoned by their officers. The fact that Ukrainian and Russian soldiers were close; there were numerous acts of camaraderie between them. Black Sea fleet of the Russian Navy was stationed in Crimea, in Sevastopol, as well as naval infantry and paratrooper units. Up until the crisis started, Ukrainian and Russian soldiers saw each other as comrades. Once the crisis began, however, numerous Ukrainian soldiers later stated, that their Russian counterparts and their behaviour, as they suddenly became hostile and aggressive.

However, no self-respecting army would ever lay down their weapons and abandon their bases unless such orders are given directly. It is highly surprising, that when some unknown armed men, wearing no ranks, no insignia, and no identification marks, arrived at the gates of Ukrainian bases and ordered them out, they complied. On its own, this fact is puzzling; however Ukrainian soldiers were demoralized by defections, lack of orders and display of strength from their government, and to a degree – betrayal from their Russian counterparts. Therefore, low morale was to blame, only helped by the fact that they were ordered out of Crimea by their commanders.\(^{92}\)

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\(^{91}\) Marcus, Jonathan “Ukrainian forces withdraw from Crimea”, BBC, 2014

\(^{92}\) Vasovic, Aleksandar “Acknowledging defeat, Ukraine pulls troops from Crimea”, Reuters, 2014
Donbass, however is a slightly different story. Russian Federation officially is not at war in Ukraine and claims that the neighbouring country is in a state of civil war. Only Russian volunteers and “vacationing” soldiers are in Ukraine. In reality, though, there is little doubt that President of the Russian Federation Vladimir Putin is pulling the strings of the so called rebels in Donbass.

Putin indeed has a lot of experience in dealing with insurgencies, as he took office during in 2000, the second Chechen war was in full swing. Chechen insurgents wanted to separate themselves from Russian Federation. Putin, a former KGB operative, changed how war was fought and succeeded where his predecessors had failed. He fused together intelligence and military measures. Therefore, In Chechnya, rebels were pursued relentlessly, often using undercover operations, and adopting terrorist tactics, such as taking hostages, aggressive interrogation, and the like. He did not relent, until some Chechen insurgent leaders switched sides and the insurgency was finally stopped. He accomplished where others failed before him.  

Russian President sees the war in Donbass very much as a proxy war against the West, namely NATO and EU. According to his statements, the EU is trying to weaken Russia by pulling a key ally, Ukraine, away from Russia and into the sphere of influence of the EU. Putin’s goal in this case is to deny Kiev the chance of associating with either NATO or EU. In his eyes, the regime change in Kiev was stoked by the West for the same reason the Americans funded and supported mujahedeen fighters in Afghanistan during the 1980s – to damage and undermine Moscow’s authority throughout the region. To him, this is highly similar to war in Afghanistan – it was the West’s proxy war against Soviet Union. Donbass is the West’s proxy war against Russia.

Putin sees asymmetry of military capabilities and economic strength between Russia and the United States together with the rest of NATO allies. Because of this, it is imperative, that Russia is more aggressive and smarter than its opponents in fighting this new kind of war. Back in January of 2013, Valery Gerasimov, chief of staff of the Russian armed forces, stated that Russian military would engage in a “new kind of war” fought with “non-military methods to

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achieve political and strategic goals.” This asymmetric, hybrid war, noted Gerasimov, requires “the close coordination of military, intelligence and information operations.”

It is clearly visible, that Russia was preparing to fight a new breed of war, using every means at its disposal – military, intelligence (GRU), security service (FSB), diplomacy, etc.

All in all, it is clear, that Russian leaders excel at using hybrid war tactics in Ukraine, as it serves as one big training exercise for this very reason. As Ukraine is largely on its own at this point, it really is a perfect training ground for refining methods of new types of warfare. This entire concept of hybrid warfare, “little green men”, information warfare and propaganda, has other former Soviet states worried.

3.1.2 Possibilities of hybrid war against NATO

This hybrid warfare practice that is going on in Ukraine is worrying NATO allies, particularly the Baltic States – Lithuania, Latvia and Estonia. These countries do have a reason to feel worried – both Latvia and Estonia have considerable Russian populations within their borders and Lithuania has a border with heavily militarised Russian exclave in Kaliningrad. According to latest available information, there are 1 313 271 people living in Estonia, 330 25 of them are Russians (roughly 25% of the entire population). In Latvia the situation is similar, with population of 2 001 468, with 520 136 Russians (also around 25%). In Lithuania, population of Russians is substantially smaller, but there are few cities which are almost exclusively Russian, as a relic of former Soviet heavy industry and nuclear power plant.

These numbers are relevant, because after Crimean annexation and the outbreak of war in Donbass, some Russian speaking citizens in every Baltic State started voicing concerns that they are not feeling safe. This is a very daunting aspect of hybrid warfare that Russia could potentially use. So far, Baltic States mainly came under constant propaganda barrage – mainly via television and internet. Internet, however, is used to brainwash Russian population as well, as recently one “troll factory” has been unmasked in St. Petersburg, by a Russian journalist. “Troll factory” is

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95 Gerasimov, Valery “General headquarters and defence of the country (Генеральный штаб и оборона страны)”, “Военно-промышленный курьер” (“Military-Industrial Courier”), 5th of February, 2014
called Internet Research, a four storey building, where employees do nothing, but praise
Vladimir Putin and criticize European and American leaders online, particularly in social
networks. Former employees stated that they had to write derogatory posts and comments about
President of the United States Barrack Obama, using derogatory racial slurs. Russian journalist,
who uncovered this “troll factory” to the world, said: “We had to say Putin was a fine fellow and
a great figure that Russia’s opponents were bad and Obama was an idiot. […] I was told on the
first day that we were working for the good of the motherland, that we were supporting the
authorities.”

This is just a one building; there must be many more, judging by the fact how
many Kremlin supporters with fake accounts are there.

There have been several cases when Russian TV channels were banned for predetermined
periods of time for spreading propaganda in Baltic States. This is a part of a concentrated effort
to destabilise the region, akin to an old Roman tactic called“divide and conquer”. This effort is
aimed at Russian speaking citizens primarily, which up until then were living as equals among
Lithuanians, Latvians and Estonians. The attempts to destabilise the Baltics are not only limited
to propaganda over the television and internet. The latest and arguably most radical attempt was
this year, at the end of June. It began when Russia’s Prosecutor General’s Office opened an
investigation into the legitimacy of independence of the Baltic States. The office looked into
whether a decision, made by the State Council of the USSR in 1991, to recognize three
breakaway states was legal. The lawmakers from the ruling United Russia party believe that the
State Council was an unconstitutional authority, and its decisions caused “great damage to the
sovereignty, security and defence capability of the country”.

More than twenty years have passed since 1991 when Baltic countries finally won their freedom and independence after fifty
years of occupation. Therefore, this inquiry was met with hostility in all three Baltic States, as it
was deemed utterly absurd and demeaning.

When questions were raised about Russia’s own independence and if it was legitimate, because it
was recognised by the very same Council, the questions died down. Also, some leaders stated

98 Parfitt, Tom “My life as a pro-Putin propagandist in Russia’s secret ‘troll factory’”, The Telegraph, 2015
found: http://www.telegraph.co.uk/news/worldnews/europe/russia/11656043/My-life-as-a-pro-Putin-
propagandist-in-Russia’s-secret-troll-factory.html

99 Sytas, Andrius “Lithuania bans Russian TV station over ‘lies’”, Reuters, 2014
found: http://in.reuters.com/article/2014/03/21/ukraine-crisis-lithuania-idINL6N0MI2ZG20140321

100 Tamkin, Emily “Russia’s senseless investigation into Baltic independence”, Open Democracy, 2015
that if Russia investigates matters like these, it fully takes responsibility as a successor to the USSR and therefore should be held accountable for the annexation of the Baltic States and atrocities committed against their citizens during the 1940s.

Baltic States fit best for possible attempt at using hybrid warfare against NATO. Since it would be not smart to invade them in full force and force NATO’s hand and push world on the brink of World War III, hybrid war would be the answer. The first phase would be destabilisation of the region – making Baltic States either disagree amongst themselves, or create a noticeable split, a fracture in their population. This could be achieved by relentlessly addressing local Russian speaking populations with a stream of ideology and twisted information. By pitting two demographics against each other, tension would be rise in each country, especially Latvia and Estonia, as they have proportionately much larger Russian populations inside their borders. If this is done successfully, and Russian minority is actively disgruntled and feels threatened – it opens an entirely new course of action. Given the fact that Russian minority feels threatened, Moscow could take the risk and bring in the actual armed forces with the excuse of protecting Russian minority from potential harm and atrocities. This however would be a very daring act, forcing NATO either to respond and risk war over some of the smallest members the Alliance has, or to stand idly by and lose integrity and prestige in the eyes of the world. Approach like this would be very drastic and unlike the others Putin has used. Therefore, the smartest thing to do would be to stick to hybrid warfare and attempt to further destabilise the Baltic States and cause chaos. “Little green men” come to mind, however, they would hardly work, at least at first. Estonian General Riho Terras illustrate the stance of the Baltic States on “little green men” when he said that upon seeing one of them “you shoot the first one to appear. […] If somebody without any military insignia commits terrorist attacks in your country you should shoot him ... you should not allow them to enter.”

This illustrates the attitude of the Baltic States towards attempts like this.

It seems simple, but it is highly doubtable Moscow’s approach would be this direct and simple, knowing that the new opponent is a member of the NATO. Author and professor Mark Galeotti makes a great argument of how hybrid approach could work and what it could look like in

101 Jones, Sam “Estonia ready to deal with Russia’s ‘little green men’” ft.com, 2015 found: http://www.ft.com/cms/s/0/03c5ebde-f95a-11e4-ae65-00144feab7de.html
Estonia. He is writing that the first “little green men” might not be armed soldiers at all: “The first little green man, after all, might instead be a 15-year-old Russian-Estonian girl waving a “Russian-speakers have rights, too” placard in the border city of Narva. Shoot her? Of course not. The second might be her older brother, throwing rocks at the police coming to arrest her. Shoot him? Hopefully not, especially as you can guarantee that footage of the incident would promptly be blasted across Russian TV channels. Meanwhile the Kremlin-backed Night Wolves motorcycle gang tries to force the border into Narva, unarmed but in numbers. At the same time, a bomb explodes in Tallinn’s railway station at rush hour, creating panic and chaos, while anonymous calls warn of other bombs around the city. A tanker truck gets into an unexplained accident just past the Luhamaa border crossing to the southeast, bursting into flames. As a noxious chemical cloud drifts across the border, Russian fire and hazmat trucks, escorted by police, demand to be allowed to deal with the scene.”102 This scene would sound much more plausible, than armed men without any insignias on their camouflage uniforms charging border posts. As well as being much more sublime and far less obvious, it would also be that much more difficult to identify and stop once it is in motion. Therefore, prevention is essential.

First and foremost, efforts should be made to integrate Russian minorities into society as much as possible. Simultaneously, counter-intelligence needs to be improved, because if such an attack is successfully hidden and held in the dark until it starts it could potentially have disastrous consequences – police officers and border guards would be quickly stretched too thin and chaos would overwhelm the opposition. As mentioned above, this type of operation would test the police officers and border patrols first – if the city is thrown into chaos and there are new threats emerging about more attacks officers must be prepared for it. Nerves of steel and calmness help overwhelm the rising panic and deal with the situation in cold blood. Additional briefings and trainings might be required but it is worth in order to give the police a chance. Border patrols also would be tested – as unrest grows they would be required to keep a level head and maintain order at border crossings and checkpoints. Another essential piece of defence against this approach would be identification of the situation and having a plan prepared. To leave as little to chance as possible if the worst does happen, top military and counter-intelligence officers together with the leaders of the state should create a plan to fall back on if communications are

broken and confusion becomes widespread. If the situation is identified as possibly an act of hybrid war, the plan is executed – each special service (police, border guards, firemen, etc.), each military unit, each city officials would have specific orders on what to do to maintain order and security of their citizens. Of course, the plan might not be adaptable to exact situations, but often times in such desperate moments any action is better than no action. This would provide a proverbial last line of defence, a plan for when all else fails.

In conclusion, Baltic States face the biggest threat of hybrid warfare in NATO. The reasons for this are clear: they are relatively new members of the Alliance; they are former Soviet states, have sizeable Russian speaking populations within their borders and are comparatively small in size of their territory and military size. A well planned, timed and executed hybrid attack against the Baltic States would force a reaction from the Alliance. This potentially would spark a discussion inside NATO as some members might refuse to risk war for three small states in Eastern Europe. However, this would be highly dangerous for the entire Alliance, because the Baltic States are one of NATO’s borders with Russia, and if the attacks are successful and chaos ensues, that border becomes unchecked. This would enable further operations deeper in the continent.

3.2 Possible Unconventional Uses of Nuclear Weapons

Hybrid warfare and its combination of approaches enables for potential use of both tactical and strategic Nuclear Weapons. As it was established earlier, one of the main aims and goals of conducting hybrid warfare is to avoid retribution for your actions or avoid your actions being attributed to you in the first place. This encourages small scale, or underground operations behind enemy lines. Special Forces are perfect for such missions as they made up of hand-picked men, all as close to perfect soldier as possible, working as an exceptionally well-coordinated team. Therefore, a lot of emphasis is put Special Operations Forces (SF, or SOF).

Back in 2009 a Russian historian and author Aleksandr Sorokin wrote an article for Russian journal “War and Peace” (“Война и Мир”), which described in great detail how destructive and dangerous well equipped, trained and motivated Special Forces teams can be in the right circumstances. As a real life example the author chose Lithuanian Special Operation Forces group “Aitvaras” (“Kite”), which became rather well-known among NATO soldiers for their
actions in Afghanistan. There “Aitvaras” earned their reputation as trustworthy allies, fearless, relentless, motivated and very well-trained soldiers. According to Sorokin, “Aitvaras” is the biggest Lithuanian contribution to NATO and its efforts. Sorokin listed potential missions for such a unit behind enemy lines, even before the actual formal armed conflict even begins. Main objectives for a covert operation behind enemy lines at the beginning of the conflict, or even before the formal declaration of war, are tactical reconnaissance, special reconnaissance of strategic objects and facilities; quick, sudden strikes and military operations. The unit is also capable of designating targets for airstrikes and cruise missiles, as well as hostage rescue and other high intensity combat tasks.103

However given the conditions and aims in the hybrid warfare doctrine, the potential objectives for Special Forces teams are much wider. Sorokin covers some of them. He claims that before the outbreak of the war, Special Forces, or Special Purpose Units as the author calls them (войска специального назначения), conduct operations at a depth of up to 2000 kilometres behind enemy lines. These operations serve as “preparations” (подготовка) for large-scale military action of other, heavier and more conventional units. These preparations include Special Forces teams performing these tasks:

disruption of control and communication (actions aimed at damaging or destroying means and channels of communication among enemy forces, organising disinformation, for example, connecting to the channels of communication of the enemy and providing false intelligence, etc.; eliminating or bribing key figures in local public administration.);

Reconnaissance of key enemy targets (searching for and monitoring military installations: nuclear missile silos, fortifications, military garrisons, etc.; as well as important non-military objects of strategic importance: hospitals, factories, power plants, television and radio stations, and so on.);

Sabotage (primary targets for sabotage operations generally are: industries and factories of strategic importance, power plants, dams, oil tanks, bridges, and so on.);

103 Sorokin, Aleksandr “The Baltic Outpost of NATO” (“Прибалтийский форпост НАТО”), Война и Мир, 2009
Demoralization of enemy troops and population, which would be achieved by the methods listed above, as well as through the distribution of all sorts of negative information, propaganda materials, rumours, etc.

Sorokin included one more potential task, which was rarely labelled as a potential mission for Special Operations Forces behind enemy lines. This task, however, receives an entirely new meaning in hybrid war conditions. The task in question is transporting a Weapon of Mass Destruction behind enemy lines and detonating it at a key location. Possible WMDs could be Chemical Weapons, Biological Weapons, even insects, or animals infected with dangerous diseases, as well as various bacterial agents. The largest effect however would be the detonation of a Tactical Nuclear Weapon. Mass destruction can also be achieved without transporting and detonating the actual Weapons of Mass destruction. It can be done by skilful sabotage, for example, sabotaging chemical plants, or factories that are using toxic chemicals, blowing up containers with chemical or radioactive waste, or toxic chemicals. Sabotaging nuclear power plants can be particularly dangerous, because they can cause huge radioactive fallouts, making territory impassable for the enemy as well as creating mass hysteria among civilian population. Nuclear silos and various Mobile Rocket Launcher Systems can also be attacked, but are much more heavily guarded.

Tactical Nuclear Weapons are light and compact enough to be transported by a light vehicle or even several men. Modern TNWs also have a big enough yield to possibly annihilate entire cities and create radioactive fallout. Therefore, if detonated at a key location, such as an industrial centre of an enemy state, harbour city housing a naval base, troop concentration centre, logistical junction or just a bustling metropolis – consequence would likely be devastating. Not only the civilian population would be shocked and terrified by the fact that an actual WMD was used against them, but the retaliation effort can be thwarted before it even begins, if, say, a major command centre or headquarters is wiped out.

Since the soldiers who conducted the strike are Special Forces and probably have left the area well before the detonation, the attack can be attributed to terrorist organisations, or rogue states. Additional proof can be falsified before the actual attack and left to be found. Therefore, if

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104 Sorokin, Aleksandr “The Baltic Outpost of NATO” (“Прибалтийский форпост НАТО”), Война и Мир, 2009
everything is done correctly, attacker can remain in the shadow and successfully avoid retaliation.

Having annexed Crimea, Russia might attempt to relocate some of its nuclear arsenal there. Putin has made clear his intentions to move some complex offensive systems there as a response to sanctions and continued expansion of NATO ALTMBD programme. Apart from Nuclear Weapons, Crimea is already being turned into a fortress. Since Russia now regards Crimean peninsula as its own territory, a lot more weapons are being dislocated there. As Black Sea fleet of the Russian Navy was already there, now various cover and air units are being added to garrison in Crimea. In early winter last year, among the most modern of Russian-built aircraft, Su-27 and Su-30 were dislocated to Belbek airbase in Sevastopol. According to Deputy Commander of the 4th Air Force and Air Defence Command in the Southern Military District, Yury Yarov, the short-term goal is to bring total number of aircraft in Belbel to 30: 24 combat aircraft and 6 training aircraft. Plans were also announced to bring strategic bomber Tu-22M3 to Sevastopol in 2016. Numerous reports were also made about Iskander-M tactical missile system being introduced in Crimea. Combined with the fact that Iskander-Ms are already feared to be present in Kaliningrad, this gives NATO plenty to worry about. With ranges up to 500 kilometres and various different warheads available, this highly mobile system now covers most of NATO’s eastern flank, leaving it somewhat exposed. Given the versatility of the Iskander-M, it can commence the launch procedure from any part of Crimea or Kaliningrad, NATO members in Eastern part of Europe are well in range. Also, if Iskander-Ms are in Crimea, Turkey is within range too, more specifically, Ankara and Istanbul.

3.3 Conclusions of the Chapter

In conclusion, both hybrid warfare and unconventional use of Nuclear Weapons in hybrid war conditions should be worrying for NATO and Europe in general. Hybrid warfare is potentially the war of the future, as Strategic Nuclear Weapons, serving as deterrents prevent states from fighting an open, all out total war, akin to World War II. Hybrid warfare is synonymous with confusion and chaos and that is why it is likely to be genuinely difficult to assess and read the

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potential situation quickly. Prevention or at least awareness of any potential danger cannot be achieved without utmost vigilance and general readiness to act at a moment’s notice.

Successful hybrid war and unorthodox use of Tactical Nuclear Weapon could also lead to destruction of the NATO ALTBMD programme. Such a scenario would include a successful hybrid warfare campaign in Baltic States, or Poland – country is in chaos, power structures and armed forces are struggling to regain control and determine who is behind it, which are friends and which are foes. In this chaos, an elite Special Operations Forces team sneaks past the overwhelmed and confused border guards. If, say Russian speaking minorities are rioting in the said country, the mentioned SOF team could even carry a portable, small Tactical Nuclear Weapon with them. With enough reconnaissance, intelligence, preparation and coordination this team could make its way to a military base housing one of the elements of the ALTBMD programme, ensuring it is in range of detonation of the TNW. This scenario, of course, is extreme, but even without the Nuclear Weapon; Special Operation Forces pose an entirely different kind of danger. These men are experts of survival and covert operations; they can blend in amidst the general disorder. It would make their tasks and missions listed above easier – infiltration deep behind enemy lines to prepare for the next phase of the conflict, sabotage, destruction, spreading of disorganisation. Combined with the fact, that entire eastern flank of the Alliance is more than likely covered by Iskander-Ms and other missile systems that are highly flexible and mobile. All these possibilities should precipitate that hybrid warfare is a very real and dangerous possibility.
4. CONCLUSIONS

To achieve the answers to the questions asked in this thesis, the theory of Classical Realism was used. Classical Realism assisted in focusing the analysis on state and sub-state level, to always keep in mind such concepts as Balance of Power. This theory made it easier to analyse various military doctrines throughout the Cold War and after it. After all, since Nuclear Weapons came to be, the Balance of Power became even more crucial.

Nuclear Weapons quickly became the cornerstone of military doctrines in every state that had developed nuclear capabilities. After the Cold War began, Strategic Nuclear Weapons became the proverbial sword of Damocles hanging over the heads of everyone in the world. As time went on, in the 1950s and 1960s, doctrines regarding Nuclear Weapons became increasingly intricate and complex, as more variants of the new technology became available. When Tactical Nuclear Weapons were developed enough to be reliable and effective, they became a part of every grand battle plan. As the main question of this thesis was regarding the changing role of Nuclear Weapons in European security, it became clearly visible, that ever since it was invented and used for the very first time in 1945, Nuclear Weapon always had a role in it. As the analysis of the military doctrines displayed, that role grew bigger up until the Cold War ended.

Both superpowers of the time, the USSR and the US featured Nuclear Weapons into their plans, yet did it differently. For the US, primary focus was Navy and naval aviation in particular. That was their focus since World War II and during the early to middle stages of the Cold War it remained the same. Main means of delivery were jets taking off from aircraft carrier vessels, even though Navy originally had to take the backseat to Air Force. The Air Force was favoured in the early 1950s, with its strategic bombing doctrine, as the main strength of the US. However, lessons learned during the Korean War led to the Navy being made the prioritised military branch of the US, and Navy’s aircraft carriers became the main means of delivering nuclear payload. The USSR, meanwhile, shifted to missile use, creating a new branch of their military – Strategic Rocket Forces, which quickly became the most looked after and prioritized military service.
Therefore, throughout the Cold War, both superpowers relied on Mutually Assured Destruction to keep a potential Nuclear War at bay. Then American leaders decided to switch their focus to defence and create a defensive system, a shield from enemy missiles, calling it the Strategic Defence Initiative. This shifted the balance, as the Soviet Union now felt threatened by this new approach and felt the need to improve their ICBMs in order to ensure that they would beat the new defensive system. While SDI was never tested, it played its part in shifting the balance and forcing the USSR to expend more recourse on improving their ICBMs.

Anti-Ballistic Missile defences still play a very large role in the international arena. NATO ALTBMD system serves as a proof of that, given the reaction it received from the main opponent – the Russian Federation. Leaders of the Russian Federation felt that these defensive instalments had an offensive function and was an active attempt to undermine the balance of power in Europe. It was also called an American projection of power through NATO to smaller countries in Europe. In other words, the project itself, as well as building of the first installations was met with Russian protests and threats to dislocate new and additional weapons to Kaliningrad, and claiming that countries agreeing to house ALTBMD components will become ‘targets’. This just serves to display that ICBM defence projects and systems are still very much important, even though tensions and Mutually Assured Destruction of the Cold War are in the past.

While the ICBM defence systems are relatively nothing new, a successful hybrid war campaign is. After what happened in Crimea and what is happening in Donbass, hybrid war is the revitalised and popularised term given to an unconventional type of warfare. It involves as many spheres and approaches as needed – intelligence, propaganda, subversive activities, etc. The goal is to avoid retribution for one’s actions, or to avoid attribution of those actions altogether – to remain officially innocent and clean. NATO countries, especially the Baltic States should be worried and prepared for potential campaigns of hybrid war against them, as their Russian speaking minorities are already being fed with propaganda via Russian TV channels and websites, as well as social networks. Therefore, a threat of hybrid war in Europe is substantial, as Russia is using Donbass as a practice facility to perfect the means and ways of conducting effective hybrid warfare. Hybrid war could involve an unorthodox threat to use Tactical Nuclear Weapons, as this approach aims to create disorder and chaos. While, a surgical nuclear strike
conducted by a small force on the ground would potentially prove difficult to track down, giving a chance to conduct the first strike, after which the potential for escalation would be high, involving other nuclear powers.

In conclusion, Europe has happily forgotten about the constant threat of Nuclear War since the Cold War ended. Nuclear Weapons, however, still remain and are more modern than 50 years ago. While giant ICBMs carrying immense nuclear payloads will likely remain in their silos, the priority has been given to smaller, more mobile weapons, much like the Iskander series MLRS, or Tactical Nuclear Weapons, that can be transported by truck, or several men, and still have big enough yield to level cities. Therefore, the role of Nuclear Weapons in European security changed – defence from massive ICBMs now steadily give way to defence against smaller and much more agile MLRS based missiles and smaller Tactical Nuclear Weapons.
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