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**THESIS**

**RUSSIA AND NATO MISSILE DEFENSE:  
THE EUROPEAN PHASED ADAPTIVE APPROACH  
EXPERIENCE, 2009–2017**

by

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March 2018

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**RUSSIA AND NATO MISSILE DEFENSE: THE EUROPEAN PHASED  
ADAPTIVE APPROACH EXPERIENCE, 2009–2017**

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## **ABSTRACT**

The objectives of the U.S. government's European Phased Adaptive Approach (EPAA)—the U.S. contribution to NATO missile defense—set out by President Barack Obama in September 2009 were modified over the course of his administration, which ended in January 2017. This thesis explores how U.S. interactions with Russia and the NATO Allies influenced the decisions on modifications made by the United States—for example, the cancellation in March 2013 of the EPAA's projected fourth phase. The thesis finds that U.S. interactions with the NATO Allies and Russia played a role in revisions in the original objectives of the EPAA but were not the only contributing factors. Budgetary constraints, technological issues, and reassessments of threats also led to modifications in the EPAA program. Providing for the defense of populations, national territories, and forces remains a high priority for the United States and its NATO Allies, and the Alliance has repeatedly sought dialogue and cooperation with Russia concerning missile defense. Events have vindicated the EPAA's design for adaptability to benefit from technological innovations and to meet the evolving needs for Alliance protection in the international security environment.

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## LIST OF ACRONYMS AND ABBREVIATIONS

ALTBMD	alternate ballistic missile defense
ABM	anti-ballistic missile
AN/TPY-2	Army Navy/ Transportable Radar Surveillance System
BMD	ballistic missile defense
BMDO	Ballistic Missile Defense Organization
BMDR	Ballistic Missile Defense Review
DDPR	Deterrence and Defense Posture Review
DoD	Department of Defense
DSB	Defense Science Board
EI	early intercept
EPAA	European Phased Adaptive Approach
GBI	ground-based interceptor
GMD	ground-based midcourse defense
GPALS	Global Protection Against Limited Strikes
ICBM	intercontinental ballistic missile
NATO	North Atlantic Treaty Organization
NORAD	North American Aerospace Defense Command
NRC	NATO-Russia cooperation
NSDD	National Security Decision Directive
PAC-3	PATRIOT Advanced Capability-3
PATRIOT	Phased Array Tracking Radar Intercept on Target
SALT	Strategic Arms Limitation Talks
SAM-D	surface-to-air missile, development
S-A-S	shoot-assess-shoot
SDI	Strategic Defense Initiative
SM3-IA	Standard Missile-3 Block I Alpha
SM3-IB	Standard Missile-3 Block I Bravo
SM3-IIA	Standard Missile-3 Block II Alpha
SM-3 IIB	Standard Missile-3 Block II Bravo
START	Strategic Arms Reduction Talks
THAAD	Theatre High Altitude Area Defense

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## I. INTRODUCTION

### A. MAJOR RESEARCH QUESTION

The original objectives of the U.S. government's European Phased Adaptive Approach (EPAA)—the U.S. contribution to NATO missile defense—were modified in the course of the program's pursuit from September 2009 until the end of the Obama administration in January 2017. This thesis investigates the hypothesis that interactions with Russia and the NATO allies influenced the decisions on modifications made by the United States—e.g., the cancellation in March 2013 of the projected fourth phase of the EPAA. It examines the original plan of the United States for the EPAA and how it was ultimately implemented. How did the responses of the NATO Allies shape their national and collective contributions to the Alliance missile defense posture and ultimately affect the original objectives of the EPAA? How did Russia's reactions to the evolving EPAA program influence its implementation? What are the ramifications for NATO as a result of Russia's criticisms and attempts to shape the program?

### B. SIGNIFICANCE OF THE RESEARCH QUESTION

NATO is the oldest, largest, and most important multilateral U.S. alliance. Missile capabilities that threaten the Alliance also endanger U.S. forces, assets, and interests. A collective NATO missile defense architecture protects not only the NATO Allies' territory and people but also U.S. troops and assets. The Obama administration instituted the EPAA program with the intent to deploy a BMD system that could be adapted to changing missile threats.<sup>1</sup> While countering prospective missile threats was the biggest concern, it appears that the Obama administration did not accurately estimate changes in the threat environment (notably with regard to Iran and North Korea), the actual time line for the EPAA's development and deployment, or the reactions of Russia and the NATO Allies. The evolving international security environment may have been one of the factors that led

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<sup>1</sup> Roger Handberg, "The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World," *Defense & Security Analysis* 31, no. 1 (2015): 49, doi: 10.1080/14751798.2014.995336.

the Obama administration to cancel the fourth phase of the EPAA, and critics argue that the EPAA has fallen short of the original intent.

With a new administration in the United States since January 2017, that of President Donald Trump, Washington may soon define further changes in U.S. missile defense policies. In 2010, the NATO Allies decided to expand the Alliance BMD program, largely because the United States agreed to provide most of the required equipment (including sensors and interceptors).<sup>2</sup> The Allies defined the purpose of NATO missile defense as follows in the 2010 Strategic Concept:

We will ensure that NATO has the full range of capabilities necessary to deter and defend against any threat to the safety and security of our populations. Therefore, we will: . . . develop the capability to defend our populations and territories against ballistic missile attack as a core element of our collective defence, which contributes to the indivisible security of the Alliance. We will actively seek cooperation on missile defence with Russia and other Euro-Atlantic partners.<sup>3</sup>

The goal of NATO missile defense is not only to deter but also to defend against current and future threats. Missile defense adds security to the Alliance by making the Allies and the cooperation between them more secure and inseparable. What threatens one NATO Ally threatens all members of the NATO Alliance.

The Deterrence and Defence Posture Review (DDPR) in May 2012 also commented on the functions of NATO missile defense. According to the DDPR,

It is expected that NATO's missile defence capabilities would complicate an adversary's planning, and provide damage mitigation. Effective missile defence could also provide valuable decision space in times of crisis. Like other weapons systems, missile defence capabilities cannot promise complete and enduring effectiveness. NATO missile defence capability, along with effective nuclear and conventional forces, will signal our

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<sup>2</sup> Steven J. Whitmore and John R. Deni, *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army* (Carlisle Barracks, PA: United States Army War College Press, 2013), 1.

<sup>3</sup> North Atlantic Treaty Organization, *Active Engagement, Modern Defence: Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organisation adopted by Heads of State and Government in Lisbon*, (Lisbon, Portugal: 2010), par. 19, [http://www.nato.int/cps/en/natolive/official\\_texts\\_68580.htm](http://www.nato.int/cps/en/natolive/official_texts_68580.htm).

determination to deter and defend against any threat from outside the Euro-Atlantic area to the safety and security of our populations.<sup>4</sup>

This passage in the DDPDR explains the benefits of NATO missile defense capabilities as well as their limitations in the realm of “complete and enduring effectiveness.”

### **C. LITERATURE REVIEW**

The literature focuses on the examination of the European Phased Adaptive Approach (EPAA) program that was instituted under the Obama administration. The primary sources for this topic include U.S. government documents and NATO communiqués and other Alliance statements as well as Russian policy declarations. The secondary sources, including works published in scholarly journals and newspapers, complement the evidence found in the primary sources.

#### **1. Obama Administration Policy and Revisions**

The Obama Administration announced the European Phased Adaptive Approach to replace the previous administration’s system based on Ground-based Midcourse Defense (GMD) interceptors. President Obama characterized the EPAA by saying, “To put it simply, our new missile defense architecture in Europe will provide stronger, smarter, and swifter defenses of American forces and America’s allies.”<sup>5</sup> In other words, the Obama administration believed that the EPAA would be more capable of protecting American forces and interests than the system that had been under development by the previous administration.

The 2010 NATO Lisbon Summit carried forward the dialogue among the Allies about the EPAA. The administration had already gained the support of the NATO Allies it desired. President Obama first announced the EPAA program in September 2009 and stated, following a meeting with the NATO security general that “we also discussed missile

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<sup>4</sup> North Atlantic Treaty Organization, *Deterrence and Defence Posture Review*, (2012), par. 20, [https://www.nato.int/cps/en/natohq/official\\_texts\\_87597.htm](https://www.nato.int/cps/en/natohq/official_texts_87597.htm).

<sup>5</sup> Barack Obama, “Remarks on Missile Defense Systems in Europe,” September 17, 2009, <https://obamawhitehouse.archives.gov/the-press-office/remarks-president-strengthening-missile-defense-europe>.

defense, and we both agreed that the configuration that we have proposed is one that, ultimately, will serve the interests of not only the United States but also NATO alliance members most effectively.”<sup>6</sup> This shows the priority of the United States and the other NATO Allies to pursue a collective plan of missile defense to protect their interests in Europe and North America. President Obama further stated, “It allows for a full collaboration with NATO members, and we are very optimistic that it will achieve our aims and deal with the very real threat of ballistic missiles.”<sup>7</sup> This shows the optimism and “buy in” concerning the collective goal of the NATO Allies, including the United States.

President Obama initially revealed his plan to the American people on September 17, 2009. Just over a year later, he wrote a letter to the Senate Leadership, which included the following statement: “My administration plans to deploy all four phases of the EPAA. While advances of technology or future changes in the threat could modify the details or timing of the later phases of the EPAA—one reason this approach is called ‘adaptive’—I will take every action available to me to support the deployment of all four phases.”<sup>8</sup> This declaration shows the intention to complete the EPAA phases as originally planned. Over two years later, in March 2013, the Obama Administration announced the restructuring of the plan, including the cancellation of Phase 4.

In March 2013, Chuck Hagel, then the Secretary of Defense, announced the cancellation of the fourth phase of the EPAA. He said that the cancellation of the phase was due to a restructuring of the program on the part of the administration. He reaffirmed that the phases in place would protect the European NATO Allies. He said, “Let me emphasize the strong and continued commitment of the United States to NATO missile defense. That commitment remains ironclad. The missile deployments the United States is making in phases one through three of the European Phased Adaptive Approach, including

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<sup>6</sup> Barack Obama, “Remarks Following a Meeting with North Atlantic Treaty Organization Secretary General Anders Fogh Rasmussen,” September 29, 2009. <https://www.gpo.gov/fdsys/pkg/PPP-2009-book2/pdf/PPP-2009-book2-Doc-pg1464.pdf>.

<sup>7</sup> Ibid.

<sup>8</sup> Barack Obama, “Letter to Senate Leadership on the Strategic Arms Reduction Treaty and Missile Defense,” December 18, 2010. Accessed February 08, 2018. <http://www.presidency.ucsb.edu/ws/index.php?pid=88850>.

sites in Poland and Romania, will be able to provide coverage of all European NATO territory as planned by 2018.”<sup>9</sup> This statement suggests that the first three phases will provide adequate protection of the NATO territory in Europe. It also suggests that the fourth phase would not have provided substantial additional protection for Europe, because it was intended to protect North America from ICBMs, as well as improving the system’s ability to counter medium—and intermediate—range missiles.

## **2. Ballistic Missile Defense Review**

The 2010 Ballistic Missile Defense Review (BMDR) was a ten-month review by the Department of Defense that assessed the threats to the United States and its Allies as well as the strategy and policy priorities of the Obama Administration. The Secretary of Defense presented the BMDR report to Congress on February 1, 2010. According to the report fact sheet, “The 2010 Ballistic Missile Defense Review (BMDR) is a review conducted pursuant to guidance from the President and the Secretary of Defense, while also addressing the legislative requirement to assess U.S. ballistic missile defense policy and strategy.”<sup>10</sup> The review was the first of its kind and pursued the goal of examining the U.S. BMD policy not only in Europe but in all geographical areas of operation.

While reviewing the policy of the United States, U.S. policy makers also needed to take into account the efforts and inputs of U.S. Allies. The BMDR report stated, “The Administration recognizes that allies do not view the specifics of the missile threat in the same way, and do not have equal resources to apply to this problem, but there is general recognition of a growing threat and the need to take steps now to address both existing threats and emerging ones.”<sup>11</sup> The review acknowledged that the resources and

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<sup>9</sup> Chuck Hagel, Secretary of Defense, “DoD News Briefing on Missile Defense from the Pentagon,” March 15, 2013, Accessed February 13, 2018. <http://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=5205>.

<sup>10</sup> Department of Defense, *2010 Ballistic Missile Defense Review (BMDR) Fact Sheet*, (Department of Defense Office of Public Affairs, 2010), [https://www.defense.gov/Portals/1/features/defenseReviews/BMDR/BMDR\\_FACT\\_SHEET\\_March\\_2010\\_Final.pdf](https://www.defense.gov/Portals/1/features/defenseReviews/BMDR/BMDR_FACT_SHEET_March_2010_Final.pdf).

<sup>11</sup> Department of Defense, *Ballistic Missile Defense Review Report*, (Ft. Belvoir: Defense Technical Information Center, 2010), 32.

requirements of the United States were different from those of its allies. This aspect is seen clearly in the EPAA: The United States has covered the bulk of the costs regarding equipment while its NATO Allies are collectively covering the command and control aspects.

The defense of U.S. troops, interests, and Allies in Europe is an important aspect of the EPAA plan, but U.S. homeland defense also remains at the forefront. The review specifically considered the individual phases of the European Phased Adaptive Approach and what the United States hoped to accomplish with it. The most interesting aspect of the review of the individual phases concerns Phase 4, which would be canceled in March 2013. The review stated, “In the European Phased Adaptive Approach, for example, Phase 4 explicitly envisages additional capabilities that can be added to the European architecture to improve on the current defense of the homeland.”<sup>12</sup> This is an interesting statement because it indicates that Phase 4 was intended to improve the defense of the continental United States. When this phase of the program was canceled, Secretary of Defense Chuck Hagel stated, “As many of you know, we had planned to deploy the SM-3 IIB as part of the European Phased Adaptive Approach. The purpose was to add to the protection of the U.S. homeland already provided by our current GBIs against missile threats from the Middle East.”<sup>13</sup>

Hagel stated that Phase 4 was being canceled due to sufficient protection provided by current GBIs. He added, “By shifting resources from this lagging program to fund the additional GBIs as well as advance-kill vehicle technology that will improve the performance of the GBI and other versions of the SM-3 interceptor we will be able to add protection against missiles from Iran sooner, while also providing additional protection against the North Korean threat.”<sup>14</sup> His statement implied that the program had fallen behind its original objectives as initially stated by the Obama Administration in September 2009 and in the BMDR in 2010. Therefore, the Obama administration needed to reprioritize

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<sup>12</sup> Ibid., 27.

<sup>13</sup> Chuck Hagel, Secretary of Defense, “DoD News Briefing on Missile Defense from the Pentagon.”

<sup>14</sup> Ibid.

what was most important to the United States regarding the continuation of the EPAA for the defense of the United States and its Allies.

The BMDR also reinforced the advantage of having a policy that was flexible enough to accommodate changes regarding technologies, threats, allied contributions, and other factors. In the words of the BMDR report, “One of the benefits of the European Phased Adaptive Approach is that it allows for a Russian contribution if political circumstances make that possible. For example, Russian radars could contribute useful and welcome tracking data, although the functioning of the U.S. system will not be dependent on that data.”<sup>15</sup> This excerpt from the report shows the adaptation that is possible with the program in the way that it was originally written. It allows for multilateral cooperation involving the NATO Allies as well as Russia. This also indicates that the system was not intended for use against the Russians, despite Moscow’s claims.

### **3. 2010 NATO Lisbon Summit Declaration**

NATO missile defense is a relatively new decision with a long history leading to the endorsement of full coverage collective missile defense of NATO territory, populations, and forces at the 2010 Lisbon Summit.<sup>16</sup> The Lisbon Summit Declaration stated that

The aim of a NATO missile defense capability is to provide full coverage and protection of all NATO European populations, territory and forces against the increasing threats posed by the proliferation of ballistic missiles, based on the principles of the indivisibility of Allied security and NATO solidarity, equitable sharing of risks and burdens as well as reasonable challenge, taking into account the level of threat, affordability and technical feasibility, and in accordance with the latest common threat assessments agreed by the Alliance.<sup>17</sup>

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<sup>15</sup> Department of Defense, *Ballistic Missile Defense Review Report*, 34.

<sup>16</sup> Alexander Vershbow, “NATO and Missile Defence,” 12 June 2013, [https://www.nato.int/cps/en/natolive/opinions\\_101397.htm](https://www.nato.int/cps/en/natolive/opinions_101397.htm).

<sup>17</sup> North Atlantic Treaty Organization, *Lisbon Summit Declaration*, (Lisbon, Portugal, 2010), [https://www.nato.int/cps/en/natolive/official\\_texts\\_68828.htm](https://www.nato.int/cps/en/natolive/official_texts_68828.htm). Par. 36 and 37.

The aim articulated at the Lisbon Summit clearly stated that the Allies would contribute what they were able to, based on “the level of threat, affordability, and technical feasibility.” This shows that the discussion on limitations and feasibility was brought to the table from the beginning. From this summit also came the following declaration: “In this context, the United States European Phased Adaptive Approach is welcomed as a valuable national contribution to the NATO missile defence architecture, as are other possible voluntary contributions by Allies.”<sup>18</sup> The EPAA remains the U.S. contribution to the combined NATO missile defense architecture. The NATO Allies acknowledged that while the United States contribution was welcome and valuable, so also are the contributions provided by other NATO members. In October 2009, a month after the initial U.S. announcement about the EPAA, Rasa Jukneviene, the Lithuanian Minister of Defense, said that

The recently announced changes to the original U.S. plan for missile defence in Europe were originally mistaken in some capitals for a sign of the U.S. losing interest in the security of Europe and making concessions to Russia. As the U.S. has shared more details about the new design of the system, we are satisfied to see that, if anything, the system will become more robust, technically advanced, mobile and adaptive to threats. The U.S. is committed to building the system and to place some of its elements in Europe. To me, it means that the U.S. is as committed to our security as ever and, rather than making concessions to Russia’s unreasonable demands, it opens new opportunities for cooperation with Russia in credibly addressing a serious growing threat.<sup>19</sup>

#### **4. Russian Views**

Russia has been opposed to the United States contribution to the NATO missile defense posture as well as to the system architecture as a whole. Since the September 2009 U.S. announcement of the EPAA, Russia has opposed the program and has claimed that it threatens Moscow’s strategic deterrent. The Russians have asserted that the system is not being developed and deployed just to counter the Iranian threat but rather also to provide

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<sup>18</sup> Ibid.

<sup>19</sup> Rasa Jukneviene, “Latest Developments in European Security: A Baltic Perspective,” (London: Chatham House, Royal Institute of International Affairs, 20 October 2009): 3. [Minister of Defense of Lithuania, 2008–2012]



first strike opportunities against Russia. In February 2009, before the announcement of the EPAA, Dmitry Rogozin condemned U.S.-led missile defense efforts in NATO Europe:

The missile defence system is aimed at Russia, not Iran. We suggested to the US that we could develop a common missile defence system and the radar system in Gabala, Azerbaijan. This system could detect missiles from the moment of launch, and would include our modern monitoring station in Rostov Oblast. This met with a flat refusal. Next, we suggested that the monitoring station in the Czech Republic be built in such a way that the angle of the radar sweep is limited and doesn't look eastward over Russia. Again we were rebuffed. They refused to allow us to inspect the facility. We asked that the facility be turned off in times of peace, this was also ignored. How was Russia supposed to act in such a situation? Russia has offered to provide confidence building measures. The competitive development of defence technology eventually spills out into an offensive arms race.<sup>20</sup>

This statement conveys the Russian policy line—that the Russians approached the United States and NATO as a whole with their concerns, and that their views were dismissed by the Alliance. As this statement suggests, the Russians have also argued that the attempt by the NATO Allies to build a missile defense system is fostering an arms race among nations.

Russia has expressed many views critical of the expansion of NATO's missile defense and the impact on Russia as a result. President Vladimir Putin in 2012 advanced the following opinion regarding the expansion of NATO's missile defense: "Everyone understands what I am referring to—an expansion of NATO that includes the deployment of new military infrastructure with its US-drafted plans to establish a missile defence system in Europe. I would not touch on this issue if these plans were not conducted in close proximity to Russian borders, if they did not undermine our security and global stability in general."<sup>21</sup> This statement by Putin once again emphasizes Russia's discontent with NATO missile defense in Europe and its contention that it threatens Russian security and global stability. The emphasis on proximity to Russia's borders may derive from the facilities under construction in both Deveselu, Romania, and Redzikowo, Poland. Russia's

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<sup>20</sup> Dmitry Rogozin, "Russia, NATO, and the Future of European Security," (London: *Royal Institute of International Affairs, Chatham House*, 20 February 2009).

<sup>21</sup> Vladimir Putin, "Russia and the Changing World," in English on the Russian Prime Minister's official website on 26 February 2012.

fear evidently came from not only the radar systems but also from the interceptor missiles being put in place to counter Iranian missiles.

Vladimir Putin also explained the rationale of Russia's professed fear of NATO missile defense in Europe and gave a warning to the United States regarding the EPAA's implementation. On 26 February 2012, when he was serving as Prime Minister, he stated,

U.S. plans to create a missile defence system in Europe give rise to legitimate fears in Russia. Why does that system worry us more than others? Because it affects the strategic nuclear deterrence forces that only Russia possesses in that theatre, and upsets the military-political balance established over decades. . . I am loath to dismiss the possibility of reaching a compromise on missile defence. One would not like to see the deployment of the American system on a scale that would demand the implementation of our declared countermeasures.<sup>22</sup>

Putin emphasized the threat not only to Russia but also to the military-political relationship between nations that had been established through the years. In 2012, General Nikolai Makarov articulated the "destabilization" argument as follows: "Taking into account a missile-defense system's destabilizing nature, that is, the creation of an illusion that a disarming strike can be launched with impunity, a decision on pre-emptive use of the attack weapons available will be made when the situation worsens."<sup>23</sup> This declaration by General Makarov elaborated on the long-standing Russian argument that NATO missile defense could lead to a shift from a deterrent relationship to a pre-emptive situation due to the hypothetical ability of missile defense systems to intercept surviving missiles after a first strike.

## 5. Secondary Sources

Daniel Gouré's paper has the merit of presenting a broad overview of available sources on the EPAA. He provides background not only on the programs of President George W. Bush's administration but also gives a synopsis of what can be expected through

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<sup>22</sup> Ibid.

<sup>23</sup> Andrew E. Kramer, "Russian General Makes Threat on Missile-Defense Sites," *New York Times*, May 4, 2012. <http://www.nytimes.com/2012/05/04/world/europe/russian-general-threatens-pre-emptive-attacks-on-missile-defense-sites.html>.

the implementation of the EPAA program, based on sources such as the BMDR.<sup>24</sup> His paper examines the challenges that the program may face regarding technology and implementation, but devotes little attention to the potential effects on NATO.

Roger Handberg also gives a broad overview and background about the origins of missile defense and the implementation of the EPAA. His paper differs from the works of most other authors in that he focuses on the budget limitations of the NATO Allies, including the United States.<sup>25</sup> Handberg offers pertinent insights about the NATO-Russian interaction as a result of the EPAA.

The study by Steven J. Whitmore and John R. Deni has the merit of clarifying the factors leading to the decision for missile defense in Europe as well as budget constraints, and also brings in the factors of burden sharing, public opinion, and technical challenges.<sup>26</sup> The wide variety of topics considered and the depth of knowledge provided make this paper among the most informative regarding challenges to the EPAA.

Richard Weitz's article provides background information, explores interactions involving Russia, NATO, and the United States, and addresses Moscow's security concerns.<sup>27</sup> Weitz offers broad insights into the various topics and offers suggestions as to where focus and attention need to be paid in the future. His paper offers suggestions to alleviate tensions between NATO and Russia by elaborating on a multinational system using assets from both sides. He asserts that NATO-Russian collaboration regarding BMD would not only help politically but also could reconcile past differences regarding missile defense and provide a strong deterrent message to Iran and other countries.

The most informative sources on NATO-Russian interactions on missile defense include works by Mikhail Tsypkin and Roberto Zadra. Zadra's article has the merit of

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<sup>24</sup> Daniel Gouré, "Phased-Adaptive Architecture: Technological, Operational and Political Issues," *Defense & Security Analysis* 28, no. 1, (2012): 17–35. DOI: 10.1080/14751798.2012.651376.

<sup>25</sup> Roger Handberg, "The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World."

<sup>26</sup> Steven J. Whitmore, and John R. Deni, *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*.

<sup>27</sup> Richard Weitz, "Illusive Visions and Practical Realities: Russia, NATO, and Missile Defence," *Survival* 52, no. 4 (2010). DOI: 10.1080/00396338.2010.506824.

furnishing a comprehensive overview of the situation, and his article includes NATO-Russia interactions in the period from NATO's Lisbon Summit in November 2010 through NATO's Chicago Summit in May 2012. His article considers not only the interactions involving Russia, NATO, and the United States at this time but also Russia's major concerns regarding missile defense in Europe and America's pursuit of global ambitions through the expansion of missile defenses in both Europe and Asia. His article also takes into account Russia's proposals and the NATO responses with exceptional clarity. Overall, this article is one of the clearest and most authoritative works in providing evidence regarding NATO-Russia interactions.<sup>28</sup>

Mikhail Tsyarkin's article also analyzes Russian reactions to NATO missile defense in Europe.<sup>29</sup> His article gives valuable background regarding the mindset and fear regarding U.S. missile defense in Russia. Overall, this study provides a narrative clarifying Russian views regarding U.S. and NATO missile defense. By adding background concerning Russia's past it throws light on Russian concerns and decisions regarding NATO missile defense. Tsyarkin's article focuses on decisions made by Vladimir Putin because he remains the most influential leader in Russia. This also makes Tsyarkin's article extremely relevant when analyzing interactions between the Obama Administration and Putin.

Jaganath Sankaran's book offers an overview of the system, including initial U.S. and Russian interactions in addition to the interactions between NATO and Russia. Like the studies by Roberto Zadra and Mikhail Tsyarkin, Sankaran's work is informative regarding the interactions and concerns on the part of the Russians. The overview of the program is followed by case studies regarding the probable effectiveness of the EPAA on missile threats originating both in Russia and Iran.<sup>30</sup> The case studies provide quantitative analysis regarding the possibility of interception using different proposed sites within

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<sup>28</sup> Roberto Zadra, "NATO, Russia and Missile Defence," *Survival* 56, no. 4 (August-September 2014).

<sup>29</sup> Mikhail Tsyarkin, "Russian Politics, Policy-Making and American Missile Defence," *International Affairs* 85, no. 4 (2009).

<sup>30</sup> Jaganath Sankaran, *The United States' European Phased Adaptive Approach Missile Defense System*, (National Security Research Division, Santa Monica, CA: Rand Corporation, 2015).

Europe to counter threats to NATO Europe as well as the United States. Sankaran's conclusions support the U.S. government's view that the EPAA system does not threaten the credibility of Russia's deterrent.

Steven Hildreth's work assesses Iran's ballistic missile program.<sup>31</sup> His paper differs completely from the other works considered in this literature review in that his paper does not examine missile defense in Europe at all. His work instead lays out facts, figures, and assessments of Iran's missile programs in the past and today. His work gives supporting evidence to the rationale behind the four phases of the EPAA.

## **D. POTENTIAL EXPLANATIONS AND HYPOTHESES**

### **1. Hypothesis 1: Budget**

The first hypothesis concerns the budgets of the United States and the NATO Allies. The thesis investigates the hypothesis that budgetary constraints have had a major impact on U.S. and collective NATO decisions on missile defense. Steven Whitmore and John Deni suggest that the other NATO Alliance members are not doing enough to support the Alliance BMD mission. In their view, this makes it unclear to what extent this program will be successful in the future. Success is defined as the effective implementation of the U.S. and Allied contributions to the NATO missile defense architecture, providing the NATO Allies with sufficient missile defense capabilities. The answer will probably derive in part from the debate over the distribution of responsibilities for the overall protection of NATO Europe. To what extent have budget constraints hindered the implementation of the EPAA program as originally intended? With the cancellation of the fourth phase came the reprioritization of the budget towards spending more on the defense of U.S. territories rather than on the defense of NATO Europe.

Another aspect of restructuring the budget came with the change in threat assessments concerning Iran. The September 2009 Fact Sheet on Missile Defense Policy states, "The intelligence community now assesses that the threat from Iran's short- and

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<sup>31</sup> Stephen Hildreth, *Iran's Ballistic Missile Programs: An Overview*, CRS Report No. RS22758. (Washington, DC: Congressional Research Service, 2009).

medium-range ballistic missiles is developing more rapidly than previously projected, while the threat of potential Iranian intercontinental ballistic missile (ICBM) capabilities has been slower to develop than previously estimated.”<sup>32</sup> This means that the United States could reallocate funds elsewhere because the threat from Iran’s development of intercontinental-range ballistic missiles was not maturing as quickly as originally expected. Reallocation of the budget due to changes in the threat level could mean that money could go to other areas of greater concern.

## **2. Hypothesis 2: Technology**

The second hypothesis centers on whether the equipment procured for the EPAA will actually work as intended. Since the program is innovative, complex, and intricate, it can be expected that it will not perform as reliably as proven technologies. The interception of a ballistic missile is a complex operation with a condensed timeline to acquire and intercept the target. With current and emerging threats, there are questions as to what extent the remedies of the past will still work. To what extent will the Alliance be able to overcome technology shortcomings as they are identified?

## **3. Hypothesis 3: Russia’s Response**

The third hypothesis explores whether and to what extent the EPAA’s implemented policy fell short of the original intent due to interactions between the Obama Administration and Russia. This section will analyze whether policy changes, notably the cancellation of the fourth phase of the EPAA, were influenced in part by a U.S. attempt to mollify the Russians and forge stronger ties with Moscow.

## **4. Hypothesis 4: Interactions with NATO Allies**

The fourth hypothesis considers the interactions between the Obama Administration and the other NATO Allies. It will examine to what extent interactions

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<sup>32</sup> “U.S. Missile Defense Policy A Phased, Adaptive Approach for Missile Defense in Europe,” Office of the Press Secretary, 17 September 2009, <https://obamawhitehouse.archives.gov/the-press-office/fact-sheet-us-missile-defense-policy-a-phased-adaptive-approach-missile-defense-eur>.

between the United States and its NATO Allies definitively caused the original objectives of the EPAA to be modified.

## **E. RESEARCH DESIGN**

The research assesses the original objectives of the European Phased Adaptive Approach (EPAA) and modifications from 2009 to 2017. This thesis investigates multiple aspects of the topic, including the relations involving the United States, Russia, and the NATO Allies, to analyze the extent that interactions influenced the EPAA program's implementation.

These various aspects are chosen for multiple reasons. First, the thesis undertakes a review of the interactions among the United States, Russia, and the NATO Allies concerning missile defense and the EPAA in particular. Official documents and published analyses provide grounds for the hypotheses to be evaluated. Examining specifically the United States and its NATO Allies allows for conclusions regarding modifications involving budgets on their part. Assessing these aspects also allows for an examination of technology factors, including to what extent shortfalls, delays, and other challenges helped to cause modifications to the original objectives of the EPAA.

As noted in the literature review, this thesis relies on United States Government, NATO, and Russian official documents and sources, including statements by national leaders. Secondary sources are used to complement the evidence found in the primary sources. An analysis of the primary and secondary sources supports conclusions regarding the hypothesis that the original objectives of the EPAA were modified in the course of U.S. interactions with Russia and the NATO Allies.

## **F. THESIS OVERVIEW AND CHAPTER OUTLINE**

This thesis is organized into five chapters. This first chapter serves as the introduction. The second chapter examines the origins and objectives of missile defense in NATO. It furnishes background regarding what preceded and led to the EPAA. It also provides a description of the EPAA, and examines the Obama Administration's original plans and the actual implementation of the project. The third chapter explores NATO's

reactions and contributions to the Alliance missile defense architecture, including the EPAA. The fourth chapter analyzes Russia's reactions to the EPAA. The fifth and concluding chapter summarizes the decisive factors that affected the implementation of the EPAA during the Obama Administration from 2009 to 2017. This final chapter also offers recommendations.



## II. HISTORY OF BALLISTIC MISSILE DEFENSE

This chapter explores the history of ballistic missile defense and reviews the programs, documents, and treaties that led to the development of NATO's missile defense posture. More specifically, how did these programs contribute to and shape the current Alliance missile defense posture and later lead to the original objectives of the European Phased Adaptive Approach (EPAA)?

### A. SZILARD LETTER (1939) AND DEVELOPMENT OF THE MANHATTAN PROJECT (1941)

In 1939, Leo Szilard wrote a letter, signed by Albert Einstein, to President Franklin Delano Roosevelt, warning him of coming advances in weaponry:

In the course of the last four months, it has been made probable—through the work of Joliot in France as well as Fermi and Szilard in America—that it may become possible to set up a nuclear chain reaction in a large mass of uranium by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears almost certain that this could be achieved in the immediate future.<sup>33</sup>

This letter was significant because it started not only the development of nuclear weapons but also the pursuit of defenses against nuclear-armed missiles.

The Szilard letter led to the founding of the Manhattan Project, the U.S. effort to develop the atomic bomb. Donald L. Hafner observes, “In 1941, two years after crucial scientific work by Szilard and Fermi suggested an atomic bomb might be feasible, the Manhattan Project began its task with promise from the project advocates that a workable nuclear system could be ready within two years. It took four.”<sup>34</sup> At the same time that the United States took the lead in the development of nuclear weapons, Germany's development, production, and employment of the V-2 rocket created the necessity for a

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<sup>33</sup> Albert Einstein, “Einstein-Szilard Letter,” Atomic Heritage Foundation, accessed February 15, 2018, <https://www.atomicheritage.org/key-documents/einstein-szilard-letter>.

<sup>34</sup> Donald L. Hafner, “Assessing the President's Vision: the Fletcher, Miller, and Hoffman Panels,” in *Weapons in Space*, ed. Franklin A. Long, Donald Hafner, and Jeffrey Boutwell (New York: W.W. Norton & Company, 1986), 94.

capability to counter it. The necessity to counter missile threats led to research and systems for this purpose.

## **B. BACKGROUND ON BALLISTIC MISSILE DEFENSE (1940s–1960s)**

### **1. V-2 Rocket, Project Wizard, and Project Thumper**

Ballistic missile defense started near the end of World War II, and it was developed to counter the German V-2 rocket. The V-1 flying bomb preceded the V-2 rocket and was only somewhat unreliable but was able to save on both fuel and air crews.<sup>35</sup> According to Lawrence Freedman,

It has been estimated that the campaign cost the British four times as much to deal with it as it cost the Germans to wage. The V-2 rocket however, though a greater technical achievement, was inefficient. For improvements in performance (greater speed and reliability in penetrating air defences) and an added sense of spectacle, it cost one hundred times as much as the V-1.<sup>36</sup>

This is significant because, although the British people were able to continue fighting despite the German missile attacks, the V-2 rocket presented a greater challenge than the V-1.

In November 1944, the General Electric Company was contracted through the U.S. Army for Project Thumper, whose goal was to investigate a way to protect Americans and allies from the V-2 rocket.<sup>37</sup> The V-2 rocket, originally used against London in 1944, could only be stopped by attacking missiles on the launch pad or in production. The V-2 was impossible to intercept once launched.<sup>38</sup> The V-2s were inaccurate because there was no way to aim them towards their targets with precision.

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<sup>35</sup> Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: Palgrave, 2003), 12.

<sup>36</sup> Ibid.

<sup>37</sup> Alexander Moens, *NATO and European Security: Alliance Politics from the End of the Cold War to the Age of Terrorism* (Westport, CT: Praeger, 2003), 15.

<sup>38</sup> Roger Handberg, “The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World,” 45.

In March 1946, the United States Army Air Force commenced two study programs to design an antiballistic missile: Project Wizard (MX-794) and Project Thumper (MX-795).<sup>39</sup> These projects were the first to try to develop technology that could counter the German V-2 missile. The plans later expanded to include all supersonic threats above 60,000 feet, but both programs were ultimately combined into Project Wizard in 1949.<sup>40</sup> Project Wizard continued until 1959, when it was terminated due to its comparative lack of cost effectiveness.<sup>41</sup>

## 2. NATO Strategic Concept (1949)

The NATO Allies laid out their Strategic Concept in 1949. It was centered on nuclear deterrence and called for the Allies

to coordinate, in time of peace, our military and economic strength with a view to creating a powerful deterrent to any nation or group of nations threatening the peace, independence and stability of the North Atlantic family of nations. . . [and to] Insure the ability to carry out strategic bombing promptly by all means possible with all types of weapons, without exception.<sup>42</sup>

This is significant because the document set out the groundwork for the mutual commitment to the protection of the allied nations. It also aimed to counter all threats aimed against the Allies. The next sentence of the 1949 Strategic Concept is extremely relevant even today: “This is primarily a U.S. responsibility assisted as practicable by other nations.”<sup>43</sup> This statement is significant because this idea remains the same and relevant today. Later chapters of this thesis further explore the U.S. role in European missile defense during the Obama administration. However, this statement reflects the idea that the United

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<sup>39</sup> Missile Defense Agency, *Missile Defense: First 70 Years* (Washington, DC: Missile Defense Agency, 2013), 5.

<sup>40</sup> Ibid.

<sup>41</sup> Center of Military History, *History of Strategic Air and Ballistic Missile Defense, Volume I, 1945–1955* (Ft. McNair, Washington DC: US Army Center of Military History, 2009), 114.

<sup>42</sup> North Atlantic Treaty Organization, *Strategic Concept for the Defense of the North Atlantic Area*, (1949), pp. 5–6, <http://www.nato.int/docu/stratdoc/eng/a491201a.pdf>.

<sup>43</sup> Ibid.

States is fulfilling its proper role, and this counters some later criticism regarding burden sharing.

### **3. Project Plato and PATRIOT**

After the 1940s, missile defense programs expanded quickly. In the 1950s, ballistic missiles replaced bombers for various reasons, including the bomber's difficulty in penetrating defenses and reaching the target.<sup>44</sup> The first project to commence in the 1950s was Project Plato, designed to meet the Army's requirement for a theatre ABM in 1949. Project Plato led to a succession of systems, which ultimately developed SAM-D, which today is known as Phased Array Tracking Radar Intercept on Target (PATRIOT).<sup>45</sup> The more advanced versions of PATRIOT are still in use today, notably in the U.S. Army as an integral part of theatre level ballistic missile defense. Raytheon has sold the PATRIOT system to the following European countries: Germany, Greece, the Netherlands, Poland, and Spain. This has promoted cooperation in the implementation of the system.

### **4. Nike Zeus, Project Defender, and Nike-X ABM**

In 1955, the United States received intelligence reports regarding the looming Soviet ICBM threat, and this caused the Department of Defense to launch a development program that was intended to counter this Soviet threat.<sup>46</sup> The development led to Nike-Zeus and Project Defender, which were later abandoned in favor of the Nike-X ABM system. The Nike-Zeus system, started in early 1957, was composed of radars and interceptor missiles that could be used to intercept high-altitude targets.<sup>47</sup> In December 1962, the Nike-Zeus system was able to successfully intercept an Atlas D Missile.<sup>48</sup> This was significant because it proved that the United States could develop a system that would

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<sup>44</sup> Roger Handberg, "The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World," 45.

<sup>45</sup> Missile Defense Agency, *Missile Defense: First 70 Years*, 6.

<sup>46</sup> Ibid.

<sup>47</sup> Alexander Flax, "Ballistic Missile Defense: Concepts and History," in *Weapons in Space*, ed. Franklin A. Long, Donald Hafner, and Jeffrey Boutwell (New York: W.W. Norton & Company, 1986), 34.

<sup>48</sup> Ibid.

be able to counter the Soviet threat, at least in some circumstances. The Nike-X ABM system would later also have the ability to intercept low-altitude targets and upgraded radars.<sup>49</sup>

In the mid-1960s, President Lyndon B. Johnson and his defense secretary, Robert S. McNamara, did not agree with the Joints Chief of Staff that deploying the Nike-X ABM system would be the correct move in regard to the Soviets. Instead, Johnson and McNamara believed that the proper counter to the Soviet ICBM threat would be either concluding an arms control agreement limiting Soviet SLBMs and ICBMs or overcoming the Soviet threat with offensive capabilities.<sup>50</sup> The debate was settled after a failure to conclude an arms control agreement with the Soviets in 1967 when Secretary McNamara announced the deployment of Sentinel, which was based on the Nike-X ABM system and that would be used to counter the new Chinese threat.<sup>51</sup> The reorientation of the project led to controversy, which President Richard Nixon attempted to put to rest during his presidency.

## **5. Reorientation of Missile Defense: Sentinel**

In 1969, President Nixon reoriented U.S. policy on missile defense. He changed the focus by shifting the Sentinel system from urban area defense to protecting Minuteman ICBMs.<sup>52</sup> President Nixon also renamed the program from Sentinel to Safeguard. He also modified the deployment numbers and the locations of the missiles as well as the radar components.<sup>53</sup> The Safeguard program became a major bargaining point during the Strategic Arms Limitation Talks (SALT) regarding the Anti-Ballistic Missile (ABM) Treaty, which was signed in May 1972 and ratified later that year.<sup>54</sup>

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<sup>49</sup> Ibid., 35.

<sup>50</sup> Missile Defense Agency, *Missile Defense: First 70 Years*, 7.

<sup>51</sup> Ibid., 10.

<sup>52</sup> Ibid.

<sup>53</sup> Flax, "Ballistic Missile Defense: Concepts and History," 36.

<sup>54</sup> Missile Defense Agency, *Missile Defense: First 70 Years*, 11.

### C. STRATEGIC ARMS LIMITATION TALKS (SALT) AND ANTI-BALLISTIC (ABM) TREATY

In 1972, the United States and the Soviet Union came to an agreement in the SALT negotiations, which consisted of both the Anti-Ballistic Missile (ABM) Treaty and an interim agreement relating to strategic offensive arms.<sup>55</sup> The purpose of the ABM Treaty was to limit U.S. and Soviet ABM systems, including the number of fixed missile defense sites.<sup>56</sup> These sites were further restricted by the 1974 amendment to the ABM Treaty. According to David Yost, “The ABM Treaty of 1972 and its 1974 protocol were welcomed in Western Europe for all of the reasons why BMD was recently opposed. The main benefit was seen as stabilization of the arms race and East-West relations generally, with a firm foundation for continuing détente.”<sup>57</sup> Yost quoted Ian Smart, who provided three more reasons why the Western Europeans endorsed it: “1) the continued credibility of the British and French deterrents was enhanced. 2) The United States insisted that Article IX of the ABM Treaty (which prohibits the transfer of ABM technology to third countries) would not prevent the transfer of offensive weapons technology. 3) The United States did not make itself less vulnerable to ballistic missile attack than its Allies.”<sup>58</sup> All three of these reasons offer strong evidence regarding why the ABM Treaty was supported in Western Europe. Alexander Flax wrote that

The signing of the ABM treaty in 1972, however, radically changed Safeguard deployment plans. The treaty, together with a subsequent protocol, permitted a total of only one hundred interceptors in only one of two types of deployment, for defense of a strategic missile site or for defense of the national capital.<sup>59</sup>

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<sup>55</sup> David S. Yost, *NATO's Balancing Act* (Washington, DC: United States Institute of Peace, 2014), 311.

<sup>56</sup> *Ibid.*

<sup>57</sup> David S. Yost, “Ballistic Missile Defense and the Atlantic Alliance,” in *The Star Wars Controversy: An International Security Reader*, ed. Steven E. Miller and Stephen Van Evera (Princeton, NJ: Princeton University Press, 1986), 134.

<sup>58</sup> *Ibid.*

<sup>59</sup> Flax, “Ballistic Missile Defense: Concepts and History,” 37.

The ABM treaty was successful in reducing the total number of interceptors and was maintained for approximately 30 years. President George W. Bush announced in December 2001 that the withdrawal of the United States from the ABM treaty would take effect in June 2002. Russia and the United States nonetheless agreed to further nuclear weapons reductions in the May 2002 Moscow Treaty.

## **D. PRIORITY SHIFT OF U.S. SECURITY POLICY**

### **1. Strategic Defense Initiative**

In 1983, President Ronald Reagan instituted the Strategic Defense Initiative (SDI) to shift U.S. security policy away from nuclear deterrence and nuclear “assured destruction” to an increased emphasis on strategic defenses. President Reagan in National Security Decision Directive Number 119 stated that, “given the uncertain long-term future of offensive deterrence, I believe that an effort must also be made to identify alternative means of deterring nuclear war and protecting our national security interests.”<sup>60</sup> In another directive, he called for “effective programs [providing] continuity of government, strategic connectivity, and civil defense.”<sup>61</sup> Reagan’s judgments became the backbone of the Strategic Defense Initiative, which he launched on 23 March 1983. Steven Hadley argues that, “Diplomatically, SDI was a major factor in the Soviet decision in January 1985 to return to the negotiating table after having walked out of the Strategic Arms Reduction Talks (START) late in 1983.”<sup>62</sup> In other words, the United States was able to use technological advances to encourage Moscow to come to the table to talk.

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<sup>60</sup> The White House, *National Security Decision Directive Number 119, “Strategic Defense Initiative”* (Washington, DC: The White House, 1984), <https://fas.org/irp/offdocs/nsdd/nsdd-119.pdf>. (declassified 28May2008).

<sup>61</sup> The White House, *National Security Decision Directive Number 32, “U.S. National Security Strategy”* (Washington, DC: The White House, 1982), <https://fas.org/irp/offdocs/nsdd/nsdd-32.pdf>. (declassified 27 August 2009).

<sup>62</sup> Stephen J. Hadley, “The Nature of SDI,” In *The Strategic Defense Initiative: Shield or Snare?* ed. Harold Brown (Washington, DC: The John Hopkins Foreign Policy Institute, 1987), 13.

## **2. GPALS, PAC-3, and THAAD**

The end of the Cold War also led to a change in the BMD policies of the United States. President George H.W. Bush called for a review of the SDI program, and this resulted in a shift from SDI to Global Protection Against Limited Strikes (GPALS) in 1991.<sup>63</sup> The aim of the new system was to establish an integrated architecture, which would protect Americans at home as well as U.S. allies and deployed forces overseas from small, accidental, or unauthorized missile attacks.<sup>64</sup>

The new system's focus on protection against limited ICBM attacks opened the way to a greater concentration on Theatre Missile Defense during the Clinton administration. Under President Bill Clinton, the Department of Defense broke up the programs into separate components such as PATRIOT Advanced Capability-3 (PAC-3) and Theatre High Altitude Area Defense (THAAD).<sup>65</sup> Both of these systems are still in use today for theatre level defense. Clinton also signed the National Missile Defense Act of 1999, which started the development of a new National Missile Defense system.<sup>66</sup> While Clinton's actions helped to set the future of missile defense in motion, missile defense received a new impetus as a result of the terrorist attacks against the United States in 2001 (9/11).

## **3. U.S. Withdrawal from the ABM Treaty and GMD Interceptors**

U.S. missile defense changed drastically after the attacks on September 11, 2001. President George W. Bush immediately took a strong stance and called for taking the shortest time possible to deploy missile defenses and told Russia of the U.S. intention to withdraw from the ABM Treaty.<sup>67</sup> President Bush, Defense Secretary Donald H. Rumsfeld, and the BMDO Director, Lieutenant General Ronald T. Kadish, reoriented the program towards an integrated, layered defense system capable of defeating missiles in all

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<sup>63</sup> Missile Defense Agency, *Missile Defense: First 70 Years*, 14.

<sup>64</sup> Ibid.

<sup>65</sup> Ibid., 15.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid., 16.



phases of flight.<sup>68</sup> The layered defense was achieved by combining the PAC-3 and AEGIS with Ground Based Midcourse Defense (GMD) interceptors. The combination of these three systems allowed for the interception of all ranges of ballistic missiles, including intercontinental ballistic missiles. In the end, the Barack Obama administration built on the previous systems to pursue the European Phased Adaptive Approach.

#### **E. BMDR REVIEW OF 2010**

The Ballistic Missile Defense Review (BMDR) started in 2009, and it was conducted concurrently with the Nuclear Posture Review. The first report was completed and the findings were released in 2010. The Department of Defense defined the Ballistic Missile Defense Review as “a review conducted pursuant to guidance from the President and the Secretary of Defense, while also addressing the legislative requirement to assess U.S. ballistic missile defense policy and strategy. The BMDR will evaluate the threats posed by ballistic missiles and develop a missile defense posture to address current and future challenges.”<sup>69</sup> This focus gives the United States a tool not only to assess its own defenses but also to evaluate threats and how quickly technology is advancing. By completing this review, U.S. policy-makers and experts were assisting in keeping the United States safe. According to the final report released in 2010,

Deterrence is a powerful tool, and the United States is seeking to strengthen deterrence against these new challenges. But deterrence by threat of a strong offensive response may not be effective against these states in a time of political-military crisis. Risk-taking leaders may conclude that they can engage the United States in a confrontation if they can raise the stakes high enough by demonstrating the potential to do further harm with their missiles. Thus U.S. missile defenses are critical to strengthening regional deterrence.<sup>70</sup>

This explanation clarifies the significance of deterrence and why the Obama administration chose in some cases to deviate from the original objectives that were set forth in the

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<sup>68</sup> Ibid.

<sup>69</sup> Department of Defense, *Ballistic Missile Defense Review Report*.

<sup>70</sup> Department of Defense, *Ballistic Missile Defense Review Report*, 6–7.

European Phased Adaptive Approach architecture for the defense of Europe and the United States.

#### **F. LISBON (2010) AND CHICAGO (2012) SUMMIT**

The Lisbon Summit took place in November 2010 and the Chicago Summit took place in May 2012. At the Lisbon Summit the Alliance and Russia agreed to “resume theatre missile defence cooperation and to develop a comprehensive Joint Analysis of the future framework for missile defense cooperation.”<sup>71</sup> This included a joint exercise, which was held in Germany in March 2012. Russia suggested on the basis of this exercise that the lessons learned report leaned to evidence supporting a joint solution.<sup>72</sup>

At the Chicago Summit the Allies put forth two proposals for missile defense cooperation for Russia to consider. First, the Alliance suggested that they work together to create two joint NATO-Russia Command and Control Centers.<sup>73</sup> This option would have allowed both sides to work together to share intelligence as well as to plan and then coordinate on missile defense options.<sup>74</sup> This option proposed by NATO did not happen because “Moscow was not ready to consider its proposal.”<sup>75</sup> This option would have been the most advantageous to both sides and could have eliminated some of the issues between both sides on the European system that are discussed in greater depth in chapter III and chapter IV. The second proposal that was brought up at the Chicago Summit was “to develop a transparency regime based upon a regular exchange of information about the current respective missile defense capabilities of NATO and Russia.”<sup>76</sup> This proposal was not pursued due to lack of enthusiasm on the part of Washington and Moscow.<sup>77</sup> This, like the former option, could have opened up dialogue between both sides and could have

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<sup>71</sup> Zadra, “NATO, Russia and Missile Defence,” 52.

<sup>72</sup> Ibid.

<sup>73</sup> Ibid.

<sup>74</sup> Ibid.

<sup>75</sup> Ibid.

<sup>76</sup> Ibid.

<sup>77</sup> Ibid.

eliminated some of the concerns on either side. As with the former option, though, this was not to be the case.

## **G. ORIGINS OF THE EUROPEAN PHASED ADAPTIVE APPROACH**

On September 17, 2009, President Obama announced the implementation of a new U.S. missile defense system in Europe. President Obama stated,

To put it simply, our new missile defense architecture in Europe will provide stronger, smarter, and swifter defenses of American forces and America's Allies. It is more comprehensive than the previous program; it deploys capabilities that are proven and cost-effective; and it sustains and builds upon our commitment to protect the U.S. homeland against long-range ballistic missile threats; and it ensures and enhances the protection of all our NATO Allies.<sup>78</sup>

The Barack Obama administration instituted the European Phased Adaptive Approach (EPAA) system to defend Europe against current and future threats from Iran. The EPAA missile defense system was to consist of four phases that would begin implementation in 2011 and continue through 2022.

### **1. EPAA Phase 1**

Phase 1 of the system commenced in March 2011 and consisted of outfitting SM3-1A and SM3-1B interceptors on Aegis ships, such as the USS MONTEREY, which would deploy to the Mediterranean Sea. On March 7, 2011, ships from the United States forward deployed to Rota, Spain; and the Ramstein, Germany, Command Center became operational.<sup>79</sup> The second part of Phase 1 included placing a land-based radar in Turkey.<sup>80</sup> This land based radar is known as the Forward-based Army Navy/Transportable Radar Surveillance System (AN/TPY-2), and it is fully operational.<sup>81</sup> The missiles that were to

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<sup>78</sup> "Implementing Missile Defense in Europe," National Archives and Records Administration, 2011, <https://obamawhitehouse.archives.gov/the-press-office/2011/09/15/fact-sheet-implementing-missile-defense-europe>.

<sup>79</sup> Karen Kaya, "NATO Missile Defense and the View from the Front Line," *Joint Force Quarterly*, 4th ser., no. 71 (2013): 85.

<sup>80</sup> Sankaran, "The United States' European Phased Adaptive Approach Missile Defense System," 3.

<sup>81</sup> Kaya, "NATO Missile Defense and the View from the Front Line," 85.

be deployed during this phase were designed to defend against short and medium range missiles launched from Iran. Short-range missiles have ranges less than 1,000 kilometers while medium range ballistic missiles have a range of 1,000 to 2,000 kilometers.<sup>82</sup> There is speculation that Iran is developing an extended medium range ballistic missile (also known as an intermediate range ballistic missile) capable of traveling between 4,000 and 5,000 kilometers.<sup>83</sup>

## **2. EPAA Phase 2**

Phase 2 was scheduled to begin in 2015 and involved installing a land based AEGIS SPY-1 radar known as AEGIS Ashore in Deveselu, Romania.<sup>84</sup> Phase 2 also involved deploying SM3-IB missiles on AEGIS ships and at sites ashore.<sup>85</sup> This was an important upgrade because the SM3-IB is more capable and has a faster burnout velocity than its predecessor.

## **3. EPAA Phase 3**

The first two phases of the EPAA have been implemented and the next phase is set to begin implementation in the near future. Phase 3 of the EPAA system is scheduled to begin in 2018, and it will provide for a second AEGIS Ashore site in Redzikowo, Poland, as well as SM3-IIA interceptors.<sup>86</sup> The SM3-IIA interceptors in this phase have a quicker burnout velocity than the SM3-IB and are designed to defend against medium and intermediate range missiles.<sup>87</sup> This is different from the SM3-IA, which could only defend against medium range missiles. This gives the United States and its NATO allies greater defense capability and more flexibility.

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<sup>82</sup> Hildreth, "Iran's Ballistic Missile Programs: An Overview," 3-4.

<sup>83</sup> Ibid.

<sup>84</sup> Sankaran, "The United States' European Phased Adaptive Approach Missile Defense System," 3.

<sup>85</sup> Ibid., 4.

<sup>86</sup> Ibid., 3.

<sup>87</sup> Ibid., 4.

#### **4. EPAA Phase 4**

Phase IV was planned to be completed in 2022, and it would have placed SM3-IIBs in Poland. It was also planned to deploy the SM3-IIB missiles with the capability to defend against intermediate and intercontinental range ballistic missiles.<sup>88</sup> An intercontinental range ballistic missile is capable of traveling more than 5,500 kilometers.<sup>89</sup> Phase IV of the EPAA system was, however, canceled in March 2013.<sup>90</sup>

#### **H. CONCLUSION**

Missile defense has long been an important feature of policy for the United States and NATO, especially since the 1960s. The priority to keep the territories and the populations of the United States and the Alliance as a whole safe has been and will continue to be important as threats evolve and change over time. The EPAA system is an adaptable architecture for the protection of the United States and Europe, and it is capable of being modified as requirements change.

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<sup>88</sup> Ibid.

<sup>89</sup> Hildreth, "Iran's Ballistic Missile Programs: An Overview," 1.

<sup>90</sup> Sankaran, "The United States' European Phased Adaptive Approach Missile Defense System," 3.

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### **III. NATO RESPONSE TO THE EUROPEAN PHASED ADAPTIVE APPROACH**

This paper will explore the relationship between the United States and the other NATO Allies in regard to the Alliance missile defense posture. More specifically, how did the responses of the NATO Allies to growing missile threats shape their national and collective contributions to the Alliance missile defense posture and eventually affect the original objectives of the U.S. European Phased Adaptive Approach (EPAA), America's contribution to NATO's missile defense posture?

#### **A. BUDGET CRITIQUE OF THE EPAA**

The European Phased Adaptive Approach was generally accepted by the other Allies as a valuable contribution to the collective defense of Europe. However, budget constraints have affected not only the United States but also its Canadian and European Allies as well. NATO officials argue that the collective defense capability (territorial missile defense) will cost the member states approximately 200 million euros (that is approximately 260 million U.S. dollars) over a ten-year period from 2010 to 2020.<sup>91</sup>

According to Steven Hildreth and Carl Ek, "This amount was characterized as an additional expenditure for upgrading the alliance's existing ALTBMD program, which is expected to cost approximately 800 million euros (approximately \$1 billion) over 14 years."<sup>92</sup> This is a significant amount of money in view of budget constraints on the part of NATO allies. Steven Whitmore and John Deni argue that the European alliance members were more cash strapped than the United States in 2009 and therefore were eager to take part in the program; but they did not possess the funds to contribute on the level of the Americans.<sup>93</sup> The compromise came with the Allies offering to contribute to Alliance missile defense with land or facilities. This shifted the mindset towards a layered defense

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<sup>91</sup> Steven A. Hildreth, and Carl Ek, *Missile Defense and NATO's Lisbon Summit*, CRS Report No. R41549 (Washington, DC, Congressional Research Service, 2010), 6.

<sup>92</sup> Ibid.

<sup>93</sup> Whitmore and Deni. *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, xi.

system with the intent to integrate national assets towards a collective command and control system.<sup>94</sup>

The donation of national assets was an attempt to please the Americans and to show their willingness to participate in the collective defense of Europe with what they could provide. Whitmore and Deni argue that while these offers satisfied Washington, few Allies have actually followed through with their pledges.<sup>95</sup> The lack of follow through has had a profound impact on the project and on public opinion today on this issue and other issues within NATO.

One major result of the lack of follow through and budget constraints on the part of the United States is the cancellation of phase four of the EPAA. Whitmore and Deni argue that the fourth phase was canceled in March 2013 due to a reprioritization of the budget that shifted resources from Europe to the Asia-Pacific region.<sup>96</sup> While this reprioritization may have had some effect on the cancellation of the EPAA's fourth phase, the major factor still seems to have been the lack of balanced burden sharing between the United States and its NATO allies. The unsatisfactory burden sharing has caused the program to fall short of its original plans.

Likewise, the other side of the argument concerns the cost effective nature of an early intercept (EI) system. The Defense Science Board study in September 2011 revealed that there is "potential for EI to provide most cost effective BMD insofar as it can contribute to reducing the number of interceptors needed/expended in both regional and homeland defense scenarios."<sup>97</sup> This is significant because cost effectiveness offers a solution to budget constraints on the side of both the European Allies and the United States. It provides a positive situation because both defense and deterrence are maintained at an acceptable cost to the contributors. Greater cost effectiveness can be achieved through a combination

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<sup>94</sup> Michael Mayer, "Strategic Uncertainty and Missile Defence: Revisiting the 1999 National Intelligence Estimate," *Contemporary Security Policy* 36 no. 3 (2015): 440.

<sup>95</sup> Whitmore, and Deni, *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, xi.

<sup>96</sup> *Ibid.*, 9.

<sup>97</sup> Defense Science Board, *Science and Technology Issues of Early Intercept Ballistic Missile Defense Feasibility*. (Washington, DC: Office of the Secretary of Defense, 2011), 29.



of policy changes, which allow for the smallest number of interceptors needed for the mission.<sup>98</sup> The reduction in the number of interceptors can be achieved by implementing a policy of Shoot-Assess-Shoot (S-A-S).<sup>99</sup> While there are technical challenges with this policy, which will be discussed in depth later, the potential for reductions in the number of required interceptors for each enemy ballistic missile offers the possibility of cost reduction. It could also aid the United States in homeland defense by eliminating the regional threat so that valuable and expensive homeland defense assets (such as ground-based interceptors, or GBIs) would not have to be used.<sup>100</sup> This could provide a huge benefit to the United States and its NATO Allies and strengthen deterrence by having a collective defense which challenges adversaries.

President Obama also saw the cost benefits in the system. On September 17, 2009, he stated, “Our new approach will therefore deploy technologies that are proven and cost effective and that counter the current threat, and do so sooner than the previous program. Because our approach will be phased and adaptive, we will retain the flexibility to adjust and enhance our defenses as the threat and technology continue to evolve.” This statement is significant because it touches on the idea of budget and cost effectiveness in procurement, and it shows an openness to changes in the program, which led to the program not meeting its original objectives.

Furthermore, one can see the understanding of cost from the American perspective because it is included in the 2010 Ballistic Missile Defense Review (BMDR). The BMDR report states, “The Administration recognizes that allies do not view the specifics of the missile threat in the same way, and do not have equal resources to apply to this problem, but there is general recognition of a growing threat and the need to take steps now to address both existing threats and emerging ones.”<sup>101</sup> This statement explains the view of the Obama Administration, which was that NATO member states only need to contribute

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<sup>98</sup> Ibid.

<sup>99</sup> Ibid., 9.

<sup>100</sup> Ibid., 23.

<sup>101</sup> Department of Defense, *Ballistic Missile Defense Review Report*, 32.

what they can feasibly provide. It also places the emphasis on preparation not just for current threats but also for those that may develop in the future.

## **B. TECHNOLOGY CHALLENGES**

While on paper the EPAA plan looks solid and feasible, it has fallen short of its original goals due to technical challenges such as target acquisition, discrimination, interception, and data networking.<sup>102</sup> Whitmore and Deni argue that the technical challenges have been among the core European objections regarding BMD for decades.<sup>103</sup> This implies that Whitmore and Deni believe that the Alliance missile defense effort was doomed to fail because the allies do not believe that the technical challenges can be overcome at an affordable cost. This implies in turn that the allies will invest fewer resources than the United States to overcome these challenges. The EPAA is the U.S. contribution to the NATO missile defense architecture, and it is by far the largest national contribution.

The first major technical issue with the EPAA system is target acquisition. The DOD Defense Science Board (DSB) concluded in 2011 that the x-band radar system, which will be used in the EPAA architecture, is “not adequate for a robust defense of Alliance territory.”<sup>104</sup> This is important to understand because once again it shows that the United States has not yet been able to develop and deploy an effective defense against ballistic missiles in Europe. The EPAA plan that was presented by President Obama to the United States and its Allies in September 2009 has fallen short of its original desired goals.

The second and third technical issues with the system are target discrimination and data networking. Target discrimination is the ability to discern whether the objects detected are threats, missile junk, or decoys. The shortage of time available for target discrimination

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<sup>102</sup> Whitmore, and Deni, *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, 11.

<sup>103</sup> Ibid.

<sup>104</sup> Whitmore, and Deni, *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, 12. The DSB source cited is the following: *Science and Technology Issues of Early Intercept Ballistic Missile Defense Feasibility*. Defense Science Board, 2011.

is the greatest challenge that a missile defense system faces. The necessity to discriminate the correct target while in the mid-course phase of flight and the necessity of fusing computational data allow little room for error on the part of the operator when assessing a data set.<sup>105</sup> The first aspect of this is straightforward. Interceptor missiles are expensive and should not be wasted by hitting shrapnel or decoys instead of the desired target. The necessity to discriminate the correct target while in the mid-course of flight is important to obtain the greatest chances of success with the interceptor. The technical issue surrounding the efficient and effective fusing of data is the largest and perhaps most demanding of these issues. In order for the EPAA system to work properly it employs sensors at sea, on land, and in space. These sensors must all work together to create a complete and accurate picture in as little time as possible. This is the ideal, but it is not always reality when trying to identify a target that is traveling at high speed and releasing penetration aids. This issue may be less of a hindrance as the system and technology continue to improve, despite the continuing capability enhancements on the part of the enemy.

The fourth technical issue with the EPAA deals with the interception of the target. Whitmore and Deni describe the current firing policy as shoot-assess-shoot, the policy recommended by the DSB in 2011.<sup>106</sup> This means that one has to have a fast enough interceptor and enough time to execute the entire timeline. As noted previously, the shoot-assess-shoot protocol is also the most cost efficient way of conducting BMD, because it provides (at least in favorable circumstances) time for the operator to assess the situation after shooting before firing again and thus saving vital resources. The current EPAA plan falls short of meeting these expectations because current missiles do not have a burnout velocity fast enough to meet the shoot-assess-shoot firing policy. Phase 1 and Phase 2 of the EPAA utilize the SM3-IA and SM3-IB, which have a burnout velocity of 3 km/sec and 3.5 km/sec respectively.<sup>107</sup> Currently Phase 3 of the EPAA intends to introduce the SM3-IIA missile, which will have a burnout velocity of 4.5 km/sec.<sup>108</sup> This new missile will

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<sup>105</sup> Ibid., 13.

<sup>106</sup> Ibid., 14.

<sup>107</sup> Sankaran, "The United States' European Phased Adaptive Approach Missile Defense System," 4.

<sup>108</sup> Ibid.

allow for the new shoot-assess-shoot firing policy to theoretically be achieved. Whitmore and Deni state that this missile will achieve the firing policy if the test and evaluation phases of the SM-3 IIA are able to overcome the technical challenges that are uncovered through the testing.<sup>109</sup> Ultimately, the final outcome will depend on whether the plan comes to fruition as originally envisioned.

### **C. ALLIANCE RESPONSE TO EPAA**

The EPAA was generally accepted by the allies, but they failed to follow through with the commitments they made to the United States regarding the Alliance's missile defense posture. The biggest obstacle to alliance missile remains with allied budgets. Roger Handberg argues that budget limits pose a challenge to BMD in Europe.<sup>110</sup> He holds that if the USA was not involved in the European BMD efforts the European Allies would not be pursuing missile defense. This is significant because, if the Europeans view BMD as lacking importance, there is no reason why they would feel inclined to assist the United States in building a complete and functional Alliance missile defense posture. They will instead contribute to missile defense in the areas they do find important or that best suit them. Handberg also argues that if the EPAA system proves effective it will cause the United States to hide behind its BMD wall, which will ultimately cause the United States to be disengaged from other important world issues.<sup>111</sup> This argument does not have any merit. An Alliance BMD posture would not only protect the European Allies but would also protect the American troops in Europe. It would protect not only the military but the civilians as well.

Furthermore, the Alliance remained concern over the United States' decision to cancel Phase 4 of the EPAA. David S. Yost elaborates on this argument by explaining,

Some European experts and officials have argued that the cancellation of phase 4 has made phase 3 more vulnerable in U.S. budget planning and

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<sup>109</sup> Whitmore and Deni. *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, 15.

<sup>110</sup> Handberg, "The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World," 53.

<sup>111</sup> *Ibid.*

politics, because phase 3 is configured essentially for the defense of Europe. In their view, the abandonment of the fourth phase has raised uncertainty about future U.S. missile defense investments, since this phase was the part of the EPAA most pertinent to U.S. national defense.<sup>112</sup>

This argument refers back to budget concerns earlier in the chapter. Not only does it question the U.S. commitment to the collective missile defense, but it also makes it much more likely that the U.S. would be willing to cut more of the budget that had been allocated to the other phases due to their purpose being defense of Europe and not defense of the U.S. homeland.

### **1. Opinion Surveys in Poland and Czech Republic**

Furthermore, public opinion surveys in Poland and the Czech Republic revealed opposition to U.S. missile defense systems in Europe.<sup>113</sup> These surveys were conducted and published in December 2008, before President Obama's September 2009 announcement of the EPAA system. However, the surveys show a baseline of hesitation and opposition that existed in Europe even prior to the EPAA announcement. Their opposition was due to concerns surrounding sovereignty as well as the possibility of antagonizing Russia.<sup>114</sup> The concerns that surfaced from the surveys represent reasonable interests for both of these countries due to their historical relations with Russia. These relations influence their interest in maintaining the sovereignty of their country. Fear of antagonizing Russia is reasonable in light of their historical relations with Moscow. Critics argue that missile defense puts Poland and the Czech Republic in a predicament because it places them in the center of the tension between the United States and Russia. There is further division among opinions in Europe over which ballistic missile threat is the most likely and relevant for Europe. This is a significant topic because individual NATO members disagree based on the threat to each individual country. For example, member states tend to disagree with Americans on the magnitude of Iran's ballistic missile

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<sup>112</sup> Yost, *NATO's Balancing Act*, 103.

<sup>113</sup> Whitmore and Deni. *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, 4.

<sup>114</sup> *Ibid.*

threat.<sup>115</sup> The 2007 Transatlantic Trends Survey found that 68 percent of Americans, and only 54 percent of Europeans were concerned with Iran's nuclear threat in Europe.<sup>116</sup> This is significant because the disparity influences how European countries choose to spend their budgetary resources for the common defense. It is also the reason why the United States believes this is such a significant topic.

## 2. Polish View on Missile Defense

The interest in an ABM system as well as ground-based interceptors provided by the United States has been expressed by the Polish government since 2004.<sup>117</sup> One major reason for Warsaw's close ties to NATO is concern over Russia.<sup>118</sup> This is important because of Poland's history of relations with Russia and Belarus (a close ally of Russia).<sup>119</sup> Second, Poland's relationship with Russia deteriorated quickly when Warsaw agreed to allow the United States to place ten Ground-Based Interceptors (GBI) on Polish soil.<sup>120</sup> Russia quickly responded by deploying Iskander missiles to the Kaliningrad Oblast.<sup>121</sup> This was significant because it showed Poland's concerns with Russia and vice versa. It was also one of the first examples of deterioration in the NATO-Russia relationship prior to 2014. This is further supported by a speech by Dmitry Medvedev, Russia's President from 2008 to 2012. On November 23, 2011, Medvedev stated: "[If] the above measures prove insufficient, the Russian Federation will deploy modern offensive weapon systems in the west and south of the country, ensuring our ability to take out any part of the U.S. missile defence system in Europe. One step in this process will be to deploy Iskander

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<sup>115</sup> Ibid., 5.

<sup>116</sup> Craig Kennedy, et al. *Transatlantic Trends Survey, 2007*, (Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2007), 4.

<sup>117</sup> Agnieszka Sowińska and Tatiana Dubrovskaya, "Discursive Construction and Transformation of 'Us' and 'Them' Categories in the Newspaper Coverage on the U.S. Anti-Ballistic Missile System: Polish Versus Russian View," *Discourse & Communication* 6, no. 4 (2012): 454.

<sup>118</sup> Andrew Somerville, Ian Kearns, and Malcolm Chalmers. "Poland, NATO and Non-Strategic Nuclear Weapons in Europe." *Royal United Services Institute for Defence and Security Studies* (February 2012): 3.

<sup>119</sup> Ibid.

<sup>120</sup> Ibid.

<sup>121</sup> Ibid.

missiles in Kaliningrad Region.”<sup>122</sup> This quotation is significant because publically NATO and Russia still had an open dialogue regarding a joint missile defence system. It is, however, clear that this relationship was already fractured beyond near-term repair. Poland’s concerns about Russia are understandable, given Russian threats to destroy European-based U.S. missile defenses.

Poland supported a missile defense system being installed on its territory because it offered some reassurance from NATO allies. Andrew Somerville, Ian Kearns, and Malcolm Chalmers elaborate on this as follows:

Whereas Poland perceives the presence of any US/NATO military infrastructure on its territory as a desirable form of strategic reassurance, Russia opposes any such deployment and argues that it goes against the commitment not to deploy further NATO forces in Central and Eastern Europe made in the NATO-Russia Founding Act.<sup>123</sup>

This clarifies the tension between Russia and NATO as well as Poland’s concerns regarding Russia. Strategic reassurance is important not only for the government in Poland but also for the Polish people.

### **3. Canadian View on Missile Defense**

Canada’s opinion on missile defense differs greatly from the views of both the European Allies and the United States. Despite agreeing to participate in collective defense, the Canadian government has done little to actually provide for the missile defense system. One explanation for Canada’s restraint has been suggested by Frank Harvey, Colin Robertson, and James Fergusson: “Perhaps Canadian officials are perfectly secure in the belief (hope) that U.S. officials will fulfill their obligation to protect their closest NATO ally from any and all incoming missiles. So why rock the boat- we’re quietly participating

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<sup>122</sup> Dmitry Medvedev, “Statement in Connection with the Situation Concerning the NATO Countries Missile Defence System in Europe,” President of Russia, November 23, 2011. <http://en.kremlin.ru/events/president/news/13637>.

<sup>123</sup> Somerville, Kearns, and Chalmers. “Poland, NATO and Non-Strategic Nuclear Weapons in Europe,” 4.

in BMD without having to engage in another public debate on the subject.”<sup>124</sup> This seems to be a sub-optimal decision as silently participating without outright guarantees from the United States that Washington will indeed protect Canada means that by remaining quiet Canadian officials may actually be putting their people in danger. Harvey, Robertson, and Fergusson argue, “Ottawa should engage in high-level consultations with Washington on BMD architecture, precisely because the government has already embraced the strategic imperatives tied to BMD. Drawing imaginary distinctions between American, European and Asia security on the one hand, and Canadian security on the other, makes no sense.”<sup>125</sup> In other words, trying to separate Canadian security from the security of Canada’s allies is not the correct answer when it comes to deterrence and protection.

Canada has been a constant quiet partner in BMD. The Senate Testimony of Colin Robertson explains the main criticisms advanced by Canadians concerning missile defense despite Canada’s central role in NORAD, the North American Aerospace Defense Command. According to Robertson, “Criticism of BMD boils down to the following: First, according to critics, it doesn’t work and it weaponizes space. It’s a latter-day Maginot Line costly, unreliable, and provocative. NORAD, they argue, provides sufficient defence but they forget that, at the critical moment, we must leave the room.”<sup>126</sup>

This criticism revolves around the idea that the programs are expensive and that BMD weaponizes space. This criticism leaves out the fact that Canada agreed in 2010 with its NATO Allies to build a BMD system. The development of the BMD system in Europe will continue regardless of Canadian participation.

Robertson adds, “The second criticism of BMD is that it makes us too reliant on the USA.”<sup>127</sup> This opinion again is a common thread between Canada and its European NATO Allies. This argument does not hold up because the program is “collective defense.” This means that the BMD posture is not just other countries relying on the United States

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<sup>124</sup> Frank Harvey, Colin Robertson, and James Fergusson, “Canada and Ballistic Missile Defense,” *Canadian Defence and Foreign Affairs Institute* (March 2014): 8.

<sup>125</sup> Ibid.

<sup>126</sup> Ibid., 13.

<sup>127</sup> Ibid.



but rather Alliance member countries contributing towards a program that provides protection and security for all the Allies.

Robertson's third and final argument is that Canada may continue to not participate in BMD because some Canadians think that BMD it is "morally wrong."<sup>128</sup> He does not elaborate on this critique further but only supplements it by saying "But we live in the real world, not Elysium."<sup>129</sup> This response supports the idea that the NATO Allies live in a world where security is threatened. Canada has no more control over whether a missile is fired at its territory than anyone else does. By participating Canada may help to save many Canadian lives in the event of a missile attack.

#### **4. Turkish View on Missile Defense**

Despite the fact that equipment for the EPAA system is based in Turkey, Ankara has had some reservations regarding what is guaranteed to Turkey through NATO. According to Nilsu Gören, "Turkey has political and technical concerns about NATO guarantees under the European Phased Adaptive Approach (EPAA), leading to the proposition that Turkey needs to develop indigenous air and missile defense capabilities to reduce vulnerability."<sup>130</sup> Turkey is concerned about being vulnerable despite hosting a NATO missile defense component. While Poland was reassured by the EPAA system, Turkey evidently regards it as insufficient.

Gören has described Turkey's other concerns as follows: "The main concerns that Turkey initially had with hosting the radar were naming Iran as a threat, the U.S. command and control not allowing any Turkish influence, whether the missile shield would cover all of Turkey, and data sharing with non-NATO countries, Israel in particular."<sup>131</sup> All of the concerns raised by Turkey were understandable. Other Allies have also voiced concerns regarding their inputs into the U.S. command and control system.

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<sup>128</sup> Ibid.

<sup>129</sup> Ibid.

<sup>130</sup> Nilsu Gören, "Turkey's Turbulent Journey with the EPAA and Quest for a National System," *Missile Defense, Extended Deterrence, and Nonproliferation in the 21st Century*, no. 2 (2017): 1.

<sup>131</sup> Ibid., 5.

Turkey's interest in acquiring its own BMD system has caused concern especially among its NATO Allies. Turkey has sought help with developing or purchasing an air of missile defense system from countries such as China and Russia.<sup>132</sup> This has raised anxiety because it implies Turkey's possible shift from cooperation with its NATO Allies towards working with non-NATO countries. With U.S. equipment already hosted on Turkish territory, Ankara's NATO Allies are concerned about what might happen if NATO cannot reassure Turkey and it continues to shift away from NATO.

## 5. NATO Allies Collective View

Ultimately, the decisive opinion in Europe from the Allies is centered around the idea that even a limited BMD coverage is more advantageous than no coverage at all in the region.<sup>133</sup> This means that even a partially working system provides the Allies with the benefit of some deterrence against their adversaries and a defense option in the event of deterrence failure. This goes back to the idea that a BMD system in Europe is not designed solely for the protection of the United States but rather is intended to protect all of NATO Europe, including American allies, troops, capabilities, and interests in Europe. While opinions in Europe have historically swayed between approval and disapproval for Alliance BMD, the Russians have completely opposed there being a BMD system in NATO Europe.

In March 2010, Anders Fogh Rasmussen, then the Alliance Secretary General, said, "We need a decision by NATO's next summit in November that missile defense for our populations and territories is an alliance mission. And that we will explore every opportunity to cooperate with Russia."<sup>134</sup> He was referring to a decision that needed to be made prior to the Lisbon Summit in November 2010. His statement was important because

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<sup>132</sup> Ibid., 6.

Carlotta Gall, and Andrew Higgins. "Turkey Signs Russian Missile Deal, Pivoting From NATO." *The New York Times*. September 12, 2017. <https://www.nytimes.com/2017/09/12/world/europe/turkey-russia-missile-deal.html>.

<sup>133</sup> Craig Kennedy, et al. *Transatlantic Trends Survey, 2007*, 20.

<sup>134</sup> David Brunnstrom, "NATO Urges Missile Defense Pact, Cites Iran Threat," *Reuters*, March 26, 2010, <https://www.reuters.com/article/us-nato-shield-russia/nato-urges-missile-defense-pact-cites-iran-threat-idUSTRE62P1U520100326>.

it showed that he not only supported an Alliance missile defense but also that he could foresee possible cooperation with non-NATO members like Russia. At the November 2010 Summit the NATO Allies agreed as follows:

In light of common security interests, we are determined to build a lasting and inclusive peace, together with Russia, in the Euro-Atlantic Area. We need to share responsibility in facing up to common challenges, jointly identified. We want to see a true strategic partnership between NATO and Russia, and we will act accordingly, with the expectation of reciprocity from Russia. We recommit ourselves to the goals, principles and commitments which underpin the NRC.<sup>135</sup>

In 2012, Alexander Vershbow, then the NATO Deputy Secretary, also reaffirmed the importance of pursuing missile defence. In a speech on September 27, 2012, he explained, “Missile defence is a key issue for NATO. As a security and defence Alliance, we have an iron-clad duty to defend our people and our territory. We are committed to working together not only to deal with current threats, but also to plan for dealing with future threats.”<sup>136</sup> This is a significant statement because it reaffirmed the mission agreed in 2010 by the NATO Allies at the Lisbon Summit. The Allies confirmed at that summit that missile defense is a mission for NATO, and that the NATO Allies have important roles to play in the protection of Europe as a whole.

#### **D. AMERICAN VIEWS ON MISSILE DEFENSE IN EUROPE**

American officials, including President Obama, have stood behind their decision that the EPAA was the right choice for both Europe and the United States. President Obama explained the benefit of the system by saying, “To put it simply, our new missile defense architecture in Europe will provide stronger, smarter, and swifter defenses of American forces and America’s allies.”<sup>137</sup> This shows that he stands behind his plan as the correct move for America and its allies. In 2010, the Department of Defense released its

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<sup>135</sup> North Atlantic Treaty Organization, *Lisbon Summit Declaration*.

<sup>136</sup> North Atlantic Treaty Organization, “Remarks by NATO Deputy Secretary General Alexander Vershbow at the Security and Defence Agenda Roundtable ‘Next steps in Missile Defence,’” [https://www.nato.int/cps/en/natolive/opinions\\_90261.htm](https://www.nato.int/cps/en/natolive/opinions_90261.htm).

<sup>137</sup> Barack Obama, “Remarks on Missile Defense Systems in Europe.”

assessment of the threats **to** the United States and its Canadian and European Allies in the Ballistic Missile Defense Review (BMDR). This review acknowledged that the United States and its allies understand that they not only view threats differently but that they also are able to support their collective defense in different ways.

This is further supported by President Obama’s letter to Senate Leadership on December 18, 2010, which states, “My administration plans to deploy all four phases of the EPAA. While advances of technology or future changes in the threat could modify the details or timing of the later phases of the EPAA—one reason this approach is called ‘adaptive’—I will take every action available to me to support the deployment of all four phases.”<sup>138</sup> The adaptive portion of the policy articulated in the letter shows that the plan is not stagnant. The United States is able to adjust the plan as necessary in order to counter threats both presently and in the future. This also implies that developments could lead to decisions to adjust the final plan from what was originally proposed, as seen with the cancellation of Phase 4 in March 2013.

Phase 4 was canceled in March 2013 after the United States concluded that the first three phases were sufficient for protection of both the European Allies and the United States. Chuck Hagel, then the Secretary of Defense, announced the cancellation of the fourth phase of the EPAA due to the restructuring of the program, which was guided by the administration. The administration decided it was time to shift the focus to threats that were emerging more quickly than Iran. He said, “Let me emphasize the strong and continued commitment of the United States to NATO missile defense. That commitment remains ironclad. The missile deployments the United States is making in phases one through three of the European Phased Adaptive Approach, including sites in Poland and Romania, will be able to provide coverage of all European NATO territory as planned by 2018.”<sup>139</sup> In other words, the administration decided that the three phases in place are sufficient to protect Europe from the current threats. Some Europeans have expressed concerns as to whether these phases will provide enough coverage to protect Europe from

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<sup>138</sup> Barack Obama, “Letter to Senate Leadership on the Strategic Arms Reduction Treaty and Missile Defense.”

<sup>139</sup> Chuck Hagel, Secretary of Defense, “DoD News Briefing on Missile Defense from the Pentagon.”

future threats or whether the United States is isolating itself more in order to focus on protection of its own territory.

## **E. ANALYSIS**

With the growing security concerns, deterrence has become a major aspect of policies throughout the United States and other NATO nations. Challenges have been identified in regard to budget constraints, technical challenges, and threat assessments. Are these challenges too great to be overcome? Based on the analysis it appears that they will not completely stop the program or prevent it from providing at least some protection and security. The extent of the protection gained is still to be seen.

The new U.S. administration that took office in January 2017 may change the dynamics of the EPAA and missile defense in general. Moreover, the NATO Allies now face a more complicated situation than they did when the EPAA was launched in 2009.

Russia remains a major player and complication to the complete implementation of the EPAA program. Arguably the Russians constitute a major reason why the United States did not follow through with its original objectives as briefed by President Obama in September 2009. Russian issues are covered in more detail in Chapter IV. The dialogue with Russia has proven to be important and remains a continuing complicated factor.

The Russians do not support the Alliance's pursuit of missile defense in Europe. This is a change from policy statements in 2009. President Dmitry Medvedev visited the United States in September 2009 after the EPAA program was announced. He spoke to the media following his talks with President Obama as follows: "We talked about missile defense with my colleague, President Obama. We talked that the decision that he took was reasonable and that reflected the position of the current U.S. administration on missile defense and also takes into consideration our concerns on the missile defense which is needed for Europe and for the world. And we are ready to continue this work with our U.S. colleagues in this direction, as well as with our European colleagues, of course."<sup>140</sup> This

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<sup>140</sup> Barack Obama, "Remarks Following a Meeting with President Dmitry A. Medvedev of Russia and an Exchange with Reporters in New York City," September 23, 2009. <https://www.gpo.gov/fdsys/pkg/PPP-2009-book2/pdf/PPP-2009-book2-Doc-pg1448.pdf>.

statement expressed Russia's original acceptance of the EPAA, but Moscow's opinion shifted as Russia started to feel threatened. The Russians have for several years argued that the EPAA program and the Alliance missile defense efforts should not continue because they think that the program threatens Russia's strategic deterrence and upholds American global ambitions. The effects of Russian opinion on the original objectives of the EPAA are explored in the next chapter. In the end, the concerns expressed by Russia seem to have contributed to the cancellation of Phase 4 of the EPAA.

## **F. CONCLUSION**

Overall budget constraints, technology deficiencies, and opinion in some quarters of Europe and the American administration appear to have influenced the implementation of the EPAA system since the original objectives were laid out by President Obama in September 2009. These factors also seemed to affect the national and collective contributions to the program. Overall, the program is still proceeding, but it is not being implemented in the way that was originally stated in 2009. At this writing, in January 2018, the Trump administration has not yet published the findings of its Ballistic Missile Defense Review.

## **IV. RUSSIAN RESPONSES TO U.S. AND ALLIED MISSILE DEFENSE**

This chapter explores the relationship between Russia and the NATO Allies in regard to the Alliance missile defense posture. More specifically, how have the responses of Russia shaped the Alliance missile defense posture and conclusively affected the U.S. European Phased Adaptive Approach (EPAA)?

### **A. BACKGROUND ON RUSSIAN MISSILE POLICY**

Russia's missile policy is highly centered around politics, the glue that holds the regime together and allows the President to keep Russia running. Politics therefore also affect Russia's missile defense policy. Mikhail Tsypkin explains this connection as follows: "The Russian political and media space has been populated, since the early 1990s, by fears that Russia may somehow lose its nuclear weapons. Such concerns have ranged from superficially rational worse-case scenarios of an American first strike all the way to conspiracy theories."<sup>141</sup> This is significant because this fear has caused a reaction in Russia to seemingly small things that other countries, including the United States, would find minor. This is an important aspect to understand because it sheds some light on Russia's views regarding NATO and specifically missile defense in Europe. This idea will be elaborated on later in the chapter.

Another dominant aspect of Russian foreign policy has been historically centered around the military exaggerating the Western threat. This can be traced back to the Soviet era, and it has continued to grow since the United States withdrew from the ABM Treaty.<sup>142</sup> Prior to the U.S. withdrawal, Russia's Ministry of Foreign Affairs held an important role in interpreting the developments of U.S. missile defense; however, with less emphasis now on the Ministry of Foreign Affairs, the military's role in interpretation has grown, as was seen in the Soviet era.<sup>143</sup> A return to the worst-case scenario idea is highly

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<sup>141</sup> Mikhail Tsypkin, "Russian Politics, Policy-Making and American Missile Defence," 783.

<sup>142</sup> Ibid., 788.

<sup>143</sup> Ibid.

likely as a result.<sup>144</sup> This is significant because politics and state-controlled influenced media play such huge roles in the day-to-day activity in Russia. Policy is developed by the President, who could be influenced by these military assertions. The worst-case scenario only further helps President Putin, especially with an upcoming election, because it allows him to use fear to influence the Russian population. He is able to raise fears of the threat and then use it to his advantage by showing the people why they need him to protect them from the West. One can expect this tactic of provoking fear to continue to grow in prominence as the election draws closer.

Another aspect of the Kremlin's policy-making is centered on the views of the elites in Russia. Russian history has centered back and forth between the acceptance of its Soviet past and how to deal with its identity as a country and as a people. Mikhail Tsyarkin's article looks at this pendulum effect between the struggle to decide which pieces of their past should be accepted, especially under the Putin era, and what pieces should be eliminated.<sup>145</sup> This is specifically true for Putin, who has not tried to eliminate private property or to isolate Russia from the world, but who has used its leverage in the former Soviet states to reduce U.S. and Western influences that had developed in the region.<sup>146</sup> This is important because by eliminating the influence of other countries Russia's leaders are strengthening their own influence and enhancing their own legitimacy domestically. Russians view the strengthening of U.S. or NATO influence as the further isolation of Russia from Europe, which they are trying to avoid.<sup>147</sup> Russia needs to prevent this from happening in order to continue its self-perception as a super power.

## **B. HISTORY OF RUSSIA, NATO, AND U.S. INTERACTION**

### **1. Anti-Ballistic Missile (ABM) Treaty**

The Anti-Ballistic Missile (ABM) Treaty was signed by the Soviet Union and the United States in 1972 as a means to prevent an arms race escalation. They aimed to prevent

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<sup>144</sup> Ibid.

<sup>145</sup> Ibid., 792.

<sup>146</sup> Ibid.

<sup>147</sup> Ibid., 792–793.



this escalation by limiting the number of interceptors and defense sites. In 1972, they agreed to a defense of two sites with 200 missile interceptors.<sup>148</sup> These numbers were later amended in 1974 to even stricter requirements of one defense site and 100 missile interceptors.<sup>149</sup> The ABM Treaty remained in place for about 30 years before the United States chose to withdraw from the treaty.

In December 2001, President Bush expressed the U.S. intention to withdraw from the treaty, which would take effect six months later.<sup>150</sup> He believed that the threats concerning national security since the Cold War had changed and that the United States needed to adapt to them.<sup>151</sup> President Bush believed that remaining in the treaty allowed rogue states and terrorists to develop long-range ballistic missiles and threaten the United States, which could not defend itself while remaining in the treaty.<sup>152</sup> He also believed that the treaty stopped the United States from developing missile defense systems with its friends and allies.<sup>153</sup> The U.S. withdrawal from the treaty had lasting consequences.

The U.S. decision to withdraw from the treaty created tensions between Russia and the United States that have yet to abate. Both Russia and China immediately protested the U.S. withdrawal from the treaty.<sup>154</sup> Russia began threatening to build a new nuclear weapon that would be capable of evading interceptors, and China began to threaten that it would begin adding more weapons to its nuclear arsenal.<sup>155</sup> This withdrawal seemed to reinforce Russia's already present fears of U.S. global ambition and the threat to Russia's strategic deterrence posture. Both of these fears are elaborated on in greater detail in later sections of this chapter.

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<sup>148</sup> Stephen M. Younger, *The Bomb: A New History* (New York, NY: Harper Collins Books, 2009), 61.

<sup>149</sup> Ibid.

<sup>150</sup> "ABM Treaty Fact Sheet." National Archives and Records Administration, 2001. <https://georgewbushwhitehouse.archives.gov/news/releases/2001/12/20011213-2.html>.

<sup>151</sup> Ibid.

<sup>152</sup> Ibid.

<sup>153</sup> Ibid.

<sup>154</sup> Stephen M. Younger, *The Bomb: A New History*, 170.

<sup>155</sup> Ibid.

## 2. Lisbon Summit (November 2010)

The Lisbon Summit was held in November 2010 in order to plan the future of NATO. The Lisbon Summit Declaration declared, “We reaffirm our commitment to the common vision and shared democratic values embodied in the Washington Treaty, and to the purposes and principles of the United Nations Charter.”<sup>156</sup> This summit declaration also announced the adoption of a new Strategic Concept that not only opened up dialogue with Russia regarding cooperation and common interests but also announced a decision to pursue a NATO missile defense capability that would protect Europe.<sup>157</sup> Russia was also invited to work jointly on the missile defense capability.<sup>158</sup> This summit was the first of two important summits that attempted to open dialogue and create a more positive NATO-Russia relationship.

This summit had two outcomes that continued in the NATO-Russia relationship after the summit. In the words of the NATO-Russia Council (NRC) Joint Statement, “We agreed to discuss pursuing missile defence cooperation. We agreed on a joint ballistic missile threat assessment and to continue dialogue in this area. The NRC will also resume Theatre Missile Defence Cooperation. We have tasked the NRC to develop a comprehensive Joint Analysis of the future framework for missile defence cooperation.”<sup>159</sup> This summit opened up further dialogue at the Chicago Summit and also stimulated debate regarding the NATO missile defense capability.

In 2010, both NATO and Russia were eager to offer ideas for joint cooperation on missile defense. Dmitry Medvedev, who was the president of Russia at the time, proposed “building a sector-based missile defence system.”<sup>160</sup> Roberto Zadra has explained that this system would have divided the responsibilities of defense into sectors, with Russia being

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<sup>156</sup> North Atlantic Treaty Organization, *Lisbon Summit Declaration*.

<sup>157</sup> *Ibid.*

<sup>158</sup> *Ibid.*

<sup>159</sup> North Atlantic Treaty Organization, “Russia Council Joint Statement at the meeting of the NATO-Russia Council held in Lisbon on 20 November 2010,” November 20, 2010, [https://www.nato.int/cps/en/natohq/news\\_68871.htm](https://www.nato.int/cps/en/natohq/news_68871.htm).

<sup>160</sup> Dmitry Medvedev, “News Conference Following NATO-Russia Council Meeting,” President of Russia, November 20, 2010, <http://en.kremlin.ru/events/president/transcripts/9570>.

responsible for ballistic missile defense of the Baltic states, among other territory.<sup>161</sup> The people living in the NATO states that would be protected by Russia were not happy with this proposal. They instead preferred Article 5 protection that would be provided by the Alliance.<sup>162</sup> Uncertainty was justified in the former Soviet republics that would have had to rely on Russia having their best interests at heart. They would have had to trust that Russia would actually choose to defend those territories. The concern was not something that could be overcome, and this sector approach did not come to fruition. Other plans, however, were suggested prior to the next summit in 2012.

In 2011, Russia proposed another idea for a joint system. The deputy chief of the Russian General Staff at that time, Colonel General Valery Gerasimov, proposed that the joint system “should include joint centers for establishing threats and be based on joint decisions.”<sup>163</sup> Dmitry Rogozin, Russian ambassador to NATO at the time, continued this thought on a joint system by stating that, “Each side will have its own button to launch operative [missile] systems, but decisions on their application should be made jointly.”<sup>164</sup> Rogozin appears to have been referring to a system that would have some type of sectorial approach. This sectorial approach, though suggested again by Moscow, did not come to fruition. Further discussions regarding a joint system continued when Russia and NATO returned to the table in 2012 for the Chicago Summit.

### **3. Chicago Summit (May 2012)**

The Chicago Summit, held in May 2012, reaffirmed the Strategic Concept that had been promulgated at the Lisbon Summit in 2010.<sup>165</sup> It placed a continued emphasis on joint cooperation with Russia regarding common security interests, including the development

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<sup>161</sup> Zadra, “NATO, Russia and Missile Defence,” 54.

<sup>162</sup> Ibid.

<sup>163</sup> “European Missile Shield Should Stipulate Joint Decision Making - Russian NATO Envoy,” *Sputnik International*, January 12, 2011, <https://sputniknews.com/russia/20110112162107128/>.

<sup>164</sup> Ibid.

<sup>165</sup> North Atlantic Treaty Organization, *Chicago Summit Declaration in Chicago on 20 May 2012*, May 20, 2012. [https://www.nato.int/cps/ua/natohq/official\\_texts\\_87593.htm?selectedLocale=en](https://www.nato.int/cps/ua/natohq/official_texts_87593.htm?selectedLocale=en).

of a joint missile defense system.<sup>166</sup> This is significant because both sides at this time were still willing and eager to cooperate and work together. Two proposals were put forth at the summit regarding joint cooperation on missile defense. First, there was a proposal to jointly develop a Missile Defense Data Fusion Centre, which would also include a Planning Operations Centre.<sup>167</sup> Russia after the summit told the Alliance that it was unable at the time to consider this first proposal.<sup>168</sup> The second proposal was “to develop a transparency regime based upon a regular exchange of information about the current respective missile defence capabilities of NATO and Russia.”<sup>169</sup> This proposal, like the first, was also abandoned because Washington and Moscow could not come to a consensus.<sup>170</sup> This is significant because it showed an increased tension that had developed since the summit in 2010.

The Chicago summit also developed some issues regarding agreements that had come out of the Lisbon Summit. At the Lisbon Summit they had agreed to “resume theatre missile defense cooperation and to develop a comprehensive Joint Analysis of the future framework for missile defence cooperation.”<sup>171</sup> The first of these plans came almost to a stop because it had been limited to a March 2012 exercise in Germany that had been based on gathering lessons from a theatre-missile-defense exercise that had been run from a computer.<sup>172</sup> Russia believed that this exercise was enough to show the advantage of having a joint system while the Alliance believed that such conclusions could not be drawn from just one exercise.<sup>173</sup> This is significant because it showed hesitation on the part of the Alliance, which was not as prevalent at the Lisbon summit.

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<sup>166</sup> Ibid.

<sup>167</sup> Zadra, “NATO, Russia and Missile Defence,” 52.

<sup>168</sup> Ibid.

<sup>169</sup> Ibid.

<sup>170</sup> Ibid.

<sup>171</sup> Ibid.

<sup>172</sup> Ibid.

<sup>173</sup> Ibid.

The second proposal from the Lisbon Summit—the comprehensive Joint Analysis—had also come to a standstill, despite multiple revisions of the document, because of an inability to come to a consensus on the final draft of the document.<sup>174</sup> This reflected the tensions developing on both sides. It also showed that developing a joint system would be more complicated than NATO and Russia had originally thought. Part of the issue with coming to a consensus concerned the role that each side would play in the system and whether a truly cooperative split arrangement would be politically feasible or even technically possible. During this discussion Russia also began raising its concerns regarding the EPAA system and the implications for Russia. These tensions and disagreements regarding missile defense and intentions have only increased since the 2012 summit. In the end, the optimism about being able to work together on missile defense cooperation ended completely in 2014.

#### **4. NATO–Russia Missile Defense Cooperation Suspended (April 2014)**

The NATO-Russia Missile Defense Cooperation was suspended in April 2014 due to Russia’s intervention in Ukraine and ultimate annexation of Crimea. At this time NATO released a statement: “We, the Foreign Ministers of NATO, are united in our condemnation of Russia’s illegal military intervention in Ukraine and Russia’s violation of Ukraine’s sovereignty and territorial integrity. We do not recognize Russia’s illegal and illegitimate attempt to annex Crimea.”<sup>175</sup> While this was the official end to the cooperation, the problems between NATO and Russia had led to a standstill in the cooperation that can be traced back to the Chicago Summit in 2012.

In October 2013, just before the Ukraine Crisis, Russia had voiced concern over its voice not being heard in regard to joint cooperation. Sergi Shoigu, the Russian Defense Minister, said, “We have failed to work jointly on this issue. The European missile defense

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<sup>174</sup> Ibid.

<sup>175</sup> North Atlantic Treaty Organization, “Statement by NATO Foreign Ministers - 1 April 2014,” April 01, 2014, [https://www.nato.int/cps/en/natolive/news\\_108501.htm](https://www.nato.int/cps/en/natolive/news_108501.htm).

programs are developing, and our [Russia's] concerns are not being taken into account."<sup>176</sup> This concern has recurred not only in regard to a joint system but also in regard to the EPAA system. Anders Fogh Rasmussen, the NATO Secretary-General from 2009 through 2014, said: "It is no secret that we have not yet found the way to work together [in this area]. But Ministerial Discussions are valuable in addressing existing concerns, and we need to continue to engage frankly and directly to overcome our difference."<sup>177</sup> These quotations from both sides show the standstill on cooperation that had already developed prior to Russia's actions in Crimea. Russia's actions just solidified the final decision over approaches that had already developed. The disagreements only worsened after the joint cooperation dissolved. The discord over Russia's intervention in Ukraine opened up space for Russia to voice other concerns specifically regarding the EPAA system.

### C. RUSSIAN ARGUMENT ON STRATEGIC DETERRENCE

Moscow has opposed the U.S. EPAA system and the larger Alliance missile defense effort because the Russians believe that such capabilities threaten their strategic deterrence. Initially they had welcomed the plan because they thought it would be a positive step away from the plan that had been in place under President Bush.<sup>178</sup> The disagreement resulted when Russia realized that this plan would take place in steps and that it would involve stationing equipment in Eastern Europe, which Russia believed was too close to its own borders.<sup>179</sup> Roberto Zadra in his article "NATO, Russia, and Missile Defence," argues that the key concern of Moscow through the years has been fear of missile defense in and for Europe and North America undermining the Russian strategic deterrent.<sup>180</sup> This view was evident with the George W. Bush administration's proposed missile defense as well as with the Obama administration's European Phased Adaptive Approach. The United

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<sup>176</sup> "Moscow Needs More 'Predictability' in NATO Missile Defense Plans," *Sputnik International*, October 23, 2013, <https://sputniknews.com/russia/20131023184317160-Moscow-Needs-More-Predictability-in-NATO-Missile-Defense-Plans/>.

<sup>177</sup> Ibid.

<sup>178</sup> Medvedev, "Statement in Connection With the Situation Concerning the NATO Countries' Missile Defence System in Europe."

<sup>179</sup> Ibid.

<sup>180</sup> Zadra, "NATO, Russia and Missile Defence," 52.

States and NATO rejected this Russian claim by pointing out that interceptors placed in Poland would be unable to catch Russian ICBMs because it would result in a tail chase.<sup>181</sup> Russian officials and some academic observers have claimed that a ground-based interceptor with a burnout velocity of about 5 km/sec would be able to intercept Russian ICBMs.<sup>182</sup> The concerns expressed by Russia appear to have resonated with the United States because Phase 4 of the EPAA, which would have had a burnout velocity above the 5km/sec threshold, was canceled in March 2013.

Mikhail Tsypkin has further explained this argument and counterargument by elucidating Russia's rationale in arguing that European missile defense could cause strategic instability. In his words, "They argue that the presence of American missile defence in Europe would result in a relationship of strategic instability between the two largest nuclear powers, the United States and Russia."<sup>183</sup> The Russians believe this because in their view the presence of U.S. and NATO missiles and missile defenses in Europe could give the United States the power to threaten Russia in some circumstances, which would create instability.

Prior to the cancellation of Phase 4 of the EPAA in March 2013, the United States considered offering classified data as a means to continue dialogue and interest Russia in participating in the joint missile defense effort.<sup>184</sup> One piece of information that they reportedly considered sharing with the Russians was the burnout velocity of the interceptors that were being placed in Eastern Europe.<sup>185</sup> Since the Russians believed that these missiles posed a threat to their strategic deterrent, this information could have been valuable to Russia and might have contributed to easing their concerns regarding missile defense. However, while assuaging Russian fears, it could also compromise the interceptor

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<sup>181</sup> Ibid., 53

<sup>182</sup> Ibid.

<sup>183</sup> Tsypkin, "Russian Politics, Policy-Making and American Missile Defence," 781.

<sup>184</sup> Jim Wolf, and Editing by Todd Eastham, "Exclusive: U.S. dangles secret data for Russia missile shield approval," *Reuters*, March 13, 2012, <https://www.reuters.com/article/us-usa-russia-missiledefense/exclusive-u-s-dangles-secret-data-for-russia-missile-shield-approval-idUSBRE82D03A20120314>.

<sup>185</sup> Ibid.

by allowing Russia to develop technology that would be capable of countering or defeating the missiles.<sup>186</sup> Additionally it opens up the risk that Russia could give or sell the information to other countries, placing the Alliance and the system at even greater risk.<sup>187</sup> This information in the wrong hands could have dire consequences for the defense of Europe and the Alliance members. Ultimately, despite the United States being willing to consider possibly giving Russia classified data, it was not enough to assuage Moscow's fears, which continue over the EPAA system in Europe.

#### **D. RUSSIAN ARGUMENT ON U.S. GLOBAL AMBITION**

The second concern for the Russians has derived from what they have assessed as American global ambitions and strategic superiority. This concern has centered on the idea that United States missile defense assets in Europe and the Asia-Pacific constitute components of a global system.<sup>188</sup> Roberto Zadra states that Russia sees the deployment of U.S. missile defense assets in both Europe and Asia as a threat to the strategic deterrence of all of Russia rather than just the European portion of the country.<sup>189</sup> The Russians assert that the global U.S. system adds a level of capability affecting not only Russia but also China, Iran, and North Korea. The U.S. missile defense system does not prevent Russia and other countries from using their assets, but it does add the benefit of a small amount of deterrence by denial capability that could be needed in some contingencies—for instance, countering small, accidental, or unauthorized attacks.

Russia, however, fears a global system due to the number of interceptors that would hypothetically be possible. Tsyarkin's analysis provides some insight into this: "Foreign Minister Sergei Lavrov stated that the ten interceptors would present no threat to Russia, but that the Kremlin was concerned about the probability of a future global US BMD system with 'hundreds or even thousands' of interceptors not limited by any guarantee on

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<sup>186</sup> Ibid.

<sup>187</sup> Ibid.

<sup>188</sup> Zadra, "NATO, Russia and Missile Defence," 53.

<sup>189</sup> Ibid.



the part of the US.”<sup>190</sup> This quotation referred to the ten interceptors being placed in Poland as part of the NATO missile defense architecture envisaged during the George W. Bush administration. Some Russians argue that the United States could blackmail Russia by making it vulnerable to not only a first strike capability but also to the U.S. defense system being able to intercept any missiles that would come from Russia in retaliation.<sup>191</sup> This vulnerability relates to Russian fears that have become prominent in the country’s decisions and policies. The Russians tend to look at the worst-case scenario as the most plausible one.

#### **E. NATO RESPONSE TO RUSSIA AND JOINT MISSILE DEFENCE**

While some of the NATO Allies believed that Russia still posed a threat, Anders Fogh Rasmussen suggested in 2010 that Russia could play a role in collective defense in some circumstances. In his view, Iran’s improvements in ballistic missiles remain a threat to Europe, which includes Russia, and failure to act regarding Iran with a “vigorous response” could endanger European security.<sup>192</sup> Regarding the threat that the Allies face as the same threat that Russia also faces, Rasmussen’s vision was based on the idea of “one security roof that protects us all” which—he declared in 2010—should extend “from Vancouver to Vladivostok.”<sup>193</sup> This idea holds that the NATO Allies and Russia face the same threat, Iran, and should be working together to ensure the safety of everyone in range of Iranian missiles.

While the idea of a cooperative partnership concerning missile defense between NATO and Russia is pleasant, it is highly unlikely in the foreseeable future due to the past and current relationships and priorities of both sides. Richard Weitz argued that it would not be possible to have a successful NATO-Russia collaboration on combined missile defense. “Some US and NATO analysts saw Russia’s confrontational posture as an attempt

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<sup>190</sup> Tsyarkin, “Russian Politics, Policy-Making and American Missile Defence,” 795.

<sup>191</sup> Ibid.

<sup>192</sup> Anders Fogh Rasmussen, “The Promise of Euro-Atlantic Missile Defense by Anders Fogh Rasmussen,” *Project Syndicate*, 30 Mar. 2010, <http://www.project-syndicate.org/commentary/afrasmussen3/English>.

<sup>193</sup> Ibid.

to bargain for much greater influence in any European missile-defence architecture than Western governments would like to provide.”<sup>194</sup> This idea is supported by Russian General Yury Baluyevskiy: “The issue should be clarified, whether the missile defense system in Europe will be developed jointly with Russia, or whether it will be a segment of the U.S. national system without Russia’s participation.”<sup>195</sup> In other words, NATO-Russian collaboration on missile defense is unlikely due to both sides being unwilling to set aside their differences for a common security goal.

## F. U.S. RESPONSE TO COOPERATIVE MISSILE DEFENCE

The George W. Bush administration also believed that cooperation in the program could be extended beyond the European Allies to Russia. The idea of joint cooperation in missile defense was expressed on May 24, 2002.<sup>196</sup> The White House released a press statement explaining this agreement: “The United States and Russia also agreed to study possible areas for missile defense cooperation, including the expansion of joint exercises related to missile defense, and the exploration of potential programs for the joint research and development of missile defense technologies.”<sup>197</sup>

This agreement was significant because it led to the discussions regarding joint missile defense at the Lisbon and Chicago Summits, as well as a joint exercise between NATO and Russia in 2012. The idea of joint missile defense cooperation continued for the United States during the Obama Administration. In the words of the 2010 Ballistic Missile Defense Review Report, “One of the benefits of the European Phased Adaptive Approach is that it allows for a Russian contribution if political circumstances make that possible. For example, Russian radars could contribute useful and welcome tracking data, although the functioning of the U.S. system will not be dependent on that data.”<sup>198</sup> However,

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<sup>194</sup> Weitz. “Illusive Visions and Practical Realities: Russia, NATO and Missile Defence,” 107.

<sup>195</sup> “Russia Concerned by U.S. Air Defense Plans in Europe – minister,” *Sputnik International*, 26 Oct. 2006, <https://sputniknews.com/russia/2006102655156444/>.

<sup>196</sup> Tsyarkin, “Russian Politics, Policy-Making and American Missile Defence,” 786.

<sup>197</sup> Office of the Press Secretary, *Text of Joint Declaration*, (Washington, DC: the White House, 2002), <https://georgewbush-whitehouse.archives.gov/news/releases/2002/05/20020524-2.html>.

<sup>198</sup> Department of Defense, *Ballistic Missile Defense Review Report*, 34.

pursuing this option is highly unlikely due to Russia's requirements to participate in a joint architecture and the complicated relationship between the United States and Russia. Furthermore, this document stated, "The United States will work more intensively with allies and partners to provide pragmatic and cost-effective capacity. The United States will also continue in its efforts to establish a cooperative BMD relationship with Russia."<sup>199</sup> This shows that the United States was willing to bring Russia into the program and to work on an agenda for constructive cooperation.

#### **G. NATO–RUSSIAN JOINT MISSILE DEFENSE CONTRIBUTION**

In summary, a joint missile defense component with Russia has been proposed but rejected due to Russia, the European Allies, and the United States being unable to reach a consensus and compromise on a joint system. Specifically, NATO nations have recognized the importance of Russia and the potential value of its contributions. Both sides have met on multiple occasions, including the Chicago and Lisbon summits, but they have been unable to reach conclusions that would suit the interests of both Moscow and Washington. Ultimately, Russia's concerns about the Alliance missile defense posture and the interactions with NATO and America appear to have resonated with the United States because the original objectives of the EPAA were modified. The U.S. decision to cancel Phase 4 in March 2013 was significant because Phase 4 would have provided protection to the United States against ICBMs.

A feasible joint missile defense system would require work on both sides. Specifically they would need to both compromise in regard to what each side holds important for a joint system.<sup>200</sup> One difficulty that would require compromise concerns missile interceptors in Central and Eastern Europe.<sup>201</sup> Russia sees these interceptors as a threat to its own strategic deterrence posture. For NATO, on the other hand, losing these interceptors would make the Allies vulnerable to the threats perceived from countries like Iran. The necessity for compromises makes this a tricky and difficult situation. On the

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<sup>199</sup> Ibid., 12.

<sup>200</sup> Tsyarkin, "Russian Politics, Policy-Making and American Missile Defence," 798.

<sup>201</sup> Ibid.

Russian side, any compromise to a joint system would have ramifications in domestic politics. Compromise could make Russia appear weak, which Putin and his colleagues do not want, since they consider Russia equal to the United States.

## **H. ANALYSIS**

Russia has its own concerns regarding Alliance missile defense just as NATO has its own concerns. Russia sees the system as a threat to its own strategic deterrent, while NATO is concerned with keeping up with current threats. One argument that has surfaced is that the United States cancellation of Phase 4 of the EPAA was meant to settle some of Russia's fears regarding threats to its strategic deterrence. Technical analyses show, however, that the missiles that would have been deployed during this phase would have resulted in the tail chase of a Russian ICBM. Therefore, Russia's concerns were unfounded. The other argument is that Phase 4 was canceled due to a reprioritization of the budget. This reprioritization was justified based on reassessments of the 2010 BMDR. In March 2013, the United States found that Iranian missile threats were not developing as quickly as was originally anticipated and therefore the money that had been set aside for that phase could be better used elsewhere—namely, defense against North Korean missiles.

The other large debate is whether NATO and Russia could eventually come to a consensus on how to work together towards cooperative missile defense. Prior to 2014, both sides seemed willing to work together to develop a system that would benefit Europe as a whole. However, it appears that two factors—(a) unreasonable fears on the part of Russia regarding America's intentions and (b) Russia's actions in Ukraine (including the annexation of Crimea)—have made this an issue that will not be solved in the near future. A step towards this would require the reinitiating of talks, with both sides coming to the table with a willingness to work together. This does not seem to be a plausible option until after the next Presidential election in Russia—if then. President Putin appears to be using his concerns about Alliance missile defense as an advantage for his campaign. By playing on the fears that have remained present in Russia since the Cold War, he is able to use the fears of a missile attack or a threat to Russia's own strategic deterrence systems as an advantage to his campaign. He presents himself as the protector of Russia who must be

reelected. Overall, it appears that the original objectives of the EPAA were modified as a result of many factors and not purely as the result of a specific interaction between Russia and NATO or Moscow and Washington.

## **I. CONCLUSION**

This chapter investigated the Alliance missile defense posture with regard to the NATO Allies and Russia. Russia's response has been shaped by its fear regarding the U.S. contributions to the Alliance missile defense posture. The EPAA has raised issues for Russia with regard to threatening Russia's strategic deterrence and what the Russians perceive as U.S. global ambitions. Overall, these concerns appear likely to persist in the foreseeable future.

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## V. CONCLUSION

The United States and NATO as a whole have a vested interest in missile defense to protect the populations, territories, and forces of the Alliance. The European Phased Adaptive Approach (EPAA) instituted under the Obama Administration in 2009 addresses the interests of all NATO nations, including the United States. While this capability is reassuring for the United States and its Allies, it causes concern for Russia. This has complicated planning and implementing Allied missile defense, and also has led in some cases to tense interactions with Russia about its concerns. This chapter is composed of three sections. The first section summarizes Chapters II through IV. The second section analyzes the interactions regarding missile defense involving the United States, the NATO Allies, and Russia. The final section provides recommendations.

### A. SUMMARY

#### 1. Chapter II

Chapter II examined the history of ballistic missile defense as well as the development of the EPAA. The history of ballistic missile defense has had a profound impact on the development and shaping of the current Alliance missile defense posture and the original objectives set out by the Obama administration for the EPAA. The necessity for missile defense grew out of the development of German missiles during World War II and NATO's 1949 Strategic Concept. The rise of missile threats from the Soviet Union and China caused even more emphasis to be put on missile defense.

Through the years, the program was reoriented many times in response to new technologies and threats. The United States and the Soviet Union participated in various talks and in 1972 signed the ABM Treaty, which set restrictions on U.S. and Soviet ABM systems and missile defense sites. In 2001, the United States announced its plan to withdraw from the treaty, a decision which eventually added tension to the U.S.-Russia relationship. These tensions increased with Russia's negative reactions to NATO's decisions at the Lisbon and Chicago summits. In 2009–2010, the United States conducted a Ballistic Missile Defense Review (BMDR) that enabled Washington to get a better gauge

on the current and future challenges. This led to an eventual reorientation of the EPAA, with a shift from the original objectives that had been laid out in 2009.

On September 17, 2009, President Obama announced the beginning of the EPAA, which was aimed at countering current and future threats from Iran. It was designed to be implemented in four phases and allowed adaptability and interoperability with non-NATO countries. Phase 1 of the system commenced in March 2011 and Phase 4 had a planned completion date of 2022. However, Phase 4 was canceled in March 2013 prior to its commencement.

## **2. Chapter III**

Chapter III examined the NATO response to the EPAA. More specifically, it reviewed critiques of the system such as costs, technology challenges, and American views of European collective defense efforts. The budget critique considered reservations about contributions by the Allies, including the United States. One aspect of the budget argument is that the European Allies are generally more financially constrained than the United States and therefore unable to contribute on the same level. They have instead contributed in other ways.

The technology challenge critique included target acquisition, discrimination, interception, and data networking. Target acquisition is a challenge because the radar system used in the program may not be robust enough to adequately monitor all of the Alliance territory. Target discrimination is a challenge because of the short time frame available to adequately discern the threat from decoys. Interception requires a kill vehicle that can actually neutralize the threat. Finally, data networking proves challenging due to the need to efficiently fuse all of the relevant data.

The alliance response has been complex due to varying opinions throughout the Alliance. Some countries have shown opposition to the U.S. missile defense system in Europe, while others have expressed support for the Alliance having such a system. Some Allies have openly agreed to participate in the collective defense but have done little to provide for the system itself beyond contributing to the ALTBMD network. Others are



concerned about the vulnerabilities that still remain. In the end, the general consensus is that some coverage is better than none.

The American perspective has centered on the idea that the system is the right choice for both the United States and its Allies. The Americans have noted that the program is adaptive and capable of modification to counter emerging threats. The U.S. has faced challenges leading to a restructuring of the program in relation to the original objectives that had been set out in 2009. Despite restructuring, the Obama Administration held that the system would still be capable of accomplishing the defense of Europe that was originally promised in September 2009.

### **3. Chapter IV**

Chapter IV analyzed the relationship between Russia and the NATO Allies regarding the Alliance missile defense posture. It more specifically considered how these relationships and interactions affected the U.S. EPAA. Russian policy has centered since the 1990s on concerns about the West and how they could impact Russia's security. Putin in particular has exploited these concerns to his advantage, not only to gain power and influence in Russia but also to keep it. Definitively Russia aims at continuing its self-perception as a super power.

Proponents of the Anti-Ballistic Missile (ABM) Treaty hoped that it would help to prevent an arms race escalation with the Soviet Union, but Soviet ICBM and SLBM programs in the 1970s substantially exceeded U.S. expectations. Ultimately, the U.S. choosing to withdraw from the treaty had lasting effects on Russia. According to Russian observers, the largest impact was a reinforcement of Russia's fears concerning threats to its own strategic deterrence posture as well as concern about the United States having global ambitions.

The Lisbon summit allowed NATO to adopt its new Strategic Concept while also opening up dialogue with Russia. Russia and NATO attempted to come to a consensus on missile defense cooperation, an effort that failed and led to further tensions between them. The prospect of working together on missile defense ended indefinitely in 2014 due to Russia's intervention in Ukraine and its annexation of Crimea.

Russia opposed the EPAA system as well as the larger U.S.-led missile defense program because, the Russians asserted, the system threatened their own strategic deterrence. It caused disagreements between Washington and Moscow due to the United States and the other NATO Allies rejecting Russia's claims. Ultimately, Russia's concerns seemed to have some impact due to the United States canceling Phase 4 of the EPAA, the phase of greatest concern to Moscow.

Russia also opposed the U.S.-led missile defense system because, the Russians contended, the system further proved the accuracy of their assessment of American global ambitions. They argued that the combination of the system in Europe and the U.S. presence in the Asia-Pacific proved this. This argument proved to have many shortcomings.

Despite the Moscow-Washington disagreements the program, the United States and its NATO Allies still believed that there was room not only for dialogue but also for cooperation with Russia on a joint system that would benefit all of the parties. A joint system involving NATO about and Russia would require all parties to set aside their differences and work together for a common goal.

## **B. ANALYSIS**

### **1. NATO Considerations**

Despite the reservations that are present in NATO, the Allies have become increasingly aware of the importance of deterrence, especially as their security concerns have mounted. With elements of the EPAA system operational in Europe, concerns such as public opinion now appear more muted. However, other concerns remain genuine, especially those concerning budget and technical challenges.

The budget concerns were prevalent after the announcement of the EPAA and have only become more important through the years regarding countries pulling their own weight not only with the Alliance missile defense posture but also in NATO in general. Steven Hildreth and Carl Ek explained that costs to improve the existing ALTBMD program in addition to the territorial defense portion of the new system would cost the Alliance over 800 million euros (approximately \$1 billion) over the timeframe of 14

years.<sup>202</sup> This is a significant expense, especially if the European Allies and the United States remain cash strapped.<sup>203</sup> The shortage of funds could hinder completing the plans that have already been put in motion as well as other potential complications (such as technology developments or threat challenges). The program may have scope for adaptability, but that does not mean that the budget does as well.

Its adaptability has been both a strength and a weakness. Its strength lies in the technical ability to modify equipment as necessary to provide an effective system. Its weakness resides in the option to abandon aspects of the program, such as Phase 4. The deletion from the original plan has had a ripple effect because some NATO observers have expressed doubts about the reliability of the United States. The NATO missile defense posture will continue to change as the priorities and threats for the Alliance evolve. Redefined priorities may emerge in the near future when the Trump Administration releases its new Ballistic Missile Defense Review (BMDR). The 2010 BMDR provided invaluable insights concerning the Obama Administration's assessments of threats and allowed for the reprioritization of the program. It can be assumed that insights presented in the forthcoming new report may do the same. The new BMDR may change the implementation of the current program or call for completely new elements in the program or an entirely new program.

The new administration in the United States may revise the policy from its original objectives and deadlines. In 2010, NATO decided to expand its BMD program largely because the United States agreed to provide most of the required equipment (including sensors and interceptors).<sup>204</sup> With the provided equipment in place, the NATO Allies could be protected, at least against small attacks. Today critics argue that more of the burden should be carried by Allies other than the United States. The future of the Alliance missile defense program may depend on whether other NATO members make greater contributions.

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<sup>202</sup> Hildreth and Ek, "Missile Defense and NATO's Lisbon Summit," 6.

<sup>203</sup> Whitmore and Deni. *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, xi.

<sup>204</sup> *Ibid.*, 1.

Secretary of Defense Jim Mattis traveled to NATO HQ in February 2017 to talk with the Allies regarding their contributions. While in Brussels Secretary Mattis said, “No longer can the American taxpayer carry a disproportionate share of the defense of western values. Americans cannot care more for your children’s security than you do.”<sup>205</sup> This statement gives perspective on the Trump Administration’s views on contributions by the NATO Allies. It remains to be seen whether the EPAA program will continue as planned or be revised to fit the new American threat assessments or a shift in priorities driven by burden-sharing debates in the Alliance. While the new administration may not be satisfied with the defense spending of the Allies, Washington may nonetheless continue pursuing the missile defense system in Europe due to its concern for the Americans that serve abroad and broader U.S. interests.

Technical issues remain an important challenge to the originally proposed U.S. EPAA as well as the overall larger Alliance posture. It has yet to be proven whether the original goals of the EPAA can be attained, owing to technical challenges. Some of these challenges will only be identified and mastered over time as the program continues and more parts of the system become fully operational. Some analysts argue that certain concerns may never be addressed if the system never has to be used against an actual threat. Steven Whitmore and John R. Deni argue that the challenges cannot be overcome because of the prohibitive cost of actually surmounting them.<sup>206</sup> Whether this criticism is valid remains to be seen. It will be hard to demonstrate success in target acquisition, target discrimination, interception, and data analysis. Technical issues and budget constraints will continue to influence the progress and execution of the EPAA system.

## **2. Russian Considerations**

Russia’s concerns reflect its history. While Russia remains concerned that U.S.-led missile defenses in Europe and the Asia-Pacific threaten its strategic deterrence, these

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<sup>205</sup> James Masters, and Ryan Browne, “Trump Defense Chief Mattis Tells NATO Members to Pay Up,” *CNN Politics*, February 15, 2017, <http://www.cnn.com/2017/02/15/politics/james-mattis-nato-brussels/index.html>.

<sup>206</sup> Whitmore and Deni. *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*, 11.

concerns seem to be largely unfounded. The United States and its NATO Allies have stepped forward in good faith to assuage these fears over the years since the original announcement of the EPAA in September 2009. The United States has even gone as far as considering options for providing Russia with classified data regarding burnout velocities of the interceptors that were to be used in the system to assuage Moscow's concerns.<sup>207</sup> If the United States was intent on threatening Russia's strategic deterrence, this option would not have even been raised as a possibility. If the United States had chosen this path, it would have increased the risk of Russia building an interceptor that could counter or defeat U.S. missiles or selling or transferring the information to a third party.<sup>208</sup> Therefore all of this evidence points to an unfounded fear on the part of Russia with regard to the EPAA.

This fear has also been shown to be unfounded by NATO's wanting to work with Russia with regard to a cooperative missile defense system that would benefit both Russia and the NATO Alliance. NATO and the United States have expressed the value they see in working with Russia on such a system. In 2010, Anders Fogh Rasmussen, then the NATO Secretary General, went so far as to suggest "one security roof that protects us all from Vancouver to Vladivostok."<sup>209</sup> This is significant because it assumes that NATO and Russia face the same threats from Iran and North Korea. The idea of a NATO-Russia effort to develop a cooperative program sounds pleasant but remains highly unlikely. Richard Weitz argues that it is unlikely due to mutual mistrust regarding the other side's participation in such a system. "Some US and NATO analysts saw Russia's confrontational posture as an attempt to bargain for much greater influence in any European missile-defence architecture than Western governments would like to provide."<sup>210</sup>

This view is supported by the Russian side as well. The possibility of cooperation has become even more distant since Russia's annexation of Crimea. With the NATO-Russia relationship even more strained, Russia appears to be less likely to compromise on

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<sup>207</sup> Wolf, and Editing by Todd Eastham, "Exclusive: U.S. dangles secret data for Russia missile shield approval."

<sup>208</sup> Ibid.

<sup>209</sup> Rasmussen, "The Promise of Euro-Atlantic Missile Defense by Anders Fogh Rasmussen."

<sup>210</sup> Weitz, "Illusive Visions and Practical Realities: Russia, NATO and Missile Defence," 107.

such a system. It would also have ramifications in Russia's domestic politics, especially for Putin, as he desires to remain in power. It remains to be seen how the new Trump administration will interact with Russia and the NATO Allies regarding missile defense in Europe.

### **C. RECOMMENDATIONS**

These findings shed light on the complex missile defense challenges that faced the United States, NATO, and Russia throughout the Obama administration. While the EPAA did not fulfill the original objectives that were proposed in September 2009 (notably because of the cancellation of Phase 4 in 2013), there is no clear cut answer as to the exact reasons why this occurred. Domestic and international factors as well as technical and budget challenges for the United States appear to be the most important determinants.

Pending the release of the 2018 BMDR, there is room for further reflection on what ramifications it may hold for the continuation of the current program, since it may move into a completely new direction. There is also further room to investigate other aspects of the relationship between the United States and Russia (and NATO and Russia) and to clarify what impact these relations have had in the past on cooperation. The new U.S. administration may open up a completely new era of research regarding missile defense and the NATO Alliance.

### **D. FINAL REFLECTIONS**

The question that both NATO and Russia should ask is, how can their relationship be mended so that they can cooperate to overcome the real current and future threats that both sides will face? Given the importance of missile defense for the protection of territory and populations to both, it appears that it would be mutually beneficial for both sides to strive towards a better relationship. This will be complicated by Russia's illegal actions in invading Ukraine and annexing Crimea, and by Russia's desire to maintain the appearance of being a superpower, partly for domestic political reasons. Missile defense will continue to present challenges to both Russia and NATO. As noted previously, the new administration in the United States may change the original objectives of the EPAA program or redefine it fundamentally.

## LIST OF REFERENCES

- Brito, Dagobert L., and Michael D. Intriligator. "Strategic Arms Limitation Treaties and Innovations in Weapons Technology." *Public Choice*, 37, no. 1, Carnegie Papers on Political Economy, Volume 1: Proceedings of the Carnegie Conference on Political Economy (1981): 41-59.
- Brunnstrom, David. "NATO Urges Missile Defense Pact, Cites Iran Threat." *Reuters*. March 26, 2010. <https://www.reuters.com/article/us-nato-shield-russia/nato-urges-missile-defense-pact-cites-iran-threat-idUSTRE62P1U520100326>.
- Center of Military History. *History of Strategic Air and Ballistic Missile Defense, Volume I, 1945-1955*. Ft. McNair, Washington, DC: US Army Center of Military History, 2009.
- Defense Science Board. *Science and Technology Issues of Early Intercept Ballistic Missile Defense Feasibility*. Washington, DC: Office of the Secretary of Defense, 2011.
- Department of Defense. *2010 Ballistic Missile Defense Review (BMDR) Fact Sheet*. Department of Defense Office of Public Affairs, 2010. [https://www.defense.gov/Portals/1/features/defenseReviews/BMDR/BMDR\\_FACT\\_SHEET\\_March\\_2010\\_Final.pdf](https://www.defense.gov/Portals/1/features/defenseReviews/BMDR/BMDR_FACT_SHEET_March_2010_Final.pdf).
- Department of Defense. *Ballistic Missile Defense Review Report*. Ft. Belvoir: Defense Technical Information Center, 2010. [http://archive.defense.gov/bmdr/docs/BMDR%20as%20of%2026JAN10%200630\\_for%20web.pdf](http://archive.defense.gov/bmdr/docs/BMDR%20as%20of%2026JAN10%200630_for%20web.pdf)
- Einstein, Albert. "Einstein-Szilard Letter." Atomic Heritage Foundation. Accessed February 15, 2018. <https://www.atomicheritage.org/key-documents/einstein-szilard-letter>.
- \_\_\_\_\_. "European Missile Shield Should Stipulate Joint Decision Making - Russian NATO Envoy." *Sputnik International*. January 12, 2011. <https://sputniknews.com/russia/20110112162107128/>.
- Flax, Alexander. "Ballistic Missile Defense: Concepts and History." in *Weapons in Space*, edited by Franklin A. Long, Donald Hafner, and Jeffrey Boutwell. New York: W.W. Norton & Company, 1986.
- Freedman, Lawrence. *The Evolution of Nuclear Strategy*. New York: Palgrave, 2003.

- Gall, Carlotta, and Andrew Higgins. "Turkey Signs Russian Missile Deal, Pivoting From NATO." *The New York Times*. September 12, 2017.  
<https://www.nytimes.com/2017/09/12/world/europe/turkey-russia-missile-deal.html>.
- Gören, Nilsu. "Turkey's Turbulent Journey with the EPAA and Quest for a National System." *Missile Defense, Extended Deterrence, and Nonproliferation in the 21st Century*, no. 2 (2017).
- Gouré, Daniel. "The Obama Administration's Phased-Adaptive Architecture: Technological, Operational and Political Issues." *Defense & Security Analysis* 28, no. 1 (2012): 17-35. doi: 10.1080/14751798.2012.651376.
- Hadley, Stephen J. "The Nature of SDI." *In The Strategic Defense Initiative: Shield or Snare?* Edited by Harold Brown. Washington DC: The John Hopkins Foreign Policy Institute, 1987.
- Hafner, Donald L. "Assessing the President's Vision: the Fletcher, Miller, and Hoffman Panels." in *Weapons in Space*, edited by Franklin A. Long, Donald Hafner, and Jeffrey Boutwell, New York: W.W. Norton & Company, 1986.
- Hagel, Chuck, Secretary of Defense. "DOD News Briefing on Missile Defense From the Pentagon." March 15, 2013.  
<http://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=5205>.
- Handberg, Roger. "The Symbolic Politics of Ballistic Missile Defense: Seeking the Perfect Defense in an Imperfect World." *Defense & Security Analysis* 31, no. 1 (2015): 44-57. doi: 10.1080/14751798.2014.995336.
- Harvey, Frank, Colin Robertson, and James Fergusson. "Canada and Ballistic Missile Defense." Canadian Defence and Foreign Affairs Institute (March 2014).
- Hildreth, Steven A. and Carl Ek. *Missile Defense and NATO's Lisbon Summit*. CRS Report No. R41549. Washington, DC: Congressional Research Service, 2010.
- Hildreth, Stephen. *Iran's Ballistic Missile Programs: An Overview*. CRS Report No. RS22758. Washington, DC: Congressional Research Service, 2009.
- Juknevičienė, Rasa. "Latest Developments in European Security: A Baltic Perspective." London: Chatham House, Royal Institute of International Affairs, (20 October 2009).
- Kaya, Karen. "NATO Missile Defense and the View from the Front Line." *Joint Force Quarterly*, 4th ser., no. 71 (2013).



- Kennedy, Craig, John Glenn, Natalie La Balme, Pierangelo Isernia, Phillip Everts, and Richard Eichenberg. *Transatlantic Trends Survey, 2007*. Ann Arbor, MI: Inter-university Consortium for Political and Social Research, 2007.  
<https://doi.org/10.3886/ICPSR28187.v1>
- Kramer, Andrew E. "Russian General Makes Threat on Missile-Defense Sites." *New York Times*, May 4, 2012.  
<http://www.nytimes.com/2012/05/04/world/europe/russian-general-threatens-pre-emptive-attacks-on-missile-defense-sites.html>.
- Masters, James, and Ryan Browne. "Trump Defense Chief Mattis Tells NATO Members to Pay Up." *CNN Politics*. Accessed February 15, 2017.  
<http://www.cnn.com/2017/02/15/politics/james-mattis-nato-brussels/index.html>.
- Mayer, Michael. "Strategic Uncertainty and Missile Defence: Revisiting the 1999 National Intelligence Estimate." *Contemporary Security Policy* 36, no. 3 (2015).
- Medvedev, Dmitry. "News Conference Following NATO-Russia Council Meeting." President of Russia, November 20, 2010.  
<http://en.kremlin.ru/events/president/transcripts/9570>.
- Medvedev, Dmitry. "Statement in Connection with the Situation Concerning the NATO Countries Missile Defence System in Europe." President of Russia. November 23, 2011. <http://en.kremlin.ru/events/president/news/13637>.
- Missile Defense Agency. *Missile Defense: First 70 Years*. Washington DC: Missile Defense Agency, 2013.
- Moens, Alexander. *NATO and European Security: Alliance Politics from the End of the Cold War to the Age of Terrorism*. Westport, CT: Praeger, 2003.
- \_\_\_\_\_. "Moscow Needs More 'Predictability' in NATO Missile Defense Plans." *Sputnik International*. October 23, 2013.  
<https://sputniknews.com/russia/20131023184317160-Moscow-Needs-More-Predictability-in-NATO-Missile-Defense-Plans/>.
- National Archives and Records Administration. "Implementing Missile Defense in Europe," 2011. <https://obamawhitehouse.archives.gov/the-press-office/2011/09/15/fact-sheet-implementing-missile-defense-Europe>.
- National Archives and Records Administration. "ABM Treaty Fact Sheet," 2001.  
<https://georgewbushwhitehouse.archives.gov/news/releases/2001/12/20011213-2.html>.

- North Atlantic Treaty Organization. *Active Engagement, Modern Defence: Strategic Concept for the Defence and Security of the Members of the North Atlantic Treaty Organization*. Lisbon, Portugal: 2010. par. 19.  
[http://www.nato.int/cps/en/natolive/official\\_texts\\_68580.htm](http://www.nato.int/cps/en/natolive/official_texts_68580.htm).
- North Atlantic Treaty Organization. *Chicago Summit Declaration in Chicago on 20 May 2012*, 2012.  
[https://www.nato.int/cps/ua/natohq/official\\_texts\\_87593.htm?selectedLocale=en](https://www.nato.int/cps/ua/natohq/official_texts_87593.htm?selectedLocale=en).
- North Atlantic Treaty Organization. *Deterrence and Defence Posture Review*. 2012. par. 20, [https://www.nato.int/cps/en/natohq/official\\_texts\\_87597.htm](https://www.nato.int/cps/en/natohq/official_texts_87597.htm).
- North Atlantic Treaty Organization, *Lisbon Summit Declaration*, Lisbon, Portugal, 2010, [https://www.nato.int/cps/en/natolive/official\\_texts\\_68828.htm](https://www.nato.int/cps/en/natolive/official_texts_68828.htm).
- North Atlantic Treaty Organization. "Remarks by NATO Deputy Secretary General Alexander Vershbow at the Security and Defence Agenda Roundtable 'Next steps in Missile Defence.'" [https://www.nato.int/cps/en/natolive/opinions\\_90261.htm](https://www.nato.int/cps/en/natolive/opinions_90261.htm).
- North Atlantic Treaty Organization. "Russia Council Joint Statement at the meeting of the NATO-Russia Council held in Lisbon on 20 November 2010." November 20, 2010. [https://www.nato.int/cps/en/natohq/news\\_68871.htm](https://www.nato.int/cps/en/natohq/news_68871.htm).
- North Atlantic Treaty Organization. "Statement by NATO Foreign Ministers - 1 April 2014." April 01, 2014. [https://www.nato.int/cps/en/natolive/news\\_108501.htm](https://www.nato.int/cps/en/natolive/news_108501.htm).
- North Atlantic Treaty Organization. *Strategic Concept for the Defense of the North Atlantic Area, 1949*. <http://www.nato.int/docu/stratdoc/eng/a491201a.pdf>.
- Obama, Barack. "Letter to Senate Leadership on the Strategic Arms Reduction Treaty and Missile Defense." December 18, 2010.  
<http://www.presidency.ucsb.edu/ws/index.php?pid=88850>.
- Obama, Barack. "Remarks Following a Meeting with North Atlantic Treaty Organization Secretary General Anders Fogh Rasmussen." September 29, 2009.  
<https://www.gpo.gov/fdsys/pkg/PPP-2009-book2/pdf/PPP-2009-book2-Doc-pg1464.pdf>.
- Obama, Barack. "Remarks Following a Meeting with President Dmitry A. Medvedev of Russia and an Exchange with Reporters in New York City." September 23, 2009.  
<https://www.gpo.gov/fdsys/pkg/PPP-2009-book2/pdf/PPP-2009-book2-Doc-pg1448.pdf>.
- Obama, Barack. "Remarks on Missile Defense Systems in Europe." September 17, 2009.  
<https://obamawhitehouse.archives.gov/the-press-office/remarks-president-strengthening-missile-defense-europe>.

- Office of the Press Secretary. *Text of Joint Declaration*. Washington, DC: the White House, 2002. <https://georgewbush-whitehouse.archives.gov/news/releases/2002/05/20020524-2.html>.
- Office of the Press Secretary. "U.S. Missile Defense Policy a Phased, Adaptive Approach for Missile Defense in Europe," 17 September 2009. <https://obamawhitehouse.archives.gov/the-press-office/fact-sheet-us-missile-defense-policy-a-phased-adaptive-approach-missile-defense-eur>.
- Putin, Vladimir. "Russia and the Changing World." in English on the Russian Prime Minister's Official Website on 26 February 2012.
- Rasmussen, Anders Fogh. "The Promise of Euro-Atlantic Missile Defense by Anders Fogh Rasmussen." *Project Syndicate*. 30 Mar. 2010. <http://www.project-syndicate.org/commentary/afasmussen3/English>.
- Rogozin, Dimitry. "Russia, NATO, and the Future of European Security." London: *Royal Institute of International Affairs, Chatham House*, (20 February 2009).
- \_\_\_\_\_. "Russia Concerned by U.S. Air Defense Plans in Europe – Minister." *Sputnik International*. 26 Oct. 2006. <https://sputniknews.com/russia/2006102655156444/>.
- Sankaran, Jaganath. *The United States' European Phased Adaptive Approach Missile Defense System*. National Security Research Division. Santa Monica, CA: Rand Corporation, 2015.
- Somerville, Andrew, Ian Kearns, and Malcolm Chalmers. "Poland, NATO and Non-Strategic Nuclear Weapons in Europe." *Royal United Services Institute for Defence and Security Studies*, February 2012.
- Sowińska, Agnieszka, and Tatiana Dubrovskaya. "Discursive Construction and Transformation of 'Us' and 'Them' Categories in the Newspaper Coverage on the US Anti-Ballistic Missile System: Polish Versus Russian View." *Discourse & Communication* 6, no. 4 (2012): 449-468. doi:10.1177/1750481312457521.
- The White House. *National Security Decision Directive Number 32*, "U.S. National Security Strategy." Washington, DC: The White House, (1982). <https://fas.org/irp/offdocs/nsdd/nsdd-32.pdf>. (declassified 27 August 2009).
- The White House. *National Security Decision Directive Number 119*, "Strategic Defense Initiative." Washington, DC: The White House, (1984). <https://fas.org/irp/offdocs/nsdd/nsdd-119.pdf>. (declassified 28 May 2008).
- Tsytkin, Mikhail. "Russian Politics, Policy-Making and American Missile Defence." *International Affairs* 85, no. 4 (2009).

- Vershow, Alexander. "NATO and Missile Defence." 12 June 2013.  
[https://www.nato.int/cps/en/natolive/opinions\\_101397.htm](https://www.nato.int/cps/en/natolive/opinions_101397.htm).
- Weitz, Richard. "Illusive Visions and Practical Realities: Russia, NATO, and Missile Defence." *Survival* 52, no. 4 (2010). DOI: 10.1080/00396338.2010.506824.
- Whitmore, Steven J. and John R. Deni. *NATO Missile Defense and the European Phased Adaptive Approach: The Implications of Burden Sharing and the Underappreciated Role of the U.S. Army*. Carlisle Barracks, PA: United States Army War College Press, 2013.
- Wolf, Jim and Editing by Todd Eastham. "Exclusive: U.S. dangles secret data for Russia missile shield approval." *Reuters*. March 13, 2012,  
<https://www.reuters.com/article/us-usa-russia-missiledefense/exclusive-u-s-dangles-secret-data-for-russia-missile-shield-approval-idUSBRE82D03A20120314>.
- Yost, David S. "Ballistic Missile Defense and the Atlantic Alliance," in *The Star Wars Controversy: An International Security Reader*, edited by Steven E. Miller and Stephen Van Evera. Princeton, NJ: Princeton University Press, 1986.
- Yost, David S. *NATO's Balancing Act*. Washington, DC: United States Institute of Peace, 2014.
- Younger, Stephen M. *The Bomb: A New History*. New York: Harper Collins Books, 2009.
- Zadra, Roberto. "NATO, Russia and Missile Defence." *Survival* 56, no. 4 (August-September 2014).

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