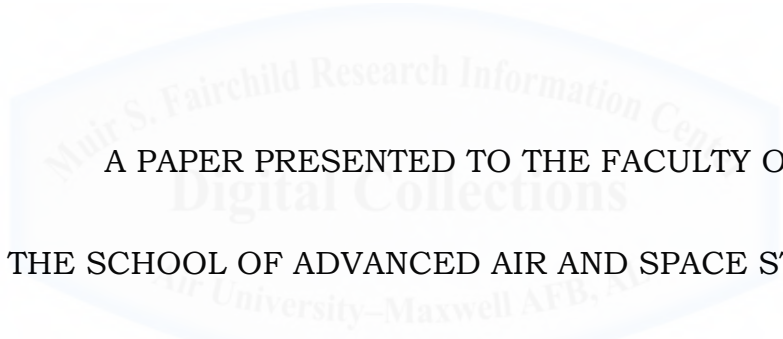


KALININGRAD TRAP – RECONCILING AIRPOWER THEORY WITH PEER
COMPETITORS

BY

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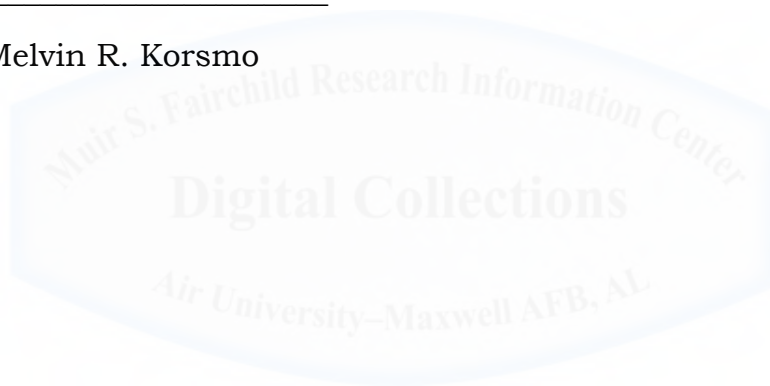
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APPROVAL PAGE

The undersigned certify that this thesis meets master's-level standard of research, argumentation, and expression.

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The conclusion and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.



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ABSTRACT

This study analyzes the appropriateness of employing traditional airpower theory against Russia in the context of a Baltic conflict and offers that air planners must consider political context when attempting to control the vertical domain through active, offensive tactics. History demonstrates that airpower is primarily an offensive weapon. The results of this study show that if NATO and the US responded to a Russian invasion of the Baltics by applying traditional airpower theories—specifically by seeking control of the vertical by violently removing the Integrated Air Defense System (IADS) located in Kaliningrad—this response would likely escalate the conflict. NATO air planners should understand that an air war against Russia will be different than the Arab-Israeli Six Day War, Desert Storm, and Allied Force. Air planners must pursue non-traditional IADS take-down methods to compel Russia to return to its borders without escalating the war.



CONTENTS

DISCLAIMER	ii
ABOUT THE AUTHOR	iii
ACKNOWLEDGEMENTS.....	iv
ABSTRACT.....	v
Chapter 1 Introduction	1
Chapter 2 Regional and Geopolitical Background.....	9
Chapter 3 Tenets of Traditional Airpower Theory and Employment	29
Chapter 4: Testing the Assumption	45
Chapter 5 Summary and Conclusion.....	64
Bibliography.....	68



Chapter 1

Introduction

Can the United States employ traditional airpower methods against Russia to defend the Baltic region without Russia escalating the conflict up to and including nuclear retaliation? In heralding a new era of great power competition, there is a great deal of enmity between the North Atlantic Treaty Organization (NATO) and Russia. Russia does not believe that NATO has a right to exist and therefore will not willingly limit its violence towards the alliance.¹ The 2017 U.S. National Security Strategy (NSS) confirms this belief by declaring Russia an existential threat to the United States. It warns that “Russia aims to weaken U.S. influence in the world and divide us from our allies and partners” and that Russia views NATO, and European Union (EU), as “threats.”²

Russia’s view of NATO as a threat is matched with revisionist intentions. In a statement pre-dating this NSS, Russian President Vladimir Putin’s former top economic adviser, Andrey Illarionov, confirmed that “Putin has his eyes on eventually reclaiming Estonia.”³ Following Moscow’s invasion of Ukraine, the Baltic States of Estonia, Latvia, and Lithuania feared they would be next. The United States and its allies face the real prospect, unthinkable a few years ago, of open conflict with Russia. The United States and NATO have yet to face such a peer competitor in war. Further, America’s traditional application of airpower—involving at the outset the establishment of air superiority

¹ Alexander Wendt, *Social Theory of International Politics*, Cambridge Studies in International Relations 67 (Cambridge, UK ; New York: Cambridge University Press, 1999). 260 This passage describes the social construction of individuals through a Hobbesian lens.

² United States. 2017. *The national security strategy of the United States of America*. [Washington]: President of the U.S., 25

³ Cody Zilhaver, *Thestrategybridge*, June 16, 2017, <https://thestrategybridge.org/the-bridge/2017/6/16/russians-in-estonia-a-case-study-in-offensive-structural-realism>.

through offensive actions—risks escalating the level of violence in a future conflict with Russia.

Establishing air superiority is fundamental to traditional U.S. airpower doctrine; such actions also explain airpower's inherently *offensive* nature. The problem with applying this doctrine stringently in the Baltic region is that the establishment of air superiority would require that NATO strike Russia's integrated air defense system (IADS) which operates from sovereign Russian territory, including Kaliningrad.

The Kaliningrad Oblast currently contains some of the most lethal IADS in the world, which presents a formidable challenge to NATO air planners. Although Kaliningrad is geographically an exclave of the Russian Federation, it is as vital to Russia as any other location, including St. Petersburg and Moscow. So then, when Kaliningrad Oblast is understood as representing part of "mainland Russia", this means that the theory of Type I deterrence applies to the exclave. Simply put, an attack against Kaliningrad is an attack against Russia. Herman Kahn describes Type I deterrence as the deterrence of a direct attack against a country such as the United States and Russia.⁴ Robert Jervis maintained that if a state were to breach Type I deterrence, the results would be, at best, uncertain.⁵ Jervis also wrote during the Cold War of the possibility of limited war between two nuclear-armed nations and why Type I deterrence should work in this case:

If escalation is neither impossible nor certain, deterrence by denial at lower levels of violence is neither necessary nor terribly helpful. That a limited war might – but might not – spread seems like mere common sense. The situations

⁴ Herman Kahn and Evan Jones, *On Thermonuclear War*, Transaction ed (New Brunswick (U.S.A.): Transaction Publishers, 2007). 126

⁵ Robert Jervis, *The Meaning of the Nuclear Revolution: Statecraft and the Prospect of Armageddon*, Cornell Studies in Security Affairs (Ithaca: Cornell University Press, 1989). 80

under consideration are unprecedented and it is difficult to see how certainty could be possible. But the implications are extremely important: *the fact that escalation is possible enhances deterrence, permits the use of risky bargaining tactics, and undercuts the importance of military advantage* (emphasis added).⁶

The U.S. has many significant exclaves equivalent to Kaliningrad, such as Alaska, Puerto Rico, and Guam. If Kaliningrad indeed was to Russia as Alaska is to the United States— sovereign territory—then NATO should, under the theory of Type 1 deterrence, be deterred from striking it. Traditional airpower doctrine and employment, however, might indicate otherwise.

This thesis will argue that the traditional pursuit of the offensive, or more specifically, methods to establish air superiority could cause a “limited” Baltic war to escalate. Using current airpower approaches, defense of the Baltic region requires destroying IADS located in Russia, including Kaliningrad. This territory, considered sovereign land of Russia, would likely trigger an escalatory response. If the United States, or NATO, were to breach Type I deterrence in a war with Russia in the Baltic region, Kahn, Jervis, and this author, believe Moscow will escalate.

Methodology

The scope of this exploratory research involves a hypothetical scenario wherein Russia attempts to take control of any of the Baltic republics. First, this paper will examine the history and geopolitical background of the region to assess Russia’s interests and how these interests could lead Moscow to invade one or more of the Baltic states. The research considers whether current Russian actions justify NATO’s

⁶ Jervis. 80

perception of Russia as a likely security threat to the region. Second, if this perception is justified, this paper makes a broad assessment on airpower tenets based on historical applications. Lastly, if Russia were to invade the Baltic region, what would the war look like? A bold attempt to describe how NATO and the U.S. would react to this hypothetical, but quite possible situation, is made in Chapter 4 followed by an assessment about whether current airpower approaches would be appropriate against Russia is provided.

Framework

In 1991, the Soviet Union and Russian authorities recognized the independence of Lithuania, Latvia, and Estonia. Estonia lead the independent movement, with admission into the United Nations 11 days later; within two months, all three Baltic republics were UN members and all three held aspirations to someday join NATO.⁷ As a deterrent to the Baltic republics attempting to join NATO, Russia attempted to invoke fear into the Baltic states' leadership by moving nuclear capable weapons to its exclave Kaliningrad in 2000.⁸ The move only heightened the anxiety of the Baltic nations. In 2004, these countries were formally admitted into the NATO alliance and all the provisions therein, including the extended deterrence and protection of Article 5 of the North Atlantic Treaty. They were also admitted to the European Union that same year, furthering their integration into the West.

Article 5 is significant because it binds the collective power of the 29 state signatories to act in response to a violation of any member state's sovereignty. The United States is the leading member of NATO. With respect to protecting the Baltic states, American air strategists in

⁷ David J. Smith, ed., *The Baltic States: Estonia, Latvia and Lithuania*, Postcommunist States and Nations (London: Routledge, 2002). Estonia chronology, ix; Lithuania chronology, xi

⁸ Arthur Collins, "Kaliningrad and Baltic Security" (Naval Post-Graduate School Monterey CA, June 2001), <http://www.dtic.mil/docs/citations/ADA390532>. 26

particular would face the burden of denying Russia's strategy, compelling it to return to its current borders. Current airpower doctrine and employment against a peer competitor such as Russia would risk escalating such a war up to and including nuclear retaliation. This thesis will examine the risks inherent in considering Russia as just another target state for the application of U.S. and NATO airpower, employed in the same manner that we have seen in places like Serbia, Iraq, and Libya.

Chapter Two provides the political context between Russia and NATO. The chapter shows how the relatively peaceful demise of the Soviet Union gave disaffected, newly-independent states the opportunity to join the Western liberal order, promising them an opportunity for greater security, together with democracy and prosperity. Meanwhile, even with the disorder in the Kremlin generated by the Soviet collapse, Kaliningrad remained a part of Russia, but became geographically isolated from the rest of the country because of the newly independent Baltic states. The Baltic states' accession to NATO heightened Kaliningrad's sense of isolation. Kaliningrad today serves as Russia's western front, a bastion and potential springboard for future Russian actions in the region and a constant reminder of a fragmented previous empire.

Chapter Three describes contemporary and recent accepted views of the appropriate use of airpower through three principal tenets: 1) offense is the best defense; 2) air superiority is fundamental to airpower; and 3) following the rules of proportionality, airpower must be used with overwhelming force against appropriate objectives, otherwise known as, "go big or go home." U.S. doctrine, theory, and principles of coercion best describe the habitual patterns of air strategists when implementing airpower in war. The chapter analyzes the influence of airpower strategists such as John Warden and Phillip Meilinger on contemporary

airpower doctrine. Warden advocated for an offensive concept of parallel targeting, a rapid and simultaneous set of strikes against so-called enemy centers of gravity such as leadership, essential production of war material, infrastructure, the population, and military forces in order to achieve strategic paralysis. Meilinger maintained that “airpower is primarily an offensive weapon” citing the application of air power during the Arab-Israeli Wars and Operations Desert Storm and Allied Force.⁹ Theorists Daniel Byman and Matthew Waxman state that one of the U.S. Air Force’s greatest strategic advantages in coercing its competition is its ability to “deploy rapidly and bring to bear quickly tremendous striking power around the globe.”¹⁰ Additionally, Byman and Waxman highlight the attributes of U.S. airpower’s ability to compel by achieving escalation dominance, the most common variable seen in successful coercion.¹¹ The Arab-Israeli wars in 1967 and 1973, Desert Storm, and Allied Force are used as case studies of how airpower is likely to be broadly applied against future opponents, including, in this case, Russia.

Chapter Four runs an assumption through a series of tests to determine if Kahn and Jervis are correct about Type I deterrence. It begins by placing Russian attachment towards Kaliningrad against a plausible scenario of airpower application on the Russian exclave if a war were to break out in the Baltic region. The chapter includes Russia’s military capabilities in the Kaliningrad Oblast and how those may affect air planners. The thesis culminates with Chapter Five which provides a summary and conclusions with implied implications.

⁹ Col Phillip S Meilinger, “Ten Propositions Emerging Airpower,” *Air University Maxwell AFB AL Airpower Journal*, 1996, 18.

¹⁰ Daniel Byman, Matthew C. Waxman, and Eric V. Larson, *Air Power as a Coercive Instrument* (Santa Monica, CA: Rand, 1999). 10

¹¹ Byman, Waxman, and Larson. 31

The evidence shows that NATO and U.S. air planners are likely to employ airpower in an overly dogmatic fashion against an existential threat such as Russia, specifically in Kaliningrad. This approach could inadvertently escalate any conflict with Moscow up to and including a retaliatory Russian nuclear strike. If Russia were to invade the Baltic states, the war must remain confined to the Baltics. Any attacks on sovereign Russian territory will likely cause the Russian Federation to escalate the conflict beyond the region and, more specifically, risk a nuclear strike against our NATO allies, while using the strategic narrative of protecting their own people from further attacks as a catalyst. *The National Interest* reports: If NATO forces cross [strike] into Russian territory, that might provoke a nuclear response from Moscow. “There is a possibility that if Russian forces are sufficiently degraded or defeated in Kaliningrad that Moscow may resort to or threaten nuclear first use.”¹² National security analyst Michael Kofman predicted escalation if such an attack unfolded. “Nuclear escalation is not assured, but given the impact of such an outcome, perhaps the best strategy is to make decisions that afford the most opportunities for managing escalation dynamics. That means a force posture oriented toward strategic flexibility, not entrenchment.”¹³ Such a war will almost certainly escalate into a full-up nuclear war between the planet’s only two nuclear superpowers—which means everyone loses.¹⁴

While *restraint* and *offense* are both principles of war, the offensive underpins airpower application. Further research is necessary for considering how traditional airpower methods might counter the IADS on

¹² Dave Majumdar, “This Is What a NATO vs. Russia War over the Baltics Would Look Like,” *The National Interest*, accessed December 11, 2017, <http://nationalinterest.org/blog/the-buzz/what-nato-vs-russia-war-over-the-baltics-would-look-22885>.

¹³ Majumdar.

¹⁴ Majumdar.

the soil of a peer competitor while still exploiting the advantages of being on the offensive. Russia would be racing against the clock if it were to invade the Baltic states; any impediment that might be injected to interfere and delay its efforts—without violating the concept of Type I deterrence—may make the difference between containing an already undesirable situation or forcing it out of control.



Chapter 2

Regional and Geopolitical Background

Know the enemy and know yourself; in a hundred battles you will never be in peril.

- Sun Tzu

Russian “Threat” to the Baltic Region

Russia’s invasion of Ukraine and its ongoing information war against the West give strong cause for the North Atlantic Treaty Organization (NATO) to question Russia’s intentions toward the Baltic states. The relatively peaceful demise of the Soviet Union allowed the states in the region to join the liberal Western order, promising them an opportunity for peace and prosperity. Studying an opponent’s past, among other methods, is critical to knowing the enemy as Sun Tzu suggests.¹ Russia’s history demonstrates that Moscow has an affinity towards the Baltic region.

The year 1991 marked the end of the Soviet Union and the birth of fifteen independent, former Soviet republics. However, the course of the region took another turn in 2004 when three of the governments, including Lithuania, Estonia, and Latvia, joined NATO. John Mearsheimer suggests that NATO’s Eastern expansion destabilized the region.² With the United States dominating the Western-backed international order, NATO’s presence along Russia’s borders provoked a perennially insecure Kremlin. If the Cold War was over, and NATO had

¹ Sunzi and Samuel B. Griffith, *The Illustrated Art of War* (New York: Oxford University Press, 2005). 125

² Mearsheimer John J., “Why the Ukraine Crisis Is the West’s Fault: The Liberal Delusions That Provoked Putin,” *Foreign Affairs* 93, no. 5 (September 2014): 77–89.

been formed to defend against a defunct USSR, why then—asked many Russians—did the alliance still exist?

Estonia, Latvia, and Lithuania spent many years under occupation by the Soviet Union, though the United States and other Western nations never recognized their forcible incorporation into the USSR. Two of the three Baltic states, Estonia and Latvia, are home to a sizable ethnic Russian population, a quarter of Estonia and Latvia's population.³ At best, those populations are unevenly integrated into the two countries' post-independence political and social mainstreams, giving Russia justification for meddling in Estonian and Latvian domestic affairs.⁴

Shortly after the demise of the Soviet Union, a mysterious man then in charge of the foreign portfolio for the St. Petersburg city government quietly sat in on a meeting which his city hosted to discuss the future of Russia. The agenda listed topics such as economic reform, industrial modernization, enlargement of the European Community, the future of the North Atlantic alliance, Russia's regional and global role after the Cold War and its future borders. As historian Michael Stuermer recalls the conference, he was surprised at "how little attention was spent on the reasons for the decline and fall of the Soviet Union – not unimportant for any predictions about Russia's future." As the unknown man witnessed the future of the former Soviet space being decided by the Germans, Americans, British, and French, he eventually took the microphone. He spoke with a frustrated yet forceful tone, noting that 20 million Russians were now on the "wrong side" of the border and how to him, "their fate is a question of war and peace."⁵ This outburst was

³ "Ethnic Russians in the Baltics," Stratfor, accessed May 29, 2018, <https://worldview.stratfor.com/article/ethnic-russians-baltics>.

⁴ David Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics* (RAND Corporation, 2016), <https://doi.org/10.7249/RR1253>. 3

⁵ Michael Stuermer, *Putin and the Rise of Russia* (New York: Pegasus Books : Distributed by W.W. Norton, 2009). 43

unanticipated by the normally mild-mannered group but was symbolic of how Russia's future leader, Vladimir Putin, the unknown speaker at the conference, would view the status of his fellow Russians among the states of the former Soviet Union.

When the Baltic states received their independence, Kaliningrad Oblast became a Russian exclave that could function as either a closed, fortified bastion or a free-trade zone and window to the European Union. More than a quarter century later, Putin clearly views Kaliningrad as Russia's western bastion. This fortress is protected by a deadly array of weapons with the capability to find, fix, track, and destroy air assets attempting to penetrate its airspace and other weapons that can strike deep into NATO territory. If this fortress was purely defensive, NATO's concerns would wane since it has no intention whatsoever of invading Russia. Additionally, if Kaliningrad were just an exclave with little significant value to Russia, this problem would not be as complicated. But since its capabilities can deny NATO access to the Baltic states and slow, if not thwart U.S. and NATO airpower should either respond to a Russian attack against any of the Baltic states, dealing with this otherwise unassuming piece of land becomes a formidable challenge to NATO's air planners.



Figure 1 Kaliningrad in Respect to Eastern Europe

Source: <http://legacy.lib.utexas.edu/maps/europe/balticseaarea.jpg>

This small swath of territory was formerly the northern half of German East Prussia and is known today as the Kaliningrad Oblast. Kaliningrad Oblast is part of Russia and has been since the fall of Nazi Germany in 1945. The city of Kaliningrad was once known as

Königsberg by the Germans and Karaliaucius by the Lithuanians and was under German rule for 700 years until 1945. It served as the location of Prussian King Frederick the III's coronation in 1701 and the birthplace of famous philosopher Immanuel Kant in 1724.⁶ Königsberg's ice-free port on the Baltic Sea was pivotal for German trade and naval power in the region. Soviet dictator Joseph Stalin understood Königsberg's strategic importance, and when the Soviet Union negotiated over war reparations following Nazi Germany's defeat, East Prussia was on the top of Stalin's list. When Germany was divided up during the Yalta and Potsdam Conferences in 1945, the British War Cabinet had no decisive objections to the Russian absorption of Königsberg, stating: "The Conference has agreed in principle to the proposal of the Soviet Government concerning the ultimate transfer to the Soviet Union of the City of Königsberg and the area adjacent to it."⁷ To this day, Kaliningrad serves as both a strategic bastion and a symbol of honor in remembrance of Soviet victory and an estimated twenty-seven million Soviet dead in what Russians still call "The Great Patriotic War."

During Russian Federation President Putin's first term in office, he took a series of steps to establish greater authoritarian control over the entire nation. Likewise, when he spoke of Russia's new foreign policy, he emphasized the importance of Russian military capabilities by saying "Russia cannot rely on diplomatic and economic methods alone to remove contradictions and resolve conflicts" and that Russia's military should be ready for a rapid response against any challenge.⁸

⁶ S. J. Main and Conflict Studies Research Centre (Great Britain), *Kaliningrad 2001* (Camberley, Surrey: Conflict Studies Research Centre, Royal Military Academy Sandhurst, 2001). 2

⁷ Main and Conflict Studies Research Centre (Great Britain). 3

⁸ Mary N. Hampton and Marion Donald Hancock, eds., *The Baltic Security Puzzle: Regional Patterns of Democratization, Integration, and Authoritarianism* (Lanham, Maryland Boulder New York London: Rowman & Littlefield, 2015). 219

Additionally, Putin emphasized the importance of Russia recapitalizing its nuclear arsenal for providing deterrence against existential threats to the state and its sovereignty, arguing that “We should not tempt anybody with our weakness ... Therefore, we will under no conditions give up our strategic deterrent capability.”⁹ It appears Putin is resorting to the strategy once conducted by the Soviet Union and the U.S. during the Cold War to ensure peace: maintain a credible nuclear capability to ensure Type I deterrence.¹⁰

Furthermore, Putin is well down a path to reform and modernize both Russia’s armed forces and its defense industry. Through much of the first decade of the 2000’s, Russian defense spending increased by approximately 15 percent per year.¹¹ Russian investment in its military has focused on neutralizing key U.S. and Western advantages.¹² Russia is modernizing its nuclear programs and has openly publicized its doctrine as “escalate to de-escalate,” interpreted as intentional use of low-yield nuclear weapons against NATO to win the battle, followed by de-escalating to win the war.¹³ Kaliningrad is serving as a bastion against western expansion, staging S-400 anti-air missile systems, Iskander-M surface-to-surface missile systems, and the Baltic Fleet to ensure open lines of communication between the exclave and mainland Russia in case of a conflict with NATO.

Baltic States in NATO

NATO now includes all the states of the defunct Warsaw Pact—Moscow’s Cold-War era alliance—though the only former Soviet republics

⁹ Hampton and Hancock. 219

¹⁰ Hampton and Hancock., 219

¹¹ Hampton and Hancock., 219

¹² “Putin Is Playing with Fire and We All May Get Burned,” *Bloomberg.Com*, May 8, 2018, <https://www.bloomberg.com/view/articles/2018-05-08/putin-is-playing-with-fire-and-we-all-may-get-burned>.

¹³ “Putin Is Playing With Fire and We All May Get Burned.”

that joined are Estonia, Latvia, and Lithuania. Since 2004, these former territories of the Soviet Union fall under the collective security and protection of Article 5, which is precisely the reason the Baltic republics first sought membership in NATO: having fallen victim to Soviet aggression as small neutral states during the interwar period, they saw NATO membership as a hedge against future Russian resurgence.

Article 5 of the treaty states:

“The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defence recognised by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.”¹⁴

While there is some ambiguity in Article 5 about how much each state must contribute in the event a member state is attacked and to what end, in 2014, then-President Barack Obama assured our Baltic allies that to the United States, “Article 5 is crystal clear: An attack on one is an attack on all. So, if in such a moment, you ever ask again, who will come to help, you will know the answer - the NATO Alliance, including the Armed Forces of the United States of America, right here, [at] present, now! We will be here for Estonia. We will be here for Latvia. We will be here for Lithuania. You lost your independence once before. With NATO, you will never lose it again.”¹⁵

Many debates occurred before 2004 over admitting the Baltic states into NATO due to their status as former Soviet republics. On the

¹⁴ https://www.nato.int/cps/ic/natohq/official_texts_17120.htm

¹⁵ Barack Obama, “Remarks by President Obama to the People of Estonia,” Tallinn, Estonia, September 3, 2014. As of November 24, 2015: <https://obamawhitehouse.archives.gov/the-press-office/2014/09/03/remarks-president-obama-people-estonia>

one hand, some warned the expansion might provoke Moscow by tying former Soviet territories to treaties that obligated the United States and Europe to defend them against possible Russian resurgence. On the other hand, advocates of the expansion argued that NATO membership also promoted democracy, free markets, and could bring an end to Europe's history of violence while solidifying the perceived gains of the West's Cold War victory.¹⁶

Today, the Trump administration is continuing Obama's legacy by supporting the defense of the Baltic region. The Baltic states are proud members of NATO; moreover, they fulfill their military spending obligation to the alliance by spending two percent of GDP on defense.¹⁷ President Trump recently assured the Baltic countries that "From the very beginning of your countries' independence, the United States never—and this is, like, never—and I think you know that better than anybody—never ceased to recognize the sovereignty of the three Baltic republics, even though, throughout the years, there's been a lot of conflict, a lot of problems, a lot of difficulty, and we never let you down. And we won't let you down."¹⁸

Additionally, U.S. Secretary of Defense James Mattis, during his meeting with his Baltic counterparts, pledged that "The United States remains steadfastly committed to Baltic defense," as he described the purpose of current U.S. and alliance contributions in the Baltic region.¹⁹ Mattis describes Russia as attempting to "re-draw international borders

¹⁶ For details on risks versus rewards for NATO expanding, see Collins, "Kaliningrad and Baltic Security."

¹⁷ "Secretary Mattis Hosts Enhanced Honor Cordon Welcoming Minister of Def," U.S. DEPARTMENT OF DEFENSE, accessed April 29, 2018, <https://www.defense.gov/News/Transcripts/Transcript-View/Article/1460947/secretary-mattis-hosts-enhanced-honor-cordon-welcoming-minister-of-defence-jri/>.

¹⁸ "Remarks by President Trump Before a Working Lunch with Heads of the Baltic States," The White House, accessed April 29, 2018, <https://www.whitehouse.gov/briefings-statements/remarks-president-trump-working-lunch-heads-baltic-states/>.

¹⁹ "Secretary Mattis Hosts Enhanced Honor Cordon Welcoming Minister of Def."

by force” and that the United States will not be deterred in supporting NATO allies against Russian resurgence.”²⁰

Russia has a different perspective on former Soviet satellite states and republics joining NATO. When Georgia and Ukraine were conducting negotiations to join NATO during the presidency of George W. Bush, Russia’s deputy foreign minister Alexander Grushko warned, “Georgia’s and Ukraine’s membership in the alliance is a huge strategic mistake which would have most serious consequences for pan-European security.” Putin himself stated that admitting those two countries, both former Soviet republics, to NATO would represent a direct threat to Russia. Putin threatened during a conversation with President Bush that “if Ukraine were accepted into NATO, it would cease to exist.”²¹ Additionally, in a speech given during the 2007 Munich Security Conference, Putin asserted:

“It is obvious that NATO expansion does not have any relation with the modernization of the Alliance itself or with ensuring security in Europe. On the contrary, it represents a serious provocation that reduces the level of mutual trust. And we have the right to ask: against whom is this expansion intended? And what happened to the assurances our western partners made after the dissolution of the Warsaw Pact? Where are those declarations today? No one even remembers them. But I will allow myself to remind this audience what was said. I would like to quote the speech of NATO General Secretary Mr. Woerner in Brussels on 17 May 1990. He said at the time that: “the fact that we are ready not to place a NATO army outside of German territory gives the Soviet Union a firm security guarantee”. Where are these guarantees?”²²

²⁰ “Secretary Mattis Hosts Enhanced Honor Cordon Welcoming Minister of Def.”

²¹ John J Mearsheimer, “Why the Ukraine Crisis Is the West’s Fault,” n.d., 12. 3

²² Team of the Official Website of the President of Russia, “Speech and the Following Discussion at the Munich Conference on Security Policy,” President of Russia, accessed April 29, 2018, <http://en.kremlin.ru/events/president/transcripts/24034>.

Putin's frustration in the above quote demonstrates that he sees no reason for NATO to exist, let alone expand, but since it has expanded, NATO is Russia's enemy.²³ Whether admitting the Baltic states into NATO was a good idea or not is still highly debated in international affairs. The Baltic nations existence in the alliance gives them a sense of security because of Article 5. However, current Russian activity is providing evidence that placing NATO on the border of Russia may have fueled Russian resentment and anger bringing instability to the region.

Recent Russian Activity has Cause for Concern

Estonia has already felt the brunt of a revisionist Russia's anger. In 2007, Russian hackers overwhelmed Estonia's digital infrastructure in response to the Estonia government's decision to relocate a Soviet war memorial within their capital city of Tallinn.²⁴ Estonians moved the artifact from the town square to a local cemetery. In response, Russian sympathizers in the country rioted over the course of two days, resulting in 153 injuries and 800 arrests.²⁵ The Russian government unequivocally stated that moving the statue would be "disastrous for the Estonians" and over the next several days, Estonia suffered an unprecedented cyber-attack that crippled banks, broadcasters, police, and the national government.²⁶ Later that spring, Putin commented during a speech given in conjunction with the annual "Great Patriotic War" victory parade in Moscow that "those who are trying today to

²³ Wendt, *Social Theory of International Politics*. 260 Referring to Dr. Wendt's discussion on the social construction of international politics.

²⁴ "Russians in Estonia: A Case Study in Offensive Structural Realism," The Bridge, accessed October 27, 2017, <https://thestrategybridge.org/the-bridge/2017/6/16/russians-in-estonia-a-case-study-in-offensive-structural-realism>.

²⁵ "Russians in Estonia."

²⁶ "Russians in Estonia."

desecrate memorials to war heroes are insulting their own people, sowing discord and new distrust between states and people.”²⁷ Russia’s disproportionate response to the desecration of a Soviet artifact is a clear manifestation of Russia’s contempt for the independence of its former territories and Putin’s design to dominate Russia’s periphery.

Russia’s actions in Georgia should have given the West another, even greater cause for concern. In this vein, Mearsheimer advised that “Russia’s invasion of Georgia in August 2008 should have dispelled any remaining doubts about Putin’s determination to prevent Georgia and Ukraine from joining NATO.”²⁸ The invasion also graphically illustrated Russia’s sense of insecurity regarding NATO expansion. Georgian President Mikheil Saakashvili had decided in the summer of 2008 to forcibly reincorporate two separatist regions, Abkhazia and South Ossetia, in hopes of paving a path for Georgia to enter NATO.²⁹ Putin demonstrated that he aimed to keep Georgia weak, divided, and out of NATO by sending his forces into both of these regions to fight on the side of the separatists.³⁰ The Kremlin declared that it was acting to defend fellow Russians whom it maintained were under threat from Georgian forces. Moscow succeeded in crippling Georgia, and more importantly for Putin, prevented Georgia from entering NATO.

Russia’s invasion of Crimea in March 2014, using so-called little “green men” (Russian naval infantry and special-operations forces wearing no insignia), demonstrated “Russia’s propensity to use military force as an instrument of policy—and even as an instrument of choice.”³¹

²⁷ “Russians in Estonia.”

²⁸ Mearsheimer, “Why the Ukraine Crisis Is the West’s Fault.”

²⁹ Mearsheimer.

³⁰ Mearsheimer.

³¹ Pavel K. Baev, “What Drives Moscow’s Military Adventurism?,” *Current History; Philadelphia* 115, no. 783 (October 2016): 251–57.

The following month, Russian agents and sympathizers turned the Donbas region of eastern Ukraine into a war zone, a war which continues to this day and has cost thousands of lives and displaced millions of civilians.³² Additionally, Russian involvement in Syria, and provocative mock attacks against U.S. Navy ships in the Baltic Sea or Black Sea occur weekly.³³

The successful and sustainable transformation of the Baltic states and Georgia to democratic market economies endangered Russia's own authoritarian-kleptocratic model of development. Russia has used all instruments of power to retain a degree of control over developments in the Baltic region, undermine the Baltic states sovereignty and independence, and drive a wedge between them and their partners in NATO and the EU.³⁴

Putin's aim of delegitimizing NATO could lead him to take actions which may threaten the Baltic region; if NATO did not react, this would not only undermine NATO's deterrent value but most likely symbolize the end of the alliance. As historian Mary Hampton noted, "If Putin's Russia manages to shed the slightest doubt on cohesion and solidarity between the Baltic states and their partners in NATO and the EU, those organizations will be politically damaged beyond repair."³⁵

To bolster NATO's eastern flank, the United States implemented the European Reassurance Initiative (ERI) in 2015. U.S. Major General David Allvin is responsible for strategy and policy in the European theatre and has been the Supreme Allied Commander, General Curtis Scaparrotti's, ERI force posture coordinator. General Allvin said, "this

³² Baev. 251-257

³³ Baev. 251-257

³⁴ Hampton and Hancock, *The Baltic Security Puzzle*. 126

³⁵ Hampton and Hancock. 126

[ERI] is one of our nation's commitments to Europe, and it demonstrates our strong dedication to the trans-Atlantic bond and the defense of our allies.”³⁶ His main points on ERI include:

1. *Increased presence*: "We're proposing a more robust U.S. military rotational presence throughout the theater that is capable of deterring and, if required, responding to any regional threats."
2. *Exercises and training*: "EUCOM is increasing the training tempo to improve overall readiness and interoperability with U.S. allies and partners."
3. *Enhanced pre-positioning*: "This is a strategic placement of equipment throughout the theater that supports our steady-state activities while also enabling us to rapidly deploy forces into theater if required."
4. *Improving infrastructure*.
5. *Building partnership capacity*: "This strengthens the ability of allies and partners to defend themselves and enables their full participation with U.S. operational forces.”³⁷

The U.S. recognition of the severity of Russia's recent actions and the inherent threat it poses to NATO and U.S. interests is evident through ERI expenditures. In 2015, ERI was slated for \$985 million. In 2016, the amount was reduced slightly to \$789 million, followed by a significant increase to \$3.4 billion in 2017.³⁸ During this past year, U.S. policy in Europe shifted from emphasizing assurance to emphasizing deterrence; simultaneously, ERI turned into EDI, or the

³⁶ "2018 Budget Request for European Reassurance Initiative Grows to \$4.7," U.S. DEPARTMENT OF DEFENSE, accessed October 27, 2017, <https://www.defense.gov/News/Article/Article/1199828/2018-budget-request-for-european-reassurance-initiative-grows-to-47-billion/>.

³⁷ Summarized from "2018 Budget Request for European Reassurance Initiative Grows to \$4.7."

³⁸ Eerik Marme and Gabriel White, "European Deterrence Initiative," n.d., 8.

European Deterrence Initiative. The approved spending for 2018 is currently at \$4.7 billion and the proposal for 2019 is \$6.5 billion—representing over an eight-fold increase in just three years.³⁹

This increased spending corresponds with a dramatically reduced U.S. force posture in Europe, albeit these transitions were part of a longer-term trend. *DefenseNews* reported the decline of American Army troops in Europe from 200,000 during the 1980s to around 33,000 in 2015. More proximately, since 2006 the Army has closed over 100 different European sites, retaining “only two permanently stationed brigade combat teams” and concentrating most of its remaining forces in Italy and Germany, nowhere near NATO’s eastern flank.”⁴⁰ Now that the funding is going towards deterrence and not assurance, the limitations on what U.S. capabilities the program will fund have been reduced. For example, under ERI, bolstering munition supplies was not an option. Under EDI, the proposal calls for “40 Abrams tanks for \$455 million, 61 Patriot Missile Segment Enhancement missiles for \$261 million, 66 Armored Multi-Purpose Vehicles for \$230 million, 61 Bradley Fighting Vehicles for \$205 million and High-Mobility Artillery Rocket System rockets for \$171 million.”⁴¹

While these amounts seem large and complement rotational Enhanced Forward Presence battle groups supplied by other NATO allies, they serve as merely a trip wire if Russia were to invade the Baltics. The new forces added to the Baltic region would not match even a limited Russian attack. Because of the tyranny of distance and the reduction of forces located in Europe today compared to the Cold War era, “It would

³⁹ Jen Judson, “Funding to Deter Russia Reaches \$6.5B in FY19 Defense Budget Request,” *Defense News*, February 12, 2018, <https://www.defensenews.com/land/2018/02/12/funding-to-deter-russia-reaches-65b-in-fy19-defense-budget-request/>.

⁴⁰ Judson.

⁴¹ Judson.

be difficult, dangerous, and time-consuming, moreover, for the United States to surge personnel, let alone [provide] the heavy equipment needed to combat Russia's maneuver forces” in a conventional war in the Baltic states.⁴²



Figure 2: Possible Russian Moves

Source: David Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO's Eastern Flank: Wargaming the Defense of the Baltics* (RAND Corporation, 2016), <https://doi.org/10.7249/RR1253>.

If Russia were to go to war over the Baltics, it would look a lot like the graphical depiction above according to the RAND Corporation.

⁴² Elbridge Colby and Jonathan Solomon, “Facing Russia: Conventional Defence and Deterrence in Europe,” *Survival* 57, no. 6 (November 2, 2015): 21–50, <https://doi.org/10.1080/00396338.2015.1116146>.
31

Moscow would leverage their geographical position by overwhelming the region with conventional forces and strike assets, which could then be defended by anti-access area-defense (A2/AD) assets and ultimately, their nuclear forces, if required.⁴³ There are many possible ways this could unfold. The Russian approach in the Baltic region could resemble a Soviet version of what the West would consider AirLand Battle doctrine, an approach to combat introduced in 1982 by the U.S. Army. The purpose of AirLand Battle was to change the traditional defensive posture of NATO to address the problem of “Warsaw Pact numerical advantages in tanks, artillery, aircraft, armored personnel carriers, and soldiers.”⁴⁴ AirLand Battle doctrine shifted the Western way of war from “traditional emphasis on tactics” to a “more operational focus involving the rapid movement of men and materials and the avoidance of decisive confrontations with the enemy.”⁴⁵

Russia could leverage its geographical position, including its territory in Kaliningrad, to mobilize its maneuver, artillery, and surface-to-surface missile battalions in an attempt to capture Tallinn and Riga as portrayed during a RAND wargame conducted by military experts in 2016.⁴⁶ Russian anti-access systems such as the S-300 and S-400 surface-to air missiles (SAMS), and surface-to-surface missiles such as the Iskander located in St Petersburg and Kaliningrad, would deny or delay NATO’s ability to maneuver forces or establish air superiority while Russia’s artillery, tactical missile systems, and close air support could suppress and attrit NATO’s frontline forces.⁴⁷ Russian air superiority aircraft such as the SU-27 and SU-35 would likely fly combat air patrols

⁴³ Colby and Solomon. 24

⁴⁴ Douglas Skinner, “AirLand Battle Doctrine,” *Professional Paper 463*, September 1988, 51. 1

⁴⁵ “AirLand Battle Doctrine.” 1

⁴⁶ Shlapak and Johnson, *Reinforcing Deterrence on NATO’s Eastern Flank*.

⁴⁷ Colby and Solomon, “Facing Russia.” 24

over the Baltics ensuring a second line of defense if NATO 5th Generation fighters were able to penetrate the A2/AD environment. As mentioned earlier, key findings from the RAND exercise described the outcome as “a disaster” for NATO: Russian forces eliminated or bypassed all resistance and were at the gates of Riga, Tallinn, or both, between 36 and 60 hours after the start of hostilities.⁴⁸

The Russian operational approach would likely take a more traditional Soviet course of action by implementing Deep Battle Doctrine, leveraging Kaliningrad as a spring board to conduct military effects deep into Europe. Deep Battle found its roots in a memorandum by Soviet military commander and theorist Vladimir Triandafillov in 1931, outlining a style of combat “which sought to employ the enhanced offensive qualities of the new technology [the tank] to achieve a breakthrough of the enemy’s tactical defense and set the stage for the operational exploitation of the success.”⁴⁹ Triandafillov died during Deep Battle’s infancy, but his ideas continued through the work of strategists such as Mikhail Tukhachevskii, who was later executed by Stalin during the purge. Triandafillov’s theoretical conclusions were significant because they recognized the tank’s contribution to warfare through its range, mobility, and destructive power, “enabl[ing] us to strike the enemy simultaneously throughout the entire depth of his position, as opposed to current forms of battle and attack, which may be characterized as the consecutive suppression of successive parts of the battle order. The means are used to paralyze the fire of all defensive weapons, regardless of the depth of their deployment, to isolate one enemy unit from another, to disrupt cooperation between them, and to destroy them in detail.”⁵⁰

⁴⁸ Shlapak and Johnson, *Reinforcing Deterrence on NATO’s Eastern Flank*. 5

⁴⁹ Richard W. Harrison, *The Russian Way of War: Operational Art, 1904-1940*, Modern War Studies (Lawrence, Kan: University Press of Kansas, 2001). 186

⁵⁰ Harrison. 187

Tukhachevskii would later take Triandafillov's theory and put it into practice.

While Deep Battle theory originally centered around the advent of the tank, it can be applied using the air domain as well. Deep Battle would use Kaliningrad as a forward post extending the battlefield far into the skies over Europe. Russian aircraft have the capability to strike not only NATO aircraft in the local vicinity, but high value assets such as Airborne Early Warning (AEW), tanker, and ISR aircraft traditionally located for beyond surface to air weapons engagement zones.⁵¹ Russian offensive counter-air operations would disrupt NATO's defensive counter-air screens protecting high-value aircraft such as the AWACS.⁵² Additionally, Russia would likely leverage "its *Iskander*-K and -M short-range ballistic and cruise missiles, and Kh-555 and Kh-101 air-launched cruise missiles for deep conventional strikes against NATO bases, air and sea ports of disembarkation, command posts, air- and missile-defense sites, and civil-military transportation and communications infrastructures."⁵³ Given the importance of air superiority to Western military success, this would strike a grave blow, one the United States and its allies are not prepared for in either material or mental terms.⁵⁴

⁵¹ Colby and Solomon, "Facing Russia." 25

⁵² Colby and Solomon. 25

⁵³ Colby and Solomon. 26

⁵⁴ Colby and Solomon. 25

Chapter 3

Tenets of Traditional U.S. Airpower Theory and Employment

Three common tenets have driven the application of airpower throughout history: 1) offense is the best defense; 2) air superiority is fundamental to airpower and 3) traditionally, airpower enthusiasts prefer to use airpower with overwhelming force while remaining within the confines of proportionality; this latter tenet is commonly expressed as “go big or go home.” This chapter will explore each of these tenets through historical applications of airpower, beliefs on when to properly use airpower, and methods on how to coerce opponents by using airpower.

The Best Defense is a Good Offense

Air Doctrine describes the *offensive* as a fundamental Principle of War which enables joint forces to seize the initiative and direct operations as the commander sees fit.¹ This is a current rendition of 19th-century ground-centric philosophy when Clausewitz described the offense as “the outflanking or by-passing of the defender – that is, taking the initiative.”² Current air doctrine considers the best use of airpower as an offensive weapon and success generally occurs only while on the offensive.³ Contemporary airpower theorists such as Colonels John Warden and Phillip Meilinger embody the notion that airpower exists primarily as an offensive weapon. But they were not the first to believe in these principles.

Italian airpower theorist and practitioner Giulio Douhet is one of the first to explore the airplane as a game-changing technology. He

¹ United States Government US Air Force, “Air Force Doctrine Volume 1, Air Force Basic Doctrine 27 February 2015” (CreateSpace Independent Publishing Platform, March 29, 2017). 53

² Carl von Clausewitz, Michael Eliot Howard, and Peter Paret, *On War*, First paperback printing (Princeton, N.J: Princeton University Press, 1989). 530

³ United States Government US Air Force, “Air Force Doctrine Volume 1, Air Force Basic Doctrine 27 February 2015.” 53

critiqued the First World War's application of force as a "failure to understand the exact nature and demands of modern war."⁴ He believed that never at any time during the First World War was there a "death-blow" struck leaving a deep gaping wound and the feeling of "imminent death."⁵ Douhet proclaimed that with the advent of the airplane, along with poison gas and bacteriology, no fortifications can possibly offset its capability to strike mortal blows into the heart of the enemy with lightning speed. Douhet went as far to say that the airplane is the "offensive weapon par excellence" because of its speed and freedom from challenges the land presents to armies.⁶

Expanding on Douhet's theory, Colonel John Warden wrote that a commander must undertake *offensive* air operations, and can do so, if properly executed, with little concern for the defense.⁷ Indeed, Warden called for *parallel targeting*, which refers to the concept of striking so-called enemy centers of gravity such as leadership, the essential production of war material, infrastructure, the population, and fielded military forces and doing so in a compressed period to achieve strategic paralysis.

Warden's views were contemporaneous with Desert Shield / Storm in 1990-91. The United States was witnessing the demise of the Soviet Union, its only peer threat, and was at the zenith of its military power. Having trained and equipped to face a massive Soviet assault in central Germany's Fulda Gap, the U.S.-led military ideally prepared for countering the Soviet-equipped and trained forces of Iraq's dictator Saddam Hussein. Thus, Iraq in 1990 invaded Kuwait at a most

⁴ Giulio Douhet, *The Command of the Air*, USAF Warrior Studies (Washington, D.C: Office of Air Force History, 1983). 14

⁵ Douhet. 14

⁶ Douhet, 14

⁷ John A. Warden, *The Air Campaign: Planning for Combat*, Rev. ed (San Jose: toExcel, 1998). 33

inopportune time. Isolated internationally and bereft of Moscow's support, Iraq faced an enormous U.S. coalition ground force, backed by America's peerless airpower. Desert Storm, the operation to liberate Kuwait, validated Warden's theory when U.S.-led airpower took the *offensive*, struck Iraq's command and control infrastructure in Baghdad, and enabled a timely win for the United States. Airpower eviscerated Iraq's armed forces, economic infrastructure and Command and Control (C2) capability, producing the most lop-sided victory in modern military history.

Meilinger examined the relationship between *offensive* counter-air operations and defensive counter-air operations. On the one hand, he believed that airpower has a defensive nature, illustrated by the Royal Air Force's defeat of the German air assault during the Battle of Britain. On the other hand, he also thought that the best defense is a good offense, as demonstrated during the Combined Bomber Offensive during the Second World War. Meilinger asserted that it is generally wise to use air power's "inherently offensive characteristics to attack and take the initiative" and that the alternative may be costly and result in an indecisive war of attrition.⁸ This echoes something Clausewitz is mistakenly interpreted to advocate for when he purportedly declared the "defense" as a stronger form of war.⁹ But in actuality, Clausewitz understood that the purpose of the defense is not to simply repulse, but to increase the probability of destroying the enemy by allowing one's forces to wear down the opponent and then take the offensive after superiority has been gained.¹⁰

⁸ Phillip S Meilinger and RAAF Air Power Studies Centre, *Critical Factors in the Air Superiority Campaign* (Fairbairn Base, Australia: Air Power Studies Centre, Royal Australian Air Force, 1994). 2

⁹ Clausewitz, Howard, and Paret, *On War*. 370

¹⁰ Clausewitz, Howard, and Paret. 370, 392

Additionally, Meilinger responded to the vision cast in 1988 by Lt. Gen. Michael Dugan, then-Deputy Chief of Staff for Plans and Operations, to create a brief and succinct document that encapsulated the essence of airpower. The result was a pocket-sized book developed as a quick reaction checklist. The book was entitled *10 Propositions Regarding Air Power*, where Meilinger proposed, among other things, that airpower is “primarily an offensive weapon.”¹¹ His purpose was to address the “psychological search for guidelines when in chaos, the tendency to apply scientific concepts of cause and effect to daily activities, and the desire for an understandable system of beliefs to use as an educational tool for young officers.”¹²

Both Warden and Meilinger also arrived at their positions based upon analyses of major air operations and campaigns. Those included the operations conducted by the Israeli armed forces in the 1960s and 1970s. The approach taken by the Israeli Defense Force (IDF) during the Arab-Israeli Six-Day War in 1967 was a textbook demonstration of airpower’s offensive and aggressive nature. The IDF launched a pre-emptive strike against the Arabs’ air forces to seize the initiative, attain air superiority, and gain victory against all odds less than a week later.

Israel assumed Egypt was preparing to attack. Therefore, at 0745 hours on Monday 5 June, IDF warplanes flew in low, under the Arab radar screens, and destroyed the Egyptian Air Force.¹³ In a single morning, Israel launched 500 sorties, destroying 309 out of 340 Egyptian combat aircraft, including all 30 long-range Tu-16 bombers, 27 medium-range Ilyushin Il-28 bombers, 12 Sukhoi Su-7 fighter-bombers, some 90

¹¹ Meilinger, *10 Propositions Regarding Air Power*, 14

¹² Meilinger, “Ten Propositions Emerging Airpower.” 1

¹³ Chaim Herzog and Shlomo Gazit, *The Arab-Israeli Wars: War and Peace in the Middle East from the 1948 War of Independence to the Present*, 2nd Vintage Books ed., rev. and updated (New York: Vintage Books, 2005). 151

MiG-21 fighters, 20 MiG-19 fighters, 25 MiG-17 fighters, and a further 32 transport aircraft and helicopters.¹⁴

With false reporting declaring Egypt's success in countering the Israeli attack, Jordan, Syria, and Iraq joined the fight and commenced their own campaigns against Israel by attacking oil refineries in Haifa Bay, an airfield at Megiddo, a small airport near Kfar Sirkin, and the little town of Netanya on the Mediterranean coast.¹⁵ The IDF struck back and by the evening of the 5th, the Jordanian Air Force had been wiped out, with twenty two Hunter fighters, six transport aircraft, and two helicopters destroyed. Israeli air attacks also cost the Syrian Air Force 32 MiG-21, 23 MiG-15, and MiG-17 fighters, and 2 Ilyushin Il-28 bombers, constituting two-thirds of its total strength.¹⁶ By the end of the second day, 416 Arab aircraft were destroyed, 393 while on the ground, while Israel lost only 26.¹⁷ The initial pre-emptive strike against Egypt and rapid and aggressive counter attacks on Jordan and Syrian air forces granted the IDF air superiority. They were then able to support the army in inflicting carnage on Arab ground forces. The war culminated with a hastily negotiated ceasefire that left Israel in possession of the Sinai from Egypt, the Golan Heights from Syria, and the West Bank from Jordan.¹⁸ RAND analyst and author Benjamin Lambeth, in his book *The Transformation of American Airpower*, commented that "western observers marveled at Israel's bold use of its fighters during the opening hours of the Six-Day War in June 1967, destroying Egypt and Syria's air forces on the ground by surprise and

¹⁴ Herzog and Gazit. 152-153

¹⁵ Herzog and Gazit. 153

¹⁶ Herzog and Gazit. 152-153

¹⁷ Herzog and Gazit. 153

¹⁸ Herzog and Gazit. 190

thus ensuring that the remainder of Israel's preemptive attack would be unmolested by enemy air action."¹⁹

Air Superiority is Fundamental to Airpower

Doctrine and theory suggest airpower must be used on the offensive, first obtaining air superiority at all costs, then to attack an enemy's centers of gravity to achieve strategic paralysis and get inside their decision chain in order to achieve victory. Air superiority is one of the core missions of the U.S. Air Force. The current U.S. National Defense Strategy demands that airpower be able to "strike various targets inside adversary air and missile defense networks to destroy mobile power-projection platforms. This will include capabilities to enhance close combat lethality in complex terrain."²⁰ During his tenure as Chief of Staff of the Air Force, General Mark Welsh claimed that "air superiority is fundamental to the American way of war."²¹

Douhet described the "command of the air" as being in "a position to prevent the enemy from flying while retaining the ability to fly oneself."²² Warden expanded on this concept and made central to his thesis the idea that "*air superiority* is crucial, that a campaign will be lost if the enemy has it, that in many circumstances it alone can win a war, and that its possession is needed before other actions on the ground or in the air can be undertaken."²³ Additionally, Meilinger and others call for aggressive action to establish air superiority during the initial phase of a war. Meilinger believed that "the concept guiding the air commander

¹⁹ Benjamin S. Lambeth, *The Transformation of American Air Power*, Cornell Studies in Security Affairs (Ithaca, N.Y: Cornell University Press, 2000). 2

²⁰ James Mattis, "Summary of the 2018 National Defense Strategy," n.d., 14.

²¹ "Welcome to the School of Advanced Air and Space Studies (SAASS)," Air University (AU), accessed May 6, 2018, <http://www.airuniversity.af.mil/SAASS/Display/Article/802939/welcome-to-the-school-of-advanced-air-and-space-studies-saass/>. Air Superiority informational video.

²² Douhet, Giulio, *The Command of the Air*. 24

²³ Warden, *The Air Campaign*. 141

should remain: avoid distractions until *air superiority* has been achieved” and “if you lose the air war you lose the war.”²⁴ That thinking clearly influenced the planning for and execution of Operation Desert Storm.

The strategic purpose of Desert Storm was an offensive operation dependent on *air superiority* to liberate Kuwait and shatter Iraqi power rather than a defensive operation to protect Persian Gulf allies.²⁵ Advancements in operational planning and technological developments resulted in arguably “the most decisive victory in the 20th century.”²⁶ On August 8, 1990, President George H.W. Bush announced four national policy objectives following the Iraqi invasion of Kuwait: 1) complete and unconditional withdrawal of all Iraqi forces from Kuwait; 2) restore Kuwait’s legitimate government; 3) protect the lives of American citizens abroad and; 4) promote the security and stability of the Persian Gulf area.²⁷ While regime change was not a national objective, Warden, who was initially the face of the Air Force among joint force planners during this operation, sold *air superiority* to Joint Force Commander U.S. Army General H. Norman Schwarzkopf as a means of guaranteeing subsequent devastating attacks on Iraqi command and control, severing communications between Saddam Hussein in Baghdad and his military forces, and opening those forces to a withering assault from the air.²⁸

Although Warden was dismissed from the planning efforts before the start of Desert Storm, phase one of four in the air campaign

²⁴ Meilinger and RAAF Air Power Studies Centre, *Critical Factors in the Air Superiority Campaign*. 2

²⁵ Thomas A. Keaney and Eliot A. Cohen, *Revolution in Warfare? Air Power in the Persian Gulf* (Annapolis, Md: Naval Institute Press, 1995). 29

²⁶ See Lambeth, *The Transformation of American Air Power*. 103

²⁷ John Andreas Olsen, *Strategic Air Power in Desert Storm*, Cass Series--Studies in Air Power 12 (London ; Portland, OR: Frank Cass, 2003). 1

²⁸ Lambeth, *The Transformation of American Air Power*. 147

replicated Warden's concept he dubbed "Instant Thunder."²⁹ Phase one's primary purpose was to target Iraq's nuclear, chemical, and biological facilities and its national air defense system and airfields to pave the way for phase two: gain *air superiority* over Kuwait.³⁰ The advent of stealth technology made the U.S. Air Force extremely lethal. The belief during Desert Storm was that "stealth carries its own air superiority with it; wrapped in a protective cocoon the stealth aircraft can go wherever it wishes with impunity."³¹ The F-117 Stealth fighter served instead as an air superiority bomber. Phase one saw the use of F-117s, cruise missiles and Army helicopters to punch "holes" in Iraq's IADS. Phase Two quickly followed exploiting these holes to establish air superiority.

Coalition air commanders employed an array of Air Force F-15Cs and Navy F-14s for air-to-air combat, E-3s and RC-135s for airborne command, control, and situational awareness, EF-111s and EA-6s for electronic jamming, and F-4 Wild Weasel aircraft for firing High-Speed Anti-Radiation missiles (HARM) at Iraqi search and tracking radars.³² Additionally, decoys were used to stimulate radar systems, allowing F-4s to engage and destroy the targets.³³ Out of the 1,961 HARMs expended during Desert Storm, almost half of them were delivered during the first week, creating an environment of fear among Iraqi radar operators. After the first week, most radars were not even turned on enabling the services to exploit air superiority and culminate the war.³⁴

²⁹ Keaney and Cohen, *Revolution in Warfare?* 31 While Warden's plan caught the attention of Generals Schwarzkopf and Powell to provide President H.W. Bush an airpower option to liberate Kuwait, Joint Force Air Component Commander General "Chuck" Horner thought Warden was too over-the-top. Horner dismissed Warden but kept his planning team from Check Mate, including (then) Lt Col Dave Deptula, to plan operations during Desert Shield and Desert Storm.

³⁰ Keaney and Cohen. 30-31

³¹ Meilinger and RAAF Air Power Studies Centre, *Critical Factors in the Air Superiority Campaign*. 16

³² Keaney and Cohen, *Revolution in Warfare?* 12

³³ Keaney and Cohen. 12

³⁴ Keaney and Cohen. 12

Since Douhet, air superiority has been Air Force operation's backbone. The importance of seizing the initiative by taking the offensive and establishing air superiority to command the air transition to the third and final tenet, proportionality. Conventional wisdom describes the U.S. intervention into Vietnam as an embarrassing defeat for the Americans. The graduated use of airpower during Operation ROLLING THUNDER stood as a lesson to air and military strategists on how not to conduct war, even when their political masters asked them to do so.

Go Big, or Go Home

I am told that you are studying airpower theory, and have studied airpower history. My hope is that airpower theory has told you that there is a right way to use airpower. At least I believe there is a right way to use airpower, and that is to maximize the potential of our capabilities. That means to me that on the first day or the first night of the war, you attack the enemy with incredible speed and incredible violence. Violence that he could never have imagined. It should be his worst possible nightmare with an incredible level of destruction, relative again, to what he thought was possible. You should use every bit of technology that you have to shock him into inaction until he is paralyzed ... that was how I thought airpower should be used in Serbia.

-Lieutenant General Michael Short, during a lecture at the Royal Norwegian Air Force Academy after Allied Force.

The soldier trained to revere offensive spirit does not feel comfortable with the argument that the defensive is obviously the stronger form of war, and he especially does not like being told that the military aim must always be subordinated to the political objectives laid down by the civilian leaders.

-Bernard Brodie

The belief that airpower should be used with overwhelming force when nations decide to go to war is the third of three airpower tendencies presented in this paper. Theories on coercion, political doctrine, and airpower application during Allied Force encompass Lieutenant General Short and Bernard Brodie's thoughts above on airpower application and codify its forceful potential.³⁵ This section will explore the tenacity of airpower zealots' when lobbying to apply airpower with great force even when political-masters choose otherwise.

Adherence to theories of coercion suggests that proper use of airpower demands overwhelming force. Byman, Waxman, and Larson define coercion as the "use of threatened force, including the limited purpose of actual force to back up the threat, to induce an adversary to behave differently than it otherwise would."³⁶ They believe that the success of coercive operations is primarily a product of escalation dominance, escalation dominance being the "ability to escalate credibly against an adversary."³⁷ Byman, Waxman, and Larson assert that the U.S. Air Force is "increasingly able to deploy rapidly and bring to bear quickly tremendous strike power around the globe" but warn that airpower should be used with restraint and if applied under inauspicious conditions, airpower's ability to coerce will be diminished."³⁸ It is important to note that "restraint" here does not mean "limited" or "graduated." Rather, Byman, Waxman, and Larson are referring to politicians not to use airpower unless they are willing to use it with devastating lethality.³⁹

³⁵ Dag Henriksen, *NATO's Gamble: Combining Diplomacy and Airpower in the Kosovo Crisis, 1998-1999* (Annapolis, Md: Naval Institute Press, 2007). 191 See also forward by Bernard Brodie in Clausewitz, Howard, and Paret, *On War*. 48

³⁶ Byman, Waxman, and Larson, *Air Power as a Coercive Instrument*. 1

³⁷ Byman, Waxman, and Larson. 30

³⁸ Byman, Waxman, and Larson. 3, 139

³⁹ Byman, Waxman, and Larson. 139. Byman, Waxman, and Larson support Eliot Cohen argument that airpower should be used with devastating lethality against targets in their conclusion.

Political doctrine also suggests the military should be used in a “go big or go home” manner. The Weinberger-Powell Doctrine was promulgated by Secretary of Defense Casper Weinberger and supported by Joint Chiefs of Staff General Colin Powell in the 1980s in response to what many in military and political circles saw as a fatally flawed U.S. military strategy used during Vietnam. The doctrine was guiding policy during Desert Storm, ensuring the United States committed force only to support U.S. vital interests, and when it committed such force, that it did so with overwhelming force, that it would “go big.” These two concepts, among others in the doctrine, were articulated as such: “If we decide that it is necessary to put combat troops into a given situation, we should do so wholeheartedly and with the clear intention of winning; once U.S. interests are in jeopardy, overwhelming force must be applied against clear political objectives as a last resort with reasonable assurance of enduring public and congressional support.” While the Weinberger-Powell doctrine no longer influenced policy during Operation Allied Force in 1999, these two tenets still resonated with airpower planners. Operation Allied Force, illustrated below, served as an example of how the concepts behind the Weinberger-Powell doctrine and coercion theory influenced airpower application against a weaker competitor.

Operation Allied Force was a NATO-led air-only campaign launched in the spring of 1999 to dissuade the Federal Republic of Yugoslavia’s (FRY) President Slobodan Milosevic from committing acts of genocide against the Kosovar Albanians. U.S. General Wesley Clark, Commander of U.S. European Command and NATO’s Supreme Allied Commander, was responsible for the campaign. Strategists with a firm understanding of airpower application attempted to overlay airpower’s aggressive template onto an uncertain political strategy. However, Clark’s expectations from his air planners was the development of options which gradually increased air attacks in intensity to 1) coerce

Milosevic to give in due to actual and prospective losses; 2) strike Serb forces on the ground to slow or halt ethnic cleansing; 3) deter a broader conflict, and 4) follow the (coercive) model of Bosnia.⁴⁰

To fulfill Clark's request, air strategists resorted to the traditional view of airpower application and returned with an option which resembled Desert Storm, focusing on centers of gravity such as FRY's capital, Belgrade, in an effort to induce "strategic paralysis" across the Yugoslav government and armed forces. Author Dag Henriksen described this approach as a poor fit for the political nature of the Kosovo crisis: "The Air Force's doctrinaire focus on decisive force and high-intensity warfare proved to be an institutionalized hindrance in terms of crafting a strategy based on the political realities in Belgrade – or on the perspectives, limitations, and political maneuvering room of the various governments within the NATO alliance. As a result, the U.S. Air Force was unprepared for the coercive diplomacy it was intended to support."⁴¹

After Clark's and NATO's rejection of the initial air strategy, a plan for which Warden would have lobbied, NATO's new air campaign consisted of three escalating phases, with phase one aiming to "establish air superiority."⁴² The method of establishing air superiority over Kosovo involved creating a no-fly zone south of a latitude of forty-four degrees north and degrading Milosevic's command and control network along with attacking his IADS.⁴³ Taking down IADS promised the threat of further devastation that the Serbs could not defend against. However,

⁴⁰ Henriksen, *NATO's Gamble*. 143 The Coercive model of Bosnian operations embodied the U.S. belief that the only language the Serbs would respect was force, and that airpower would provide the force needed to achieve political goals. Henriksen. 109

⁴¹ Henriksen.30

⁴² Henriksen. 13

⁴³ Henriksen. 13

U.S. Joint Chiefs of Staff, General Joseph Ralston, wanted to go “downtown” and argued with General Wesley Clark on the initial phase of NATO’s air operation: “Bombing surface-to-air missile sites—why the hell would Milosevic care about something like that? That was not going to cause him to review or change, and that was basically what was on the target list for the first three days—it was defensive systems.”⁴⁴ While establishing air superiority is a tenet of airpower, the graduated method statesmen chose to achieve this tenet was contentious among Air Force generals.

Additionally, airpower strategists underestimated Milosevic’s ability to apply lessons learned from observing the Arab-Israeli conflict and U.S. actions during Operation Desert Storm. Milosevic shocked NATO’s leaders by not capitulating the first week of operations and surprised air strategists by becoming a formidable opponent against the world’s leading airpower. Milosevic’s air defense doctrine of using air defense radars to intermittently pulse air superiority assets weakened NATO’s ability to counter the threat posed by his IADS. The Serbian operations against Kosovar Albanians did not present suitable targets to NATO air units as they operated only in small units, mixed in with civilian infrastructure. Air strategists began to publicly blame NATO for a lack of a coherent strategy and excessive restraints on airpower. General Michael Short, the air commander responsible for the air campaign, began to view Allied Force’s gradual approach as one that mimicked the ineffectual gradualism of the Vietnam War’s Rolling Thunder. He was frank in airing his feelings on NATO’s controls by publicly claiming that “the graduated campaign was counter to all of his professional instincts.”⁴⁵ Knowing that NATO would not employ ground troops—a

⁴⁴ Henriksen, *NATO’s Gamble*. 19

⁴⁵ Lambeth, *The Transformation of American Air Power*. 219

fact confirmed through public statements made by U.S. President Bill Clinton—Milosevic ratcheted up his acts of violence against the Kosovar Albanians. NATO now had to escalate, seeing that Milosevic had called its bluff. The alliance's prestige and cohesion were on the line.

Growing political frustrations and the realization that Milosevic's ethnic cleansing was accelerating led to a relaxing of target restrictions and a shift in the campaign's focus. With many targeting restraints now lifted and NATO discarding any concern for Milosevic's ability to escalate, because he did not have the means to do so, airpower went "downtown" and attacked key government and economic targets in Belgrade and across the country.⁴⁶ Isolated and facing economic ruin, Milosevic eventually capitulated. NATO saved the Kosovar Albanians without a single loss of life from among the alliance forces and without the deployment of ground forces. Milosevic's decision to come to the negotiating table quickly after NATO released the ferocity of airpower led air strategists to believe that they were ultimately correct in their general assumptions about the appropriate use of airpower. The perceived causal results deepened U.S. air strategists' commitment to use airpower as an offensive arm, gaining air superiority to then unleash a nearly unstoppable campaign of punishment against an opponent. Allied Force still serves as a case study for airpower advocates who are looking for an example where airpower was eventually decisive on its own when unleashed fully. The analogy is dangerous, though.⁴⁷ What the case study does not display is Milosevic's inability to escalate in response to the U.S.-led NATO air campaign to a threatening level.

⁴⁶ Henriksen, *NATO's Gamble*. 20

⁴⁷ Yuen Foong Khong, *Analogies at War: Korea, Munich, Dien Bien Phu, and the Vietnam Decisions of 1965*, Princeton Paperbacks (Princeton, N.J: Princeton University Press, 1992). Discusses the pitfalls of using analogies incorrectly and the risks associated with them.

Benjamin Lambeth criticized political elites during Allied Force for restricting airpower's inherent lethality: "U.S. air power has become a more capable instrument of force employment than ever. Even in the best of circumstances, however, it [airpower] can never be more effective than the strategy it is intended to support."⁴⁸ While Lambeth's comment is valid, his advice to politicians to unleash the full ferocity of U.S. airpower will not be appropriate if the goal is to prevent escalation, especially against an opponent like Russia.

Summary

The approaches airpower will take against any opponent are likely to abide by Cohen's recommendation that "When presidents use it [airpower], they should either hurl it with devastating lethality against a few targets, (say, a full-scale meeting of an enemy war cabinet or senior-level military staff) or extensively enough to cause sharp and lasting pain to a military and a society."⁴⁹

Airpower will likely take the following methods to achieve these effects: First, those who wield airpower's capabilities will attempt to take an *offensive* approach as being on the offensive seizes the initiative. 18th-century theorist Clausewitz, early 20th-century theorist Douhet, and late 20th-century advocates such as Meilinger and Warden have expressed the power of the offensive. The Six Day War was a prime example what taking the "offensive" looks like in battle when the Israelis made a pre-emptive strike against their Arab opponents resulting in a military success against formidable opponents six days later. It is easy

⁴⁸ Lambeth, *The Transformation of American Air Power*. 232

⁴⁹ Eliot A. Cohen, "The Mystique of U.S. Air Power," *Foreign Affairs* 73, no. 1 (1994): 109–24, <https://doi.org/10.2307/20045895>. 10

to see why U.S. airpower leaders advocate for taking the offensive and seizing the initiative.

Second, air superiority is fundamental to airpower. Douhet again was a critical helmsman advocating that air superiority is fundamental to winning a war. Military generals such as General Welsh subscribed to the notion of air superiority along with strategists such as Meilinger. Finally, Desert Storm was quintessential airpower application bringing success to the United States and its allies by establishing air superiority early in the war.

Lastly, quotes from General Short and Bernard Brodie opened this chapter with a conceptual view on how to use airpower. Speeches by general officers, strategists, theorists, national policy, and airpower conduct during Operation Allied Force support the notion of using overwhelming force against opponents through airpower. Byman, Waxman, and Larson discuss the notion of “escalation dominance” and warn politicians to restrain the use of airpower unless the targets have *significant* value to the opponent.⁵⁰ Failure to do so will dismantle airpower’s ability to coerce effectively. A national policy such as the Weinberger-Power Doctrine commends that when airpower is employed to compel the enemy to do one’s will, commanders are best served when they use airpower in a violent, aggressive manner rather than in a campaign of graduated pressure with ambiguous objectives. Finally, Operation Allied Force demonstrated the tension between Air Force generals and policymakers when airpower was not used with overwhelming force against critical infrastructure. From this description of three, among others, tenets of airpower, the following chapter will assess these approaches against Russia.

⁵⁰ Byman, Waxman, and Larson, *Air Power as a Coercive Instrument*. 138

Chapter 4

Testing an Assumption

A plausible conflict scenario between Russia and the North Atlantic Treaty Organization (NATO) was wargamed between summer of 2014 to spring of 2015 by analysts from the RAND corporation and NATO officers. The results were sobering for NATO planners, showing that “Across multiple games using a wide range of expert participants in and out of uniform playing both sides, the longest it has taken Russian forces to reach the outskirts of the Estonian and/or Latvian capitals of Tallinn and Riga, respectively, is 60 hours.”¹ The wargame’s Red Team [Russia] leveraged Kaliningrad Oblast’s strategic location and the combat power of 27 maneuver battalions in an attack to occupy either Estonia, Latvia, or both and present NATO with a rapid “fait accompli.”²

The RAND analysis alerted NATO of its inability to protect the most vulnerable members of its alliance. Russia’s attack on the Baltic region would affect NATO’s prestige and deterrence capability, resulting in the potential dissolution of the alliance and/or presenting the West with either a new “Cold War,” a costly counter-offensive, or strategic failure. The RAND analysts concluded their report with the following recommendation: “further gaming indicates that a force of about seven brigades, including three heavy armored brigades, adequately supported by airpower, land-based fires, and other enablers on the ground and ready to fight at the onset of hostilities—could suffice to prevent the

¹ David Shlapak and Michael Johnson, *Reinforcing Deterrence on NATO’s Eastern Flank: Wargaming the Defense of the Baltics* (RAND Corporation, 2016), <https://doi.org/10.7249/RR1253>. 5

² Shlapak and Johnson.

rapid overrun of the Baltic states.”³ This chapter explores what “adequately supported by airpower” may look like against Russia and if the traditional employment of that airpower ought to be a concern for escalation.

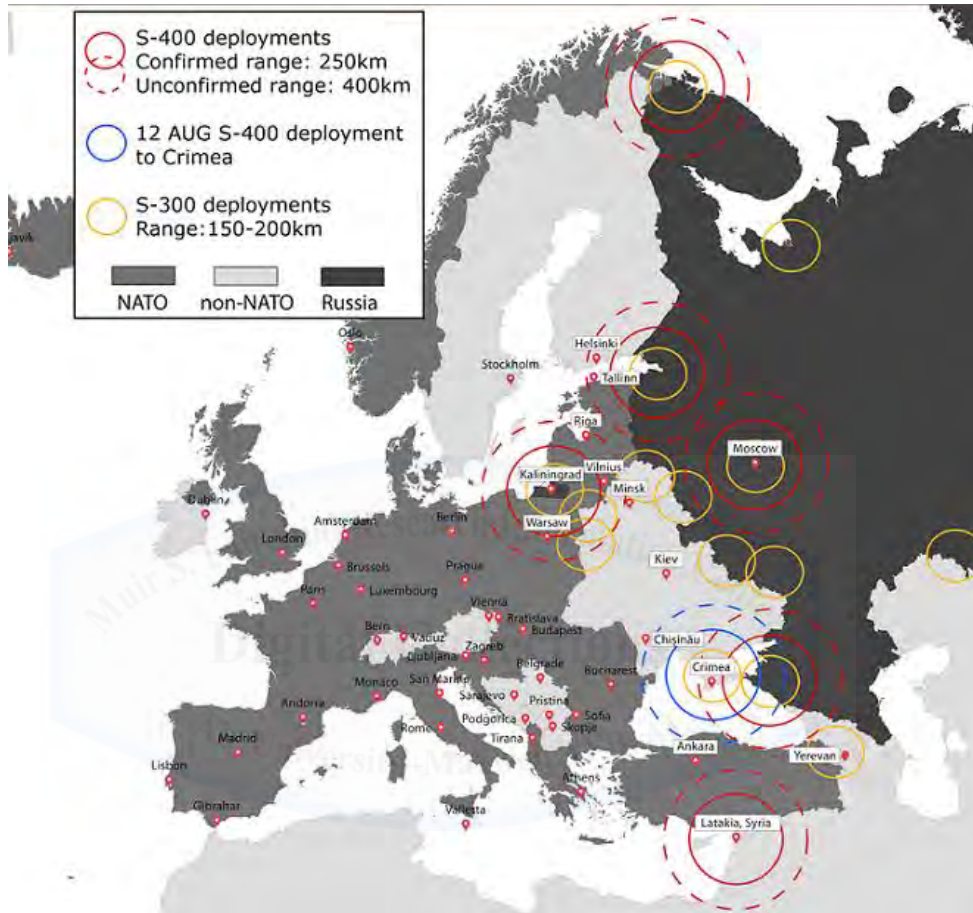


Figure 3. Graphical Depiction of Air Defense Component of an A2/AD Environment

Source: <https://foreignpolicyblogs.com/2016/10/25/bubble-trouble-russia-a2-ad/>

Since the end of the Cold War, Russia has specialized in surface-based air defense systems as seen in Figure 3 above. Russian doctrine embraces the use of “mutually supporting” air defense weapons

³ Shlapak and Johnson. 5

throughout a wide range of altitudes.⁴ The Soviet-era defense architecture evolved significantly over the years. The 1960s defense structure integrated systems such as the S-75s (SA-2) and the S-200 (SA-5) long-range missile systems; the S-300 series (SA-10) entered service in 1979 bringing a new lethal capability of engaging several targets simultaneously to the Soviet defense network.⁵

According to a Joint Strike Fighter assessment regarding A2/AD, the Russians reengineered their IADS significantly after the embarrassing failure of both Soviet air defense doctrine and technology against the U.S. and its allies during Desert Storm. First, Russian SAMS today have a better ability to “shoot and scoot” inside 5 minutes, making suppression very difficult because there is little time for opposing forces to acquire the target after the battery initially exposes its position. Second, point defense missiles, or anti-aircraft artillery (AAA), now heavily defend critical search/acquisition and SAM system radars. Third, surveillance and acquisition radars now use longer wavelengths such as L-band, UHF-band, and VHF-band, making stealth aircraft and munitions easier to detect and engage. Lastly, Russian SAM batteries are increasingly autonomous, so if a command and control center is destroyed, the entire IADS does not go down. Enhanced accuracy of the missiles themselves, the use of wireless communications, and extended detection range of the radars have also changed significantly in today’s Russian IADS compared to Soviet systems used by the Iraqis during Desert Storm.⁶

⁴ Stephan Frühling and Guillaume Lasconjarias, “NATO, A2/AD and the Kaliningrad Challenge,” *Survival* 58, no. 2 (March 3, 2016): 95–116, <https://doi.org/10.1080/00396338.2016.1161906>. 100

⁵ Frühling and Lasconjarias. 100

⁶ “Assessing Joint Strike Fighter Defence Penetration Capabilities,” accessed December 6, 2017, <http://www.ausairpower.net/APA-2009-01.html>.

As far as individual weapon systems are concerned, the S-300PM (SA-20) and S-300PMU-2 were introduced to Russia's arsenal of SAMS with a capability to engage ballistic missiles at a range of 150 km and 200 km respectively. General Frank Gorenc, then-Commander of Allied Air Command, said in 2015 that the Russians have improved both their training and equipment over the years and that the advantage the U.S. had from the air is disappearing. The most alarming thing, General Gorenc continues, is Russia's ability to "create anti-access/area denial [zones] that are *very* well defended by batteries of ground-based anti-aircraft missiles."⁷ General Gorenc comments underpin the U.S. National Defense Strategy's description of Russia as now a peer competitor who can establish an A2/AD environment formidable to NATO air planners.

General Gorenc was referring to the Russian air defenses in Kaliningrad, among others. What we see in Kaliningrad today is the addition of the S-400 to Russia's air defense architecture deployed there in retaliation for NATO deployment of forces to central Europe and the Baltic states in 2016.⁸ Putin ordered the placement of the advanced S-400, SA-21 NATO-equivalent SAM, and nuclear-capable surface-to-surface Iskander missiles to Russia's exclave Kaliningrad. The S-400 is designed to be the foundation of Russia's advanced air defense system until beyond 2025.⁹

⁷ "Russians 'Closed The Gap' For A2/AD: Air Force Gen. Gorenc," *Breaking Defense* (blog), accessed May 12, 2018, <https://breakingdefense.com/2015/09/russians-closed-the-gap-for-a2ad-air-force-gen-gorenc/>.

⁸ "New Russia Missiles in Kaliningrad Are Answer to U.S. Shield: Lawmaker," *Reuters*, November 21, 2016, <https://www.reuters.com/article/us-russia-missiles-kaliningrad/russia-to-deploy-s-400-and-iskander-missiles-in-kaliningrad-ria-cites-senator-idUSKBN13G0W9>.

⁹ James C O'Halloran, *Jane's Land-Based Air Defence: 2011-2012* (Couldson; Alexandria: Jane's Information Group, 2011). 100

Kaliningrad's air defense network, and especially its surface-to-air missiles, meets three requirements: First, the effectiveness of the system relies on its ability to detect hostile aircraft, including missiles. Second, accurate coordination between command, control, communications, and intelligence assets will allow for the sensors to tell the defending missiles which targets to destroy. Lastly, rapid deployment, mobility, and hardening enable both sensors and weapon systems to survive.¹⁰ With the S-400 networked in Russia's already elaborate IADS, this system poses a deadly threat to even new and exquisite technology such as the latest 5th generation fighters.



¹⁰ Frank Heilenday, *Principles of Air Defense and Air Vehicle Penetration* (Washington, D.C: CEEPress Books, 1988). 1-5

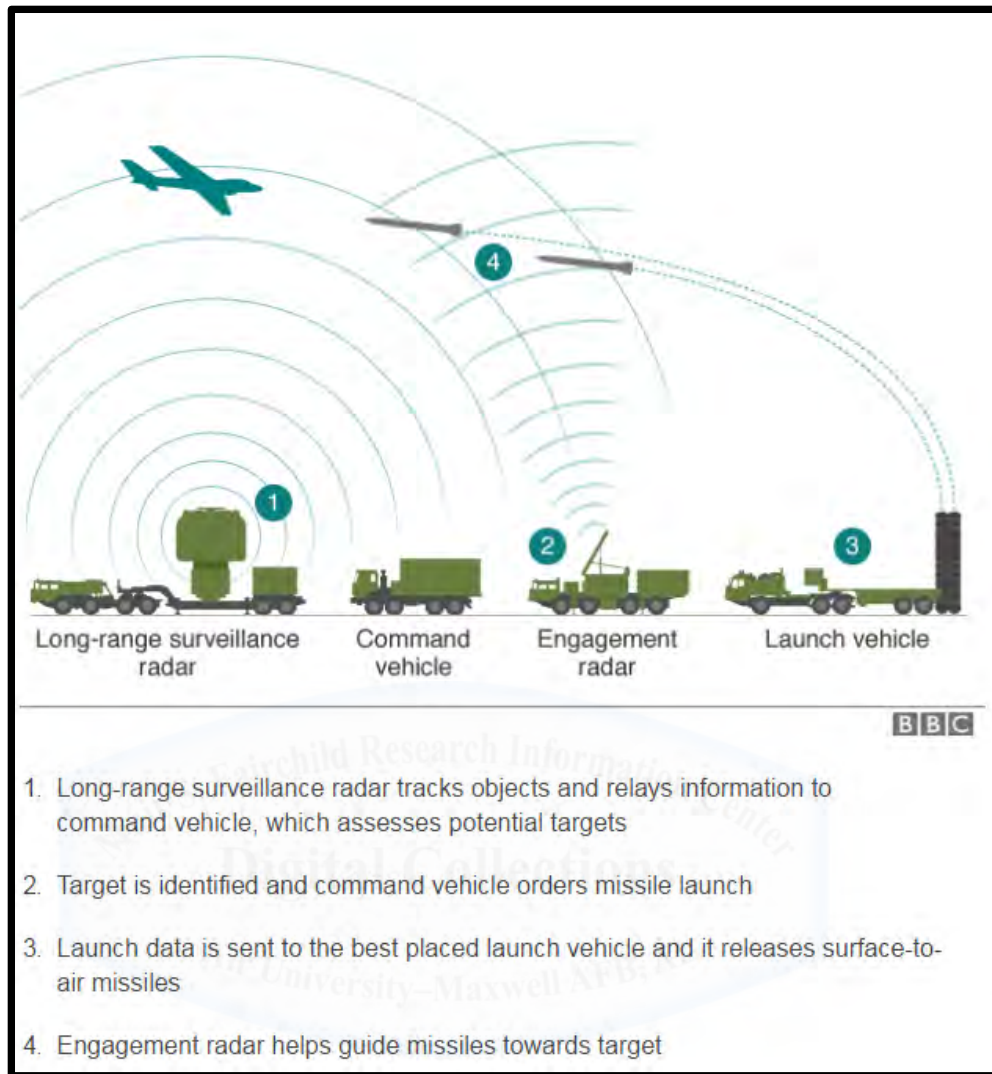


Figure 4: How the S-400 Air Defense System Works

Source: “Bubble Trouble: Russia’s A2/AD Capabilities - Foreign Policy Blogs,” accessed May 10, 2018, <https://foreignpolicyblogs.com/2016/10/25/bubble-trouble-russia-a2-ad/>.

The S-400 / SA-21 as seen in Figure 4 is the most advanced and lethal SAM in Russia’s arsenal. It can engage up to 36 targets simultaneously within the range of 400km and at an altitude of up to 30km.¹¹ The S-400 can engage and destroy stealth aircraft as well as

¹¹ Frühling and Lasconjarias, “NATO, A2/AD and the Kaliningrad Challenge.” 100

missiles with speeds up to 4.8 km per second. By comparison, NATO's best HARM, the AGM-88, only has a velocity of approximately .68 km per second and a range of just 150 km.¹² That maximum High-Speed Anti-Radiation missiles (HARM) range is only possible if pre-briefed coordinates are uploaded into the aircraft prior to launch. This forces aircraft to either fly closer to the threat, or use long range strike munitions such as Tomahawk Cruise Missiles. Either way, the mobile S-400s located in Kaliningrad are very difficult to target and will take a plethora of munitions and time, something NATO does not have if Putin's forces can capture Riga and/or Tallinn in less than 60 hours.

The S-400 system relies on centralized command-and-control and uses a multi-mode radar assembly and eight launcher units. Each launcher can carry either four of the standard 48N6/48N6E2 missile container launchers (with one missile each), four of the 9M96 missile container launchers (with four missiles each) or a mixture of both. During the initial and middle phases of flight, the weapon has inertial guidance with radio command corrections capability making it resilient to jamming. When near the target, a different, and more accurate, terminal guidance system is activated to ensure it strikes its intended objective.¹³ The radar typically guiding the S-400 uses electronic beam steering in both azimuth and elevation and has a maximum range of 250 km against a fighter aircraft target. The 96L6 surveillance 3-D radar option operates at 1 to 2 GHz (L-band) and can range 300 km. The radar is mounted on a wheeled vehicle with its own ability to generate electricity through a gas turbine-powered electric generator, making it

¹² See <https://www.naval-technology.com/projects/agm-88e-advanced-anti-radiation-guided-missile-aargm/> for a more detailed description of HARM capabilities.

¹³ O'Halloran, *Jane's Land-Based Air Defence*. 580

immune to power grid outages such as those that hobbled Iraqi defenses in 1991.¹⁴

The S-400s are not the only threats to NATO located in Kaliningrad if a war were to break out. Anti-ship missile systems can hamper any attempt to reinforce by sea NATO troops engaged in combat in the Baltic states.¹⁵ Iskander-M surface-to-surface missiles (SSMs) in Kaliningrad allows coverage of targets in southern Sweden, Poland, northwestern Ukraine, and Latvia, keeping forces at bay.¹⁶ The Iskander-M is an upgrade to the Scud missiles Saddam used during Desert Storm to strike Israel, causing a significant share of U.S. airpower to be diverted away from the “strategic air plan” and the use of a multitude of munitions in an attempt to destroy these targets to ensure Israel did not enter the war.¹⁷ According to Thomas Keaney and Eliot Cohen’s summary on Desert Storm, even with air superiority, the U.S.-led Scud hunt failed because of airpower’s inability to destroy them due to Iraq’s good use of decoys and the fact that the Scuds are mobile.¹⁸ The S-400 is significantly more maneuverable than the Scud and Russian doctrine still uses decoys as a method to protect their IADS making an S-400 hunt likely to emulate the Scud hunt during Desert Storm, even with new airpower capabilities. The bottom line is that in order to gain air superiority, secure NATO lines of communications, defend NATO targets from Russia SSMs and definitely enable NATO air operations in support of troops in contact, United States and NATO air forces and other assets would absolutely have to strike and/or suppress Russian forces in

¹⁴ O’Halloran. Russian Federation section 580

¹⁵ Colby and Solomon, “Facing Russia.” 26

¹⁶ “Order-of-Battle | Russian Defense Policy,” accessed May 16, 2018, <https://russiandefpolicy.blog/category/order-of-battle/>.

¹⁷ Olsen, *Strategic Air Power in Desert Storm*. 245

¹⁸ Keaney and Cohen, *Revolution in Warfare?* 108

Kaliningrad Oblast to be successful in either defending or liberating the Baltic states.

Kaliningrad Oblast, however, is not just a small piece of land buttressed by Lithuania, Poland, and the Baltic sea, but sovereign Russian territory. A researcher for the United Kingdom's Ministry of Defense, Dr. Steven Main, claims that as a "direct result of the collapse of the USSR and the re-found independence of Latvia, Lithuania and Estonia, the importance of Kaliningrad Oblast' increased significantly, not least from the military."¹⁹ Kaliningrad serves a significant strategic purpose for Russia. Statements from Russian military and political leaders best displays Kaliningrad's strategic significance to Russia as well as its political importance as sovereign Russian soil.

In the early 1990s, then-Commander in Chief of the Russian Navy Admiral F. N. Gromov stated, "On account of its geographical position, Kaliningrad Oblast' has a special significance in both Russia's internal and external policy. Here intersect many economic and political interests of the surrounding European countries ... thanks to this, Kaliningrad Oblast' ... has an important economic and military-significance for Russia in the Western region."²⁰ Former Russian Foreign Minister A. Kozyrev addressed The Council of Baltic Sea States in 1993 by saying, "There is no need to explain the exceptional significance of the Kaliningrad Oblast' in being an important link in Russia's military-strategic and economic interests in the Baltic region. Especially now, when every meter of Baltic shoreline, for us, is literally worth its weight in gold."²¹

¹⁹ Main and Conflict Studies Research Centre (Great Britain), *Kaliningrad 2001*. 22

²⁰ Main., 20

²¹ Main., 20

The prestige Kaliningrad brings to the Russian people by hosting the Baltic Fleet is illustrated in a Russian article written by Admiral Gromov in 1995. In the article, he states, “It is not superfluous to remind [readers] that the appearance of a regular Russian military fleet was brought about by a historic mission – to gain entry to the community of European nations. Having secured Russia’s entry to the Baltic Sea and has created a military fleet, Peter the First made us a great European power. Since then, Russia has not been a guest in wider Europe, but an equal partner.”²²

Admiral Gromov was very explicit in stating the significance Kaliningrad has hosting the fleet. He stated, “It is difficult to overestimate the significance of the Baltic Fleet in the defence of the national interests of Russia in the Baltic Sea – an objective and historically justified necessity, confirmed by almost 300 years of history, one of the indispensable conditions [guaranteeing] the security of the country, its economic development and international authority. The deployment of the Fleet’s main forces to Kaliningrad Oblast’ ensures Russia’s status as a Baltic power and its ability to defend its interests at sea.”²³

This tie between the Baltic fleet and Kaliningrad was highlighted again when former Russian Security Council Secretary, I. Rybkin, on a visit to the region in May 1997, stated that “the Russian military presence in Kaliningrad Oblast’ has two aspects: it is important both as a symbol of Russian sovereignty on this territory, and as a sign of Russia’s firm intention to preserve its position in the Baltic Sea. In light

²² Main., 20

²³ Main., 21

of NATO's enlargement, Kaliningrad Oblast' is one of the key elements in ensuring the security of Russia and its ally-state, Belarus."²⁴

Expanding on the military significance of Kaliningrad, former Commander of the North-Western Group of Forces, General L. S. Mayorov, stated during a visit to Kaliningrad in 1998, "The role of the region and the military here – and I am not scared by accusations of an excessive exaggeration – is very great. Look, if earlier in the direction of Moscow there was the Western Group of Forces, the Northern Group of Forces, and the Belarussian Military District, now from Smolensk, the capital is within easy reach. That is why, from a military point of view, the military force here is vital. There is no doubt about it."²⁵

While isolated from mainland Russia, the citizens of Kaliningrad relate to Russia more today than ever before. Because of a series of deportations of Lithuanians and Germans since 1947, Kaliningrad today is 82% ethnic Russian.²⁶ Kaliningrad contributes to national myths, identity formation, and self-consciousness. The region symbolizes a reparation for the suffering of the Russian people, and it reminds them of the victory finally achieved during the Second World War, or the "Great Patriotic War" as it is still known in Russia. That war symbolized the most significant success of the Soviet Union and the beginning of its rise as a global super power. The population still rates this victory number one on the list of historical Russian achievements.

Now, placing Kaliningrad in context with a possible Russian invasion of NATO's Baltic members is very important. The significance of Kaliningrad to Russia as sovereign territory, attacks on which may prove escalatory, seems to be ignored by many analysts who focus instead on

²⁴ Main., 21

²⁵ Main., 22

²⁶ Andrey Klemeshev, Gennady Fedorov, Efim Fidrya, *Bulletin of Geography. Socio-economic Series* / No. 38 (2017): 47–55 (Klemeshev, *Bulletin of Geography*)

the more routine tactical and operational tasks of suppressing and/or destroying Russia's military forces there. For example, Stephen Frühling and Guillaume Lasconjarias call for a very aggressive approach to Kaliningrad, arguing that "The best way of dealing with the Russian A2/AD threat in the Baltic would be to isolate Kaliningrad as soon as possible in wartime, and to threaten an invasion of the territory to deter Russia from conducting military operations from the enclave in the first place."²⁷ They conclude that NATO could claim actions against Kaliningrad are NOT escalatory, regardless of Moscow's views: "In its public and private communication with Russia, NATO should make clear that, whatever restrictions might be put on NATO ground operations into Russia's mainland, it would consider an invasion of Kaliningrad a legitimate and non-escalatory response to Russian use of the territory to interfere with NATO's lines of communication."²⁸ In this same vein, Jerry Hendrix nonchalantly notes that, "If NATO and the United States is going to successfully repel a Russian invasion, NATO must plan to 'pop' the Anti-Access/Area Denial 'bubble' centered on Kaliningrad."²⁹

The one common theme to these approaches is holding Kaliningrad hostage and/or suppressing A2AD systems there in order to compel Russia to return to its borders. The alarming concern is that none of these authors, except for a subtle hint late in one article, address an outcome where Moscow escalates the war up to and including nuclear retaliation if NATO either (1) threatens an invasion on Kaliningrad; (2) normalizes attacks on Kaliningrad as reasonable and non-escalatory in response to Russian actions; and (3) attacks Kaliningrad with NATO bombers to "burst" the A2/AD bubble.

²⁷ Frühling and Lasconjarias, "NATO, A2/AD and the Kaliningrad Challenge." 108

²⁸ Frühling and Lasconjarias. 110

²⁹ "Gdansk, Poland: Key to Defending Baltic from Putin, Russia | National Review," accessed May 12, 2018, <https://www.nationalreview.com/2017/12/gdansk-poland-defending-baltic-putin-russia/>.

A Notional Air Campaign Against Kaliningrad

It is pretty clear we're going to have to go back and start exercising some of the same stuff we used to do in the Cold War.

-General Frank Gorenc

A key assumption and concern addressed in this thesis is that if Russia were to invade one or more of the three Baltic states, current airpower doctrine and practice would likely replicate historical applications noted in earlier chapters and annotated in the quote by General Frank Gorenc above.³⁰ American and NATO commanders would use airpower in an offensive manner and seize the initiative, establish air superiority, and subsequently support ground forces with a maximum effort. If Russia were to cross into the Baltic region, thus seizing the initiative by being on the offensive, NATO would be in crisis mode, knowing they were caught flatfooted.

The instinctual response of air commanders may look something like the following. Joint military doctrine advises Joint Force Commanders (JFCs) to phase operations in order to visualize and think through the entire operation or campaign.³¹ The phases are traditionally as follows: Phase 1: shape; Phase 2: deter; Phase 3: seize initiative; Phase 4: dominate; Phase 5: stabilize, and Phase 6: enable civil authority. Since deterrence failed in this situation, the NATO alliance would initiate Phase Three operations to “seize the initiative and exploit friendly

³⁰ “Russians ‘Closed The Gap’ For A2/AD.” Spoken when asked about the risk of the A2/AD bubble over the Baltic region.

³¹ “JP 3-0; Joint Publications 3-0” (United States. Joint Chiefs of Staff, January 17, 2017), <https://www.hsdl.org/?view&did=798700>. V-13

advantages by conducting forcible entry operations; directing operations immediately against enemy centers of gravity; seeking superiority in the air, land, maritime, and space domains and the information environment; while protecting the joint force, host nation infrastructure, and logistic support.”³² To establish air superiority, NATO would employ F-15Cs, F-15Es, F-16s, EA-18Gs, KC-135s, and whatever is currently in theatre on a rotational basis, such as B-1 bombers and fifth generation fighters such as F-22s and F-35s. The assets would be employed to “burst” the A2/AD bubble over the Baltic region to halt the Russian advance, attrit Russian forces, and provide close air support to hard-pressed NATO ground forces.

Since Wild Weasels are in short supply and the HARM range is not conducive to the S-400s networked with Russia’s air defense system, a bombardment of Tomahawk Land Attack Missiles (TLAMS), Tomahawk Air-Launch Cruise Missiles (TALCM), and Conventional Air Launch Cruise Missiles (CALCM) aimed at Kaliningrad would be expected, based on Desert Storm and Allied Force tactics.³³ The challenge for air strategists is finding, fixing, tracking and assessing the damage done by these weapons.³⁴ Once the target is acquired, technology has made the targeting and the engagement portions of the kill chain relatively easy.

Since much of the IADS in Kaliningrad is mobile, it will be very difficult to acquire accurate real-time coordinates on them once fighting begins. Crews will find it difficult to destroy the radar, SAM, or both, let alone assess if their attacks were successful. Multiple missiles would likely be needed to strike individual critical components of the IADS in

³² “JP 3-0 Joint Operations.” xxiii

³³ “The Need for SEAD Part I: The Nature of SEAD,” War on the Rocks, May 17, 2016, <https://warontherocks.com/2016/05/the-need-for-sead-part-i-the-nature-of-sead/>. For a great discussion on the short supply of SEAD platforms.

³⁴ Taken from interviews with Air Superiority experts (F-15C Evaluator Pilot)

order to increase the probability of kill. IADS operators employ tactics such as shutting down radars until the moment of target engagement in order to deny attackers a firm indication of whether the threat is down or not. A way around that is to deploy Miniature Air Launched Decoys (MALD) to stimulate the IADS and allow friendly forces to target them. These decoys appear to IADS operators as actual aircraft, tricking them to turn on their active radars. Decoys like MALD could also trick the sensor operator to launch their missiles against them and thus expend their weapons. MALD gives technologically advanced powers, such as the U.S. and NATO, who also possess relatively low numbers of exquisite airframes like F-22s and F-35s an option to bring a bit more mass to the battlefield while negating advanced weapons such as the S-400.³⁵

In addition to the MALD, fourth generation aircraft such as the F-16, B-1, F-15E, and F-15C could act as missile trucks for F-35s, who can more easily fly within the IADS and get better fidelity on target locations. A networked F-35 can share target data with fourth generation assets, allowing them to stay outside of the IADS but still engage targets. This type of capability makes fourth and fifth generation assets more effective and is a force multiplier given the limited number of fifth generation assets available today.³⁶

Considering Russia's potential advantages highlighted in the RAND study, time matters. Phase 4 operations (Dominate the Enemy) would likely occur in parallel with Phase 3. Additional F-22s and F-35s would flow into theater immediately after Russia invaded the Baltic nations. One U.S. Armored Brigade Combat Team (ABCT) currently located in Poland on a heel-to-toe rotational presence would flow North to protect

³⁵ "Mass" is a principle of war.

³⁶ Taken from capability briefs from 4th gen and 5th gen assets along with an interview with a F-15C pilot.

the Suwalki Gap on the Polish-Lithuanian border, between Russia's ally Belarus and Kaliningrad.³⁷ This would be vital to ensure Russian Forces cannot cut-off land lines of communication to NATO forces already in the Baltic region. The U.S. forces in Poland currently consist of 87 M1 Abrams tanks, 103 Bradley Fighting Vehicles, 18 Paladin self-propelled Howitzers, and other vehicles and equipment.³⁸ It is reasonable to expect Special Operations Forces would enter Kaliningrad Oblast in order to attack hard-to-hit IADS and thus penetrate the A2/AD "bubble," in a manner similar to what special forces did during Desert Storm.³⁹ Additionally, other NATO ground forces would probably position themselves to lay siege to the oblast to strengthen NATO's position if Russia is compelled to come to the negotiating table.

While it will take some time, likely longer than the 60 hours RAND analysts believe the Russians need to reach their objectives and consume almost the entire arsenal of U.S. and NATO stand-off weapons located in the European theatre, the U.S. and NATO would be successful in suppressing the A2/AD environment over the Baltic region and eventually establish air superiority, but at a cost of pilots and aircraft. Iraq, Yugoslavia, Egypt, and Syria also presented a formidable A2/AD problem for the U.S. and Allied nations to overcome, but history illustrates that airpower can overcome such challenges. While the addition of more modern SAMs and radars to Russia's air defense network does make this problem more complicated compared to that faced by the Israeli Air Force in the Yom Kippur War, coalition air forces in Desert Storm, and NATO airpower in Allied Force, a determined U.S.

³⁷ "Heal-to-toe" describes a continuous rotational presence in the Baltic region without any gaps.

³⁸ "US Army Tanks Arrive in Poland as Russia Starts Military Drills on Country's Border | The Independent," accessed May 13, 2018, <https://www.independent.co.uk/news/world/us-tanks-poland-russia-war-games-military-drills-belarus-putin-trump-a7949906.html>.

³⁹ Special Operations Forces were pivotal in destroying SAMs either by helicopter or by small teams on the ground to enable air assets to enter Iraq's weapon engagement zone during Desert Storm.

and NATO air campaign, while incurring losses rarely seen in several generations, can likely turn the tide against the Russians.

Cause for Alarm?

This optimistic assessment overlooks one essential fact—Russia has the will and capability to escalate and strike back at the U.S. and its allies in ways no previous recent opponent could. Putin would have every reason to do so following NATO attacks on Kaliningrad—sovereign Russian soil—and the evisceration of his armed forces in the region. So, in summary, Khan and Jervis are still right. Breaching Type I deterrence with Russia will lead to escalation, possibly including nuclear retaliation.

First, Russia revised its Nuclear doctrine in 2000, lowering the threshold for the use of the country's nuclear weapons. The previous policy allowed for the use of nuclear weapons only in case of a threat to the existence of the Russian Federation. The current doctrine allows nuclear weapons use "in response to large-scale aggression utilizing conventional weapons in situations critical to the national security of the Russian Federation."⁴⁰ Additionally, Russian parliamentarian Vyacheslav Alekseyevich Nikonov suggested to attendees at the Global Security (GLOBSEC) 2017 forum in Bratislava, Slovakia that if U.S. or NATO were to send forces into eastern Ukraine, Russia would be forced to use nuclear weapons.⁴¹ Russia's conventional military force is just a shadow of the Cold War-era Army and its Warsaw Pact satellite armies.

⁴⁰ "Russia's Military Doctrine," accessed May 13, 2018, <https://www.armscontrol.org/print/658>.

⁴¹ Specifically, Nikonov argued that "On the issue of NATO expansion on our borders, at some point I heard from the Russian military — and I think they are right — If U.S. forces, NATO forces, are, were, in the Crimea, in eastern Ukraine, Russia is undefendable militarily in case of conflict without using nuclear weapons in the early stage of the conflict." See "Russian Lawmaker: We Would Use Nukes If US or NATO Enters Crimea," Defense One, accessed May 13, 2018, <https://www.defenseone.com/threats/2017/05/russian-lawmaker-we-would-use-nukes-if-us-or-nato-enters-crimea/138230/>.

Moscow's military budget, equivalent to \$46 billion U.S. dollars, is considered a monetary rounding error compared to the U.S. military's budget of \$700 billion, let alone the addition of the entire NATO alliance.⁴² NATO's latent conventional superiority and economic power poses a huge problem for Russia.

Putin appears to have reincarnated the late-President Dwight Eisenhower's military doctrine with his advertised willingness to use nuclear force in response to a Soviet provocation by showing a readiness to "go nuclear." For example, during a documentary made in 2014, Putin declared that he was concerned that the West might intervene in the annexation of Crimea which pushed him to consider putting Russia's nuclear weapons on alert. While he decided it was unnecessary in the end, he was preparing for "the worst possible turn of events."⁴³ Indeed, Putin is using America's foreign policy of the 1950s against us.

Second, Kaliningrad is Russia, and an attack on Russia breaches Type I deterrence. Such an attack would be equivalent to Russia attacking Alaska or Guam. It is reasonable to believe that the United States would escalate against any power if those two exclaves were struck. If Russia sees a NATO move in eastern Ukraine as threatening, attacking Kaliningrad would have a significantly higher cause for concern. As for Syria, Russia's Permanent Representative to the European Union Vladimir Chizhov advertised Russia's intent to escalate if Russians were hurt by recent U.S. air strikes in Syria, declaring that "Russia has warned US representatives, both publicly and via corresponding channels, including military ones, about serious

⁴² "TASS: Military & Defense - Russia to Shell out \$46 Bln on Defense Spending in 2018," accessed May 9, 2018, <http://tass.com/defense/982575>.

⁴³ Neil MacFarquhar, "Putin Says He Weighed Nuclear Alert Over Crimea," *The New York Times*, December 21, 2017, sec. World, <https://www.nytimes.com/2015/03/16/world/europe/putin-says-he-weighed-nuclear-alert-over-crimea.html>.

consequences that might follow possible strikes [on Syria], if Russian citizens are hurt in such strikes, accidentally or not."⁴⁴ While this threat did not deter the United States from striking Syria, and luckily Russia did not carry out their threat, there is still potential for escalation next time, especially if Russians die in attacks specifically targeted against Russia's homeland.

Additionally, to establish air superiority, Kaliningrad would not be the only target. S-400s located in St. Petersburg would be a target as well. As depicted earlier in this chapter, the IADS' range rings located in St. Petersburg almost reach Riga, Latvia and fully encompass Estonia. An assault on Kaliningrad, and especially St. Petersburg, would have a damaging effect on Putin's prestige and his regime's stability and would likely drive him to act. Seeing his recent ability to manipulate the information domain through "hybrid war," he would most definitely leverage state-sponsored media to control the strategic narrative and show dead Russian women and children in Kaliningrad because of NATO's air raids. Whether the casualties are staged or actual, it will serve as an emotional event for the Russian people to see their own citizens dead on Russian soil. So why would Russia not escalate to de-escalate—force the United States and NATO to back down—when Type I deterrence has been breached? Would not the U.S. do the same?

⁴⁴ "Russia warns US against Syria strike," TASS, accessed May 17, 2018, <http://tass.com/politics/998897>.

Chapter 5

Summary and Conclusions

As noted in earlier chapters, a team of RAND analysts concluded, following a series of wargames, that Russian President Vladimir Putin's forces can reach Baltic capitals in 60 hours. The fear of Russian aggression in Europe has returned and the United States is responding through mechanisms such as the European Deterrence Initiative (EDI). After Russia's illegal invasion of Ukraine in 2014, the United States authorized specified budgets of \$985 million in 2015, \$789 million in 2016, \$3.4 billion in 2017, \$4.7 billion in 2018, and a proposed \$6.5 billion for 2019 to oppose Russian efforts.¹ Tensions continue to rise; should deterrence fail, NATO must seek to fight the war on their terms to ensure success against a near-peer competitor such as Russia.

The Baltic states are both a blessing and a curse for U.S. and NATO air planners. From 1945 until the collapse of the Soviet Union, the United States officially maintained that Moscow had illegally annexed Latvia, Lithuania, and Estonia.² Once the three Baltic nations received their independence, the U.S. was quick to re-state its recognition of them as sovereign states. However, the United States was not ready to discuss the Baltic states joining NATO because of likely tensions between Moscow and NATO. Then U.S. Defense Secretary William Perry argued in 1996 that 'the Baltic states are not ready to join NATO. These countries simply do not meet the alliance's standards.'³

¹ Judson, "Funding to Deter Russia Reaches \$6.5B in FY19 Defense Budget Request."

² Mark Kramer, "NATO, the Baltic States and Russia: A Framework for Sustainable Enlargement," *International Affairs* 78, no. 4 (October 2002): 731–56, <https://doi.org/10.1111/1468-2346.00277>. 740

³ Kramer. 741

However, as time progressed, so did U.S. policy. The eventual admission of Estonia, Latvia, and Lithuania to NATO in 2004 arguably had a destabilizing effect in the region. Now that the Baltic states are under the protection of Article 5, air planners must prepare for their protection. The challenge for air planners, among others, lies in a small swath of land called Kaliningrad Oblast. Kaliningrad is exceptionally significant to Russia. It was bled over by Russian soldiers avenging the atrocities of the Nazis. The rhetoric from leading Russian military and political leaders reinforce the exclave's importance to Moscow. With NATO's expansion, Kaliningrad's geostrategic significance has only increased as a mechanism to counterbalance the military might of the West and the encroachment of NATO into central and eastern Europe.

The tenets of airpower such as the power of the offense, the fundamental nature of air superiority to air and military operations, and the tendency to go big or go home correctly describe airpower's advantages in war. These tenets have been tested against weaker nations unable to escalate against an American-led Western military powerhouse. Russia, however, will be a different story.

NATO has yet to face a peer competitor in war and against a weaker opponent, such as Serbia's President Slobodan Milosevic, time was wasted matching political objectives to military application. Fortunately for NATO, Milosevic did not have the opportunity to exploit NATO's indecision and afforded the alliance the luxury to form a consensus.

The US Air Force exceeds at developing capabilities-based strategies in order to provide diplomats with options for the use of the military instrument of power and to be able to negotiate in a position of strength. What the military must understand, however, is that while policy should shape military capabilities, often military capabilities become overly relied upon to shape policy. In a crisis against Russia,

there will be little time to think, leaving only time to react. The military is a highly organized institution accustomed to crisis planning, probably more prepared than any other organization in the country. Therefore, policymakers will be looking for answers and the Air Force will be one of the few who has any.

Unfortunately, in a crisis, it is easy to imagine the tail wagging the dog. In other words, the spectrum of options across the range of war will be vast and should be used only with a cool head. This is the reason Phillip Meilinger wrote the *10 Propositions Regarding Airpower*. It is hard to react rationally without allowing emotions to take over during a crisis. Airpower advocates will default instinctively to current—traditional—airpower doctrine. Thus, an offensive full-throttle approach to establishing air superiority, among other things, against Russia will result in a strategic and political disaster.

Emergency conditioning for this situation must be at the forefront of NATO's agenda to explore the possible outcomes of this scenario. The graduated use of force against North Vietnam was considered a failure to most military theorists. A strong counterargument is that the Vietnam War succeeded in the most significant way, avoiding the "big war" with the Soviet Union. U.S. forces must not just conduct exercises against the Russian-Baltic scenario in a vacuum, but with NATO in the lead. NATO Decision making must be exercised and tested. The North Atlantic Council (NAC) must be involved in scenarios exploring all possible Russian moves in the Baltic region, including the use of low yield nuclear weapons.

Further research must be done to find ways to improve airpower's methods while still retaining the initiative seizing the offensive offers. This may mean developing capabilities to degrade Russian IADS through the cyber or information domains, or even launching TLAMs against Russian fielded forces rather than wasting time to "burst the bubble."

Sending a quick message that the price of proceeding forward is higher than the cost of turning around may be Russia's center of gravity. These alternatives are essential to research since current airpower approaches are likely not to compel Russia, but instead provoke an escalation up to and including nuclear retaliation while failing to guarantee air superiority at a reasonable cost as well.



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