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THESIS

**NATO AND U.S. BALLISTIC MISSILE DEFENSE
PROGRAMS: DIVERGENT OR CONVERGENT PATHS?**

by

Kevin E. Toms

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Thesis Co-Advisor:

David Yost

Thesis Co-Advisor:

Scott Siegel

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OR CONVERGENT PATHS?**

Kevin E. Toms
Captain, United States Army
B.S., Missouri Western State University, 2002

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December 2008**

Author: Kevin E. Toms

Approved by: David Yost
Thesis Co-Advisor

Scott Siegel
Thesis Co-Advisor

Harold A. Trinkunas, Ph.D.
Chairman, Department of National Security Affairs

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ABSTRACT

NATO and the United States are actively pursuing missile defense policies. NATO has invested in the Active Layered Theatre Ballistic Missile Defence (ALTBMD) information network to support the Theater Missile Defense (TMD) capabilities of specific Allies for the protection of forward deployed troops, and studies of the feasibility and political-military implications of Ballistic Missile Defense (BMD) for the protection of NATO territory, forces and population centers. The U.S. program includes TMD activities in cooperation with NATO Allies, such as Patriot, as well as BMD research and deployment. The U.S. proposal to deploy BMD system elements in Poland and the Czech Republic has led to more extensive discussions of BMD in the Alliance. The North Atlantic Council made BMD-relevant decisions in April 2008.

The United States and its NATO Allies nonetheless seem to differ greatly on the urgency and importance of pursuing BMD. TMD generates far more cooperation and support within the Alliance than does BMD for the protection of NATO territory, forces and population centers. This thesis compares TMD and BMD policies within the Alliance in an attempt to identify the causes of disagreements on BMD policy and to propose a course of action that may meet the Alliance's goals.

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I. INTRODUCTION

A. MAJOR RESEARCH QUESTION

NATO and the United States are actively pursuing relatively ambitious and independent Missile Defense (MD) policies. NATO has engaged in two key activities related to MD: Theater Missile Defense (TMD) of forward deployed troops and studies of the feasibility and political-military implications of Ballistic Missile Defense (BMD) for the protection of NATO territory, forces and population centers.¹

The U.S. MD program, which is operating independently of NATO coordination, is focused on the same two objectives as the NATO activities. The U.S. TMD program is focused on refining existing systems and developing improved lower and upper tier TMD systems. The United States currently has a Ballistic Missile Defense System (BMDS) for the protection of its territory, forces, and population centers deployed in California and Alaska. The United States is also in the advanced stages of talks with Poland and the Czech Republic regarding the possible installation of BMDS elements to provide protection for North America and most of NATO Europe from Middle Eastern threats.²

NATO and the United States seem to be pursuing independent paths of TMD and BMD development and differ greatly on the urgency and the importance of pursuing BMD. Both NATO and the United States strongly support TMD development and deployment activities. TMD of forward deployed troops generates far more cooperation and support within the Alliance than does BMD for the protection of NATO territory, forces and population centers. Why do the U.S. and NATO efforts, which have similar goals, seem to be taking distinct or even divergent paths with respect to BMD, and what are the possible causes of this dichotomy? This thesis compares TMD and BMD policies within the Alliance in order to clarify the primary causes of policy divergence and prescribe a future course of action that may better satisfy the Alliance's goals.

¹ "Topics: Missile Defence," *North Atlantic Treaty Organization*.
http://www.nato.int/issues/missile_defence/index.html.

² "U.S. and Poland Agree in Principle on Missile Defense," *New York Times*, February 2, 2008, A2.

TMD is, to be sure, a form of BMD. TMD concentrates on protecting forward deployed forces from short and medium-range missiles (that is, missiles with a range up to 2,500 km). TMD systems can only provide “point” defense to a specific area or group of deployed forces. Additionally, TMD systems are not capable of engaging longer range, strategic Inter-Continental Ballistic Missiles (ICBMs). Therefore, TMD systems have typically been viewed as conventional defensive weapons that do not impact a nation’s strategic force and as such were not regulated by the 1972 Anti-Ballistic Missile (ABM) Treaty.

In contemporary usage, employed in this thesis, “BMD” signifies protection of territory and population centers against attacks with longer-range missiles (4,500 km and above). As opposed to the “point” defense provided by TMD systems, BMD systems are specifically designed to provide “area” protection to large portions of territory from attack by longer range ballistic missiles. This area protection has the potential to nullify an adversaries strategic missile forces and as a result, BMD systems were restricted by the 1972 ABM Treaty. Shorter-range missiles could also be employed to attack cities and territories, but in this case TMD systems might offer the most suitable defense.

B. IMPORTANCE

BMD is an important political topic within the Alliance that has been primarily driven by the United States. Since the end of the Cold War in 1989-1991 the NATO Allies have devoted greater attention than during the Cold War period to the pursuit by regional powers of ballistic missiles and weapons of mass destruction. The National Defense Authorization Act for 1996 identified four key areas of concern for the future of U.S. BMD strategy. The four areas of concern were the development of a National Missile Defense System, development of TMD systems, negotiations with Russia, and possible amendment or withdrawal from the 1972 Anti-Ballistic Missile Treaty in order to achieve these goals.³ Section 238 of the National Defense Authorization Act urged the President:

³ 104th Congress, House Resolution 1530, National Defense Authorization Act for Fiscal Year 1996, Title II, Subtitle C – Ballistic Missile Defense Act of 1995.
<http://www.thomas.gov/cgi-bin/query/F?c104:3:/temp/~c104ITyFnS:e139706> .

- (1) to pursue high-level discussions with allies of the United States and selected other states on the means and methods by which the parties on a bilateral basis can cooperate in the development, deployment, and operation of ballistic missile defenses;
- (2) to take the initiative within the North Atlantic Treaty Organization to develop consensus in the Alliance for a timely deployment of effective ballistic missile defenses by the Alliance; and
- (3) in the interim, to seek agreement with allies of the United States and selected other states on steps the parties should take, consistent with their national interests, to reduce the risks posed by the threat of limited ballistic missile attacks, such steps to include—
 - (A) the sharing of early warning information derived from sensors deployed by the United States and other states;
 - (B) the exchange on a reciprocal basis of technical data and technology to support both joint development programs and the sale and purchase of missile defense systems and components; and
 - (C) operational level planning to exploit current missile defense capabilities and to help define future requirements.⁴

NATO's 1991 Strategic Concept identified the potential threat posed by ballistic missiles and recommended that "complementary approaches, including for example, export control and missile defences," be pursued to solve the problem.⁵ The 1999 Strategic Concept identified BMD as a means of protection from nuclear, biological, and chemical (NBC) weapons and their means of delivery.⁶ The Missile Defence Feasibility Study (MD-FS), which was initiated at the 2002 Prague Summit, concluded, as the Allies noted at the 2006 Riga Summit, that "missile defence is technically feasible within the limitations and assumptions of the study."⁷ At the April 2008 Bucharest Summit the Allies declared that:

Ballistic missile proliferation poses an increasing threat to Allies' forces, territory and populations. Missile defence forms part of a broader response to counter this threat. We therefore recognise the substantial

⁴104th Congress, House Resolution 1530, National Defense Authorization Act for Fiscal Year 1996, Section 238, Paragraphs 1-3.

⁵ "The Alliance's New Strategic Concept," *North Atlantic Treaty Organization* (November 7, 1991): Paragraph 49. <http://www.nato.int/docu/comm/49-95/c911107a.htm>.

⁶ "The Alliance's Strategic Concept," *North Atlantic Treaty Organization* (April 24, 1999): Paragraph 56. <http://www.nato.int/docu/pr/1999/p99-065e.htm>.

⁷ "Riga Summit Declaration," *North Atlantic Treaty Organization* (November 29, 2006): Paragraph 25. <http://www.nato.int/docu/pr/2006/p06-150e.htm>.

contribution to the protection of Allies from long-range ballistic missiles to be provided by the planned deployment of European-based United States missile defence assets. We are exploring ways to link this capability with current NATO missile defence efforts as a way to ensure that it would be an integral part of any future NATO-wide missile defence architecture. Bearing in mind the principle of the indivisibility of Allied security as well as NATO solidarity, we task the Council in Permanent Session to develop options for a comprehensive missile defence architecture to extend coverage to all Allied territory and populations not otherwise covered by the United States system for review at our 2009 Summit, to inform any future political decision.⁸

This statement is noteworthy because it refers to a central topic of this thesis: reconciling NATO and U.S. BMD efforts.

C. PROBLEMS AND HYPOTHESES

TMD of forward deployed troops is the type of missile defense associated with the least amount of discord within the Alliance. However, this does not mean that the United States and NATO are on convergent paths of development. The current state of TMD efforts presents three issues that may provide insight into the sources of friction over the larger issue of BMD for the protection of NATO territory, forces, and population centers. First, TMD efforts within the Alliance have been based upon a widely agreed upon threat assessment. The greatest missile threat to forward deployed troops consists of Theater Ballistic Missiles (TBM) with a range of less than 2,500 km. As a result of this threat assessment, most TMD systems are lower tier (MEADS, Patriot, SAMP-T) or upper tier (AEGIS, THAAD) and capable of protecting only a limited amount of territory from slower, shorter range TBMs.⁹

⁸ “Bucharest Summit Declaration.”

⁹ Lower or upper tier refers to the altitude at which a TMD system is capable of engaging a TBM. Lower tier systems typically cannot conduct engagements above 35km. This limits their capabilities to shorter-range TBMs because the TBM’s depressed trajectory keeps the flight path and intercept at a lower altitude. An upper tier system is capable of conducting engagements from 35km to over 100 km. This makes upper tier systems more effective against longer-range TBMs because the missile’s lofted trajectory allows more time for engagement at higher altitudes. BMD systems (as defined in this thesis) are capable only of exoatmospheric engagements above 100km.

Second, TMD decision-making within the alliance has revolved around capabilities rather than politics. What has developed is a process in which Canada and the European members of the Alliance have allowed the United States to bear most of the research and development costs, while they have borne limited purchasing costs. With the exception of the SAMP-T, a French-Italian endeavor, every TMD system fielded within the Alliance was developed almost exclusively by the United States. The United States has had little input from most of the other members of the Alliance in its design and development of TMD systems and has borne willingly most of the costs. TMD solutions have been identified purely on operational and technological grounds, devoid of politics.

Finally, the development and deployment of TMD systems were never restricted under the 1972 ABM Treaty, which was in force until June 2002. TMD systems have always been much less politically contentious than BMD systems as they are only for the protection of forward deployed troops and lack the capability to defend against ICBMs and Sea-Launched Ballistic Missiles (SLBMs).

BMD for the protection of NATO territory, forces and population centers is an area in which the United States and NATO appear to be taking divergent paths. Most European governments express varying levels of support for the proposed U.S. BMD system. While some governments express concerns about the proposed U.S. BMD system, most acknowledge its potential benefits. Confirming this view is Paragraph 37 of the Bucharest Summit Declaration, where the Allies agreed to “recognise the substantial contribution to the protection of Allies from long-range ballistic missiles to be provided by the planned deployment of European-based United States missile defence assets.”¹⁰

Expressing the greatest concern within the Alliance over the proposed U.S. BMD system are Germany and France. “German perspectives on...BMD are shaped significantly by geopolitics and geoeconomics.”¹¹ Berlin is sensitive to Moscow’s reaction to the proposed U.S. BMD system because of its proximity to Russia and their growing economic interdependence. Because of their proximity, Germans and Russians

¹⁰ “Bucharest Summit Declaration.”

¹¹ Colin S. Gray, “European Perspective on U.S. Ballistic Missile Defense,” *Comparative Strategy* 21 (2002): 289.

are accustomed to being sensitive to one and others security concerns. Additionally, German investments in Russia have risen steadily since the end of the Cold War. Moreover, Germany receives a large amount of its energy supplies from Russia and Berlin does not wish to see any of these relationships destabilized by its support for the proposed U.S. BMD system.

Along with Germany, France expresses a high level of concern over the proposed U.S. BMD system. The objection from Paris is not against a BMD system, but an American led BMD project. Paris is in favor of developing some sort of protection from ICBMs, but believes it should be primarily a European project. The 2008 French White Paper on Defence and National Security calls for France to retain its role in defense development:

France must retain its areas of [technical] sovereignty, concentrated on the capability necessary for the maintenance of the strategic and political autonomy of the nation: nuclear deterrence; ballistic missiles; SSNs; and cyber-security are amongst the priorities. As regards the other technologies and capacities that it may wish to acquire, France believes that the European framework must be privileged.¹²

European governments generally support the proposed U.S. BMD system with the primary opposition coming in the form of public opinion. Prague and Warsaw have already agreed to host portions of the proposed U.S. BMD system. Polish government support for the proposed U.S. BMD system is strong as Prime Minister Donald Tusk's Civic Platform party controls a majority of Senate seats and a near majority in the Sejm. While government support for the proposed U.S. BMD system is strong, public support is much lower. According to Polish Defense Minister Bogdan Klich, "About 15 percent of Poles would support the American installation of the shield in Poland, without any other contributions...But 50 percent would support such an installation if it contributed to the modernization of our armed forces."¹³

¹² 2008 French White Paper on Defence and National Security, Section 2, Paragraph 13. http://www.ambafrance-ca.org/IMG/pdf/Livre_blanco_Press_kit_english_version.pdf.

¹³ Bogdan Klich quoted by Judy Dempsey, "Poland Wants U.S. to be Third Leg of its Security Plan," *International Herald Tribune* (April 21, 2008). <http://www.iht.com/articles/2008/04/21/europe/poland.php>.

Support in the Czech Republic is much weaker because of the fragile coalition government assembled by Prime Minister Mirek Topolánek. While the Topolánek coalition supports the proposed U.S. BMD system now, low public support may force dissent within the coalition. In the Czech Republic, public opinion polls indicate that only about 35% of Czechs support basing elements of the proposed U.S. BMD system on Czech soil.¹⁴

Some observers have attributed the divergence in BMD support to different threat assessments. This thesis investigates the hypothesis that one of the causes of disagreement over BMD policy between the United States and NATO resides in differing threat assessments. The primary difference in threat assessment has been attributed to the emphasis on capabilities or intent as American threat assessments are heavily based on a state's capabilities while European threat assessments are heavily based on a state's intentions.¹⁵ Threat assessment is an important factor in decision making about BMD because threat is the primary justification for any MD system.

U.S. - European divergences in BMD policy have also been attributed to technical uncertainties regarding the system. In a situation similar to that with TMD development, the United States is trying to develop and deploy an independently developed BMD system. There are much greater technical and political problems associated with a BMD system than with a TMD system. The proposed BMD system leaves portions of southeastern Europe unprotected. The Allies therefore agreed at the Bucharest Summit, as noted above, to review options to ensure the indivisibility of Alliance security.¹⁶ This thesis investigates the hypothesis that technical uncertainties regarding the performance of U.S. BMD systems may constitute a factor explaining U.S.-NATO differences in BMD policy.

¹⁴ Andrew Thompson, "Czech Republic: Issues Under the Radar," *International Relations and Security Network* (June 23, 2008). <http://www.isn.ethz.ch/isn/Current-Affairs/Security-Watch/Detail/?ots591=4888CAA0-B3DB-1461-98B9-E20E7B9C13D4&lng=en&id=57315>.

¹⁵ Gray, 283.

¹⁶ Martin Butcher and Nicola Butler, "Bucharest Summit: U.S. Missile Defense Bases Continue to Divide NATO," *Disarmament Diplomacy* 87 (Spring 2008): 73.

A third factor that may explain the dichotomy between NATO and the United States on TMD and BMD policy is the decision making framework. It is common for TMD systems to be developed and deployed via bilateral negotiations. The only TMD project that has been subject to the consensus of the North Atlantic Council is the Active Layered Theatre Ballistic Missile Defence (ALTBMD), which is primarily a command and control system and which is commonly funded by several Allies. This thesis investigates the hypothesis that the decision making framework may constitute a factor.

A fourth factor that may explain the NATO-U.S. rift is associated costs. As previously stated, the United States is the Alliance's largest source of missile defense technology and has borne most of the cost of TMD research and development. Because of the prevalence of bilateral arrangements with TMD systems, only those Alliance members that wish to contribute financially are obliged to do so. Because of the technical uncertainties associated with the BMD system, many Alliance members are concerned about the possible costs. This thesis investigates the hypothesis that the costs associated with BMD constitute a factor.

The United States has consulted extensively with its NATO Allies about missile defense issues since the late 1960s. Although these consultations have, since 2004, included the proposed deployment of BMD system elements in Poland and the Czech Republic, the U.S. government has not made its national BMD system development and deployment choices a subject for consensus decision-making in the North Atlantic Council. As a U.S. Department of Defense official observed in March 2007, "NATO is a consensus organization, which means that we would have to try to achieve unanimity within the NATO context to get NATO to actually endorse a U.S. effort. . . In essence, what such an approach would do would allow any one nation within NATO to veto a U.S. initiative that we believe is very important to U.S. national security, in addition to European security. I think we would be very reluctant to go down that path." Moreover, the official pointed out, "NATO as an alliance develops very few of its own capabilities.

Most of its capabilities are actually developed by individual nations or smaller groupings within NATO that develop a particular capability, and then offer those capabilities in the context of the NATO alliance."¹⁷

The United States has accordingly sought bilateral agreements with selected Allies, including the Czech Republic, Denmark, Poland, and the United Kingdom. Since early 2007 these agreements (and negotiations about these agreements) have received greater attention in the Alliance. As noted previously, at the April 2008 Bucharest Summit, the heads of state and government of the NATO Allies announced the following decision: "Bearing in mind the principle of the indivisibility of Allied security as well as NATO solidarity, we task the Council in Permanent Session to develop options for a comprehensive missile defence architecture to extend coverage to all Allied territory and populations not otherwise covered by the United States system for review at our 2009 Summit, to inform any future political decision."¹⁸

Another explanation for the controversy within the Alliance associated with BMD (as opposed to TMD) may be the perception that it could disrupt the security status quo and affect relations with Russia.¹⁹ This thesis investigates the hypothesis that a fifth cause of disagreement over BMD policy between the United States and NATO is concern about the possible effects that a BMD system might have on the security status quo and Russian relations. In contrast to TMD systems, if deployed in substantial numbers and if technically reliable, BMD systems could severely alter existing security relationships by limiting the effectiveness of an adversary's ICBMs and SLBMs. The predominant third party opposition has come from Russia. Moscow argues that the proposed U.S. BMD system would be able to defeat Russian ICBMs. Central and Eastern European Countries are primarily affected by Russian opposition because it might damage their relations with Russia and put their security at risk if Moscow takes countermeasures.

¹⁷ Brian Green, Testimony before the Strategic Forces Subcommittee of the House Armed Services Committee, "Hearing on the Fiscal Year Defense Authorization Budget Request for Missile Defense Programs," March 27, 2007. http://www.house.gov/hasc/hearing_information.shtml.

¹⁸ "Bucharest Summit Declaration."

¹⁹ Butcher and Butler, 74.

The findings reached in this thesis conclude that two of the tested hypotheses explain the divergence in BMD policy. First, the decision-making framework regarding BMD systems is different from the decision-making framework regarding TMD systems. The decision to procure TMD systems has historically been made at the national level, outside of the North Atlantic Council. The key difference between the decision-making process for TMD and that for BMD is that BMD has the potential to affect the Alliance as a whole, regardless of an individual Ally's desires. With TMD systems, only the Allies that wish to participate are affected in specific situations by operations involving TMD assets. Many of the European members of the Alliance want the BMD system to be developed jointly to ensure that their specific economic, geopolitical, and security concerns are addressed. Second, Europeans are more sensitive to the affects that the proposed BMD U.S. BMD system could have on Russian relations. Despite Washington's efforts to broker an acceptable deal, Moscow continues to create tension within the Alliance through its objection to the proposed BMD system. Europeans are reluctant to pursue a policy which may have negative impacts on NATO-Russian relations.

D. LITERATURE REVIEW

The threat to the Alliance is the primary question as the plausibility of the threat provides the main justification for the BMD system. Two German analysts, Sascha Lange and Oliver Thränert, make several key assertions regarding the threat posed by Iran. First, "missiles are not weapons of mass destruction until they carry nuclear warheads."²⁰ Second, developing multistage ICBMs is a complex task that requires a lot of technological expertise. Most of the current Iranian missile technology has been imported, and the Iranians will not indigenously develop any long-range missiles in the near or medium term.²¹ Finally, Iran is unlikely to import the technology to produce ICBMs or import complete missile systems because North Korea has a limited amount of

²⁰ Sascha Lange and Oliver Thränert, "Missile Defense in and for Europe?" *German Institute for International Security Affairs* (April 2007): 1.
http://www.swpberlin.org/en/common/get_document.php?asset_id=3917.

²¹ Ibid.

Taepodong missiles, and Pyongyang would most likely not be willing to sell them.²² Lange and Thränert acknowledge that missile technology is spreading but maintain that there is no immediate or short term threat posed by Iran or any other Middle Eastern state.

Arguing from a German perspective, Alexander Bitter says that Iran and Pakistan pose the main threats to European security.²³ But, “in general the Federal government [of Germany] and NATO should not narrow their field of vision needlessly by only considering a few risk nations. The American government’s concentration on Tehran and Pyongyang is shortsighted.”²⁴ For if the BMD system was justified by only one or two threats, what would happen if those threats ceased to exist?

Colin Gray attributes the rift in U.S. and European views on BMD policy to two main factors. First, European views have been shaped in a security environment in which vulnerability and insecurity are normal and in which periods of peace are more akin to interwar periods. Unilateral defense policies are much harder to carry out without threatening one’s neighbors on a crowded continent. This constant threat and experience of war has shaped a European approach that is hard for Americans to understand.²⁵ Europeans “are reluctant to fuel any policy commitment that might subvert a security order which appears to be working well enough.”²⁶

Second, Gray holds, geopolitics explain why Europe is much more interested in intentions than capabilities. Europeans are used to sharing a continent and borders with enemies that could do great harm. Therefore, according to Gray,

European strategic culture assumes: the persistence of a complex political-strategic context, wherein several or more major players have to be taken seriously on their own terms; that national security depends upon a multi-skeined tapestry of political arrangements, attitudes, and capabilities; and that political intentions are for capabilities as three to one. Because no

²² Lange and Thränert, 1.

²³ Alexander Bitter, “NATO and Missile Defence: Implications for Germany Before the Bucharest Summit in 2008,” *German Institute for International and Security Affairs* (December 2007): 7. http://swp-berlin.org/en/common/get_document.php?asset_id=4548.

²⁴ *Ibid.*, 8.

²⁵ Gray, 282.

²⁶ Gray, 282.

European polity has been able to secure its national survival or well being strictly by means of national military defense, Europeans reflexively focus more upon a putative foe's intentions than upon his assessed capabilities.²⁷

Martin Butcher and Nicola Butler maintain that the U.S. administration made a diplomatic blunder in attempting to broker bilateral deals with certain Allies instead of making BMD decisions subject to consensus in the North Atlantic Council.²⁸ Speaking on American bilateral diplomacy, U.S. Congressional Representative Ellen Tauscher states, "I have been concerned that the administration initially sought to bypass NATO on this issue and move forward on a bilateral basis with Poland and the Czech Republic. I thought this was a mistake and publicly voiced my concerns...sometimes it's faster to work with a 'coalition of the willing,' but such coalitions usually don't have strong foundations."²⁹

Even if a consensus is reached that a threat exists, the next question is whether the technology currently exists to defeat ICBMs. Gustav Lindstrom, a Swedish researcher at the Geneva Centre for Security Policy, in February 2008 pointed out that since 2002, tests of the United States BMD system have produced mixed results. In his view the data produced have shown that the current BMD system cannot be classified as effective. Despite the mixed test results of the three-stage BMD system, the United States plans to install a two-stage interceptor missile in Europe, one that has had no flight tests to date.³⁰

The U.S. BMD system may lack sufficient testing, but NATO's MD-FS concluded in 2006, as noted previously, that missile defense of NATO territory, forces and population centers is technically possible. Bernd Kreienbaum notes that since the

²⁷ Gray, 283.

²⁸ Butler and Butcher, 74.

²⁹ Ellen Tauscher, "European Missile Defense: A Congressional Perspective," *Arms Control Today* 37:8 (October 2007): 9.

³⁰ Gustav Lindstrom, "Missile Defence in Europe- The Political and Security Dimensions," *European Union Institute for Security Policy* (February 2008): 4. http://www.iss.europa.eu/uploads/media/policyBrief_001.pdf.

inception of the MD-FS in 2002, the progress of “industry, NC3A [NATO Consultation, Command and Control Agency] and many national experts within and outside NATO committees has been remarkable.”³¹

Offering an explanation for NATO’s commitment to TMD, Richard Sokolsky acknowledged that TMD is a much more politically acceptable form of missile defense than a BMD system. TMD elements already exist, provide protection against shorter range TBMs, and pose much fewer diplomatic problems with Russia or China.³²

Berd Kubbig further elucidates the attractiveness of TMD over BMD when he places the latter in the context of the ABM Treaty, which was in force from 1972 to 2002. While no longer in force, “the ABM Treaty had a symbolic and a stability-related relevance. It stood for detente, cooperation and the support of the agreement-based variant of arms control. Its major achievements were widely lauded, including accountable partners, technically verifiable and politically irreversible results, as well as a predictable relationship between (antagonistic) countries. Many of these traditional American allies – notably Canada, Germany and the Netherlands – internalized these norms; they became part of their foreign policy culture.”³³ Kubbig’s portrait of the ABM Treaty experience is idealized, in that it omits the disputes between Moscow and Washington over ABM Treaty compliance. (Soviet Foreign Minister Eduard Shevardnadze admitted in 1989 that Moscow had violated the ABM Treaty in constructing the Krasnoyarsk radar.) Moreover, the ABM Treaty obviously did not produce “politically irreversible results,” because the treaty came to an end. TMD systems are nonetheless much more attractive politically than BMD systems because they were allowed within the framework of the ABM treaty and do not threaten a major power’s strategic missile force.

³¹ Bernd Kreienbaum, “Missile Defence Feasibility Study: NATO’s Baseline for the Political and Military Debate on Protecting Alliance Cities and Population Against Ballistic Missiles,” *Military Technology* (September 2006): 55.

³² Richard Sokolsky, “European Missile Defense-Issues and Opinions,” *Joint Forces Quarterly* 29 (Autumn 2001-Winter 2002): 47-48.

³³ Bernd W. Kubbig, “Introduction: The Domestic Politics of Missile Defense,” *Contemporary Security Policy* 26:3 (December 2005): 388.

E. METHODS AND SOURCES

This thesis utilizes existing analytical sources and case studies which examine threat assessments, technical uncertainties, bilateral negotiations, costs, and the effects that a missile defense shield might have on the security status quo and MD cooperation with Russia. These sources are examined according to their relevance to TMD and BMD and the implications for TMD and BMD are compared.

The majority of existing scholarship focuses on the political aspect of the debate for several reasons. First, the current rift between the U.S. and the Alliance is one that will be resolved primarily by political means, whatever the technical merits of any BMD system. Second, the technical aspects of missile defense systems are usually classified, making full disclosure impossible. Finally, missile defense systems are highly technical, with numerous nuances that take years of experience to fully understand.

Therefore, the technical aspect of this thesis will be drawn from the author's own experience as Top Gun trained Patriot system operator and tactician with joint and multinational experience with NATO and non-NATO U.S. allies. The author is familiar with the technical capabilities of all of the U.S. TMD systems, including Patriot, THAAD, AEGIS, and the Israeli Arrow system.³⁴

F. THESIS OVERVIEW

The thesis is organized into four chapters which investigate the comparative differences in the five hypotheses as they relate to U.S. and NATO policy concerning TMD and BMD. The first chapter consists of the introduction in which the research question and thesis overview are provided. Chapter II analyzes threat assessments, technical uncertainties, decision-making frameworks, costs and the effects that missile defenses might have on the security status quo, and dialogue and cooperation with Russia as they pertain to TMD. Chapter III analyzes the same issues as they pertain to BMD and draws contrasts with TMD. Chapter IV offers conclusions.

³⁴ The Arrow system is an upper tier system that was developed jointly by the United States and Israel and served as the technological basis for the U.S. THAAD system.

II. THEATER MISSILE DEFENSE (TMD)

TMD of forward deployed troops is the type of missile defense associated with the least amount of discord within the Alliance. This chapter explores explanations for this. Five factors that may explain U.S. and NATO policy concerning TMD are investigated. In general, the entire Alliance can agree that there is a common threat set, that the technological capabilities exist to defend against TBMs, and that a common decision making process behind procurement of TMD systems is desirable and feasible. While there may be an Alliance wide conception that TMD systems do not alter the security status quo, TMD systems may in some circumstances have effects comparable to those of a BMD system in their impact on the strategic interests of specific NATO Allies. Finally, NATO and the United States appear to be the primary interlocutors when it comes to dialogue and cooperation with Russia on TMD issues. While the United States conducts extensive TMD cooperation with its allies outside of the Alliance, including Australia, Israel and Japan, Washington remains reluctant to cooperate with non-allied states that do not purchase American TMD systems.

A. THREAT ASSESSMENT

Short and medium range TBMs and rockets have been a threat to NATO since the formation of the Alliance and the proliferation of ballistic missiles and technology has continued steadily since then. As of today, over 36 countries possess ballistic missiles and 15 countries are known to be producers of ballistic missiles.³⁵ Peppino DeBiaso summarizes this trend:

Over the past decade, in addition to the roughly two dozen states operating short-range ballistic missiles (up to 1,000 kilometers [km]), the number of countries with medium-range (1,000–2,500 km), intermediate-range (2,500–5,500 km), or intercontinental-range (greater than 5,500 km) ballistic missiles has increased from five to nine. Not only has the number of nations possessing ballistic missiles been growing, but this group also includes some of the most dangerous regimes, such as North Korea and Iran.³⁶

³⁵ Andrew Feickert, *Missile Survey: Ballistic and Cruise Missiles of Selected Foreign Countries*, CRS Report for Congress, July 26, 2005, Order Code RL 30427, 3.

³⁶ Peppino A. DeBiaso, "Missile Defense and NATO Security," *Joint Forces Quarterly* 51 (4th Quarter 2008): 47.

Over the past thirty years there have been at least ten conflicts in which TBMs were launched. During the Iran-Iraq conflict in the 1980s, conventional and WMD-equipped missiles were launched against military and civilian targets.³⁷ “In regional wars, missile attacks and artillery fire on civilian population centers have become a standard form of combat, as the use of standoff weapons (usually cruise missiles or air-to-surface guided weapons) against hostile military units, intelligence centers, terrorist camps, and WMD facilities has become a commonly-accepted U.S. military practice.”³⁸

Peppino DeBiaso finds a correlation between the proliferation of ballistic missiles and the corresponding proliferation of WMD. While TBM and WMD are not synonymous, it would appear that the two are increasingly becoming so. “First, there are more than 20 nations today that possess or are seeking to acquire nuclear, biological, or chemical capabilities that can be carried by ballistic missiles. Second, in the past decade, the proliferation of WMD technologies and the expertise required to ‘weaponize’ them have been accelerated by the willingness of both state and nonstate organizations to collaborate to advance these programs.”³⁹ For these reasons, TBMs pose a serious threat to Alliance security.

1. North Korea

The TBM threat posed by North Korea to the Alliance is primarily through Pyongyang’s proven record of producing TBMs and its willingness to export ballistic missile and nuclear technology to Middle Eastern states.⁴⁰ “North Korea has become the world’s most prolific exporter of ballistic missiles and related equipment, materials and technology,”⁴¹ and it does not appear as if this will change anytime soon as Pyongyang relies on missile sales for economic reasons. Currently, North Korea lacks the capability to directly threaten any members of the Alliance with TBMs. However, its TBM exports

³⁷ DeBiaso, 48.

³⁸ Feickert, 5.

³⁹ DeBiaso, 47-48.

⁴⁰ DeBiaso, 47.

⁴¹ “North Korea's Weapons Programmes: A Net Assessment,” *The International Institute for Strategic Studies*, <http://www.iiss.org/publications/strategic-dossiers/north-korean-dossier/north-koreas-weapons-programmes-a-net-asses/north-koreas-ballistic-missile-programme/>.

to Middle Eastern states constitute a direct threat to Alliance security. “Since 1980, it has supplied Middle Eastern countries, such as Iran, Iraq, Yemen, and Syria, but also Egypt and Libya, with over 400 Scud-class ballistic missiles.”⁴² North Korea’s missile program is based primarily on Soviet Scud missile technology which it has continued to indigenously build upon.

North Korea possesses several short range ballistic missiles (SRBMs) and one proven medium range ballistic missile (MRBM) that it has sold internationally. The Hwasong 5, Hwasong 6, and Hwasong 7 missiles are respectively the North Korean versions of the Soviet Scud B, C, and D missiles. Scud missiles are antiquated, single stage, liquid filled ballistic missiles based on German V2 technology. The Hwasong 5 has a range of 300km and is capable of carrying a payload of 1000kg. The Hwasong 6 has an extended range of 500km which is achieved by decreasing its payload to 700 to 800kg.⁴³ The Hwasong 7 missile has a range of up to 700km with a payload similar to that of the Hwasong 6.⁴⁴ While North Korea no longer produces or exports the Hwasong missiles, they are significant because these exports during the 1980s provided many Middle Eastern countries with the basis for their own missile force as many of them took North Korean technology and built upon it.

The No-dong missile is an MRBM with a range of up to 1,300 km. The No-dong has been exported to several countries which have used this missile to reverse engineer its technology in order to design and build their own MRBMs. Iran and Pakistan both have variants of the No-dong, which owe their creation to the purchase of North Korean missiles and technology.

2. Iran

The Iranian missile program has relied heavily on the importation of technology from North Korea, the Soviet Union and China. Iran now produces numerous solid fueled rockets (Zelzal, Fateh, and Fajr) which have the range to be classified as SRBMs

⁴² “The Threat: North Korea,” *Missile Threat*, <http://www.missilethreat.com/thethreat/pageID.249/default.asp>.

⁴³ “North Korea's Weapons Programmes: A Net Assessment.”

⁴⁴ “The Threat: North Korea.”

(that is, from 100km to 1,000km). In addition to their indigenous rocket program, the Iranians have developed the Shahab family of missiles based on the Soviet Scud and North Korean No-dong missiles. In the Middle East Iran poses the most significant TMD threat to the Alliance “because it unites a vigorous ballistic missile program, development of key capabilities needed to produce nuclear weapons, the demonstrated use of missile-delivered chemical weapons (against Iraq in the 1980s), and the stated desire to destroy nearby countries.”⁴⁵ Additionally, Iran has a history of supporting terrorist groups and during the 2006 Israeli-Hezbollah conflict Iran supplied Hezbollah with Katyusha shoulder-fired rockets and Zelzal rockets which were launched against Israeli cities.

The Shahab-3 missile is an MRBM that has a known range of 1,300km, and Iran has recently tested a Shahab-3 with a claimed range of 2,000km.⁴⁶ In addition to the Shahab-3 and its extended range variants, Iran is working on the Shahab-4 and Shahab-5 which could have ranges up to 4,000km. Currently, the 2,000km Shahab-3 has the range to strike anywhere in Bulgaria, Greece, Romania, and Turkey and in parts of Hungary and Slovenia. A 4,000km IRBM will threaten all but three members of the Alliance (Canada, Portugal, and the United States).

3. UAV/LACM

Unmanned Aerial Vehicles (UAVs) and Land Attack Cruise Missiles (LACMs) have emerged in the past decade as serious threat. In the most recent threat assessment by the U.S. National Air and Space Intelligence Center, LACMs pose a serious threat because:

Proliferation of land attack cruise missiles will expand in the next decade...The majority of new LACMs will be very accurate, conventionally armed, and available for export. The high accuracy of many LACMs will allow them to inflict serious damage on important targets, even when the missiles are armed only with conventional

⁴⁵ DeBiaso, 47.

⁴⁶ “Iran Test-Fires Shahab-3 Long Range Missile,” *Russian News and Information Agency*. <http://en.rian.ru/world/20080709/113564266.html>.

warheads....U.S. defense systems could be severely stressed by low-flying stealthy cruise missiles that can simultaneously attack a target from several directions.⁴⁷

All TMD systems possess a measure of capability against UAVs and LACMs, and this versatility (in addition to maneuverability) makes TMD systems highly attractive.

B. TECHNICAL UNCERTAINTIES

TMD systems have made substantial improvements since their first combat appearance during the 1991 Gulf War where American Patriot batteries had a paltry 9% interception rate.⁴⁸ During Operation Iraqi Freedom in 2003, every Iraqi TBM that threatened a coalition asset was successfully intercepted. Today the TMD systems of the United States and other NATO nations are combat proven and generally viewed as reliable and essential combat assets for the protection of forward deployed troops. Members of the Alliance currently field an assortment of lower and upper tier TMD systems that have been predominately developed by the United States.

1. Lower Tier TMD Systems

Boost, midcourse, and terminal phase are terms used to define the phases of flight for all ballistic missiles, and these flight phases correspond to the level at which a TMD system will engage. As noted in the introduction, a lower tier system is only capable of lower altitude engagements when the TBM is in its terminal phase. This is the most difficult time to engage a TBM for three reasons. First, the TBM approaches its greatest speed in its terminal phase of flight. When the speed of the interceptor is factored in, it is not uncommon to see closing velocities of over 3km per second. This immense closing velocity means that the interceptors and guidance systems have little room for error and no time for a second shot should the first interceptor miss. Second, most SRBMs and some MRBMs that are built by states other than Russia or China are of relatively poor

⁴⁷*Ballistic and Cruise Missile Threat* (Wright Patterson Air Force Base, Ohio: National Air and Space Intelligence Center, March 2006), 25.

⁴⁸Dennis M. Gormley, "Missile Contagion," *Survival* 50:4 (August/September 2008): 143.

quality. This means that they are inaccurate and susceptible to reentry problems when they descend into the atmosphere. Reentry problems include tumbling (the warhead begins to tumble end over end instead of maintaining a ballistic flight path) and breaking apart (the missile disintegrates and a debris field accompanies the warhead, making discrimination difficult for the TMD system). While reentry problems affect all SRBMs, MRBMs, and ICBMs, they are more prevalent in SRBMs because they are usually single stage missiles, which means that the warhead does not separate from the body. A warhead that has separated from the booster is much more aerodynamic, decreasing the drag when re-entering the atmosphere. Finally, any counter measures that are deployed by incoming TBMs are done so in the midcourse phase. This means that lower tier systems have to discriminate against decoys, maneuvering re-entry vehicles, and multiple reentry vehicles in the terminal phase.

The engagement envelope (or range) of lower tier TMD systems is restricted by two factors: the detection range of the radar and the range of the interceptors. Radars require an immense amount of power to function. TMD radars cannot be larger than a certain physical size in order to maintain maneuverability. Moreover, they must be capable of generating a certain level of electrical power. As a result, lower tier TMD systems rely heavily on external early warning sources for cueing because outside radars can detect incoming TBMs more promptly than the radar integral to lower tier TMD systems. If a radar is directed to search a specific area for an anticipated TBM, it can detect and intercept it more quickly by narrowing its search area and directing more power to that area. This means that lower tier TMD systems will only be able to engage SRBMs and some MRBMs without cueing, as IRBMs and ICBMs move too fast to allow sufficient time for detection and engagement. While lower tier systems can only intercept slower, shorter-range TBMs, they are much more deployable than upper tier systems and can easily maintain protection of forward maneuver forces. Additionally, lower tier systems can engage a wider threat set, such as aircraft (rotary and fixed wing), UAVs and LACMs. This deployability and effectiveness against a wide threat set make lower tier TMD systems attractive.

The most recent developments in lower tier systems have indicated a shift in the world of air defense. First, UAVs and LACMs have encouraged the development of lower tier systems that have decreased performance against TBMs and increased performance against UAVs and LACMs. Second, upper tier systems are currently achieving an operational capability to engage TBMs with ranges greater than 500km, meaning that lower tier systems only have to engage SRBMs.

a. Patriot

The Patriot system is one of two TMD assets that are currently fielded by members of the Alliance. The Patriot system has been developed exclusively by the United States over the past 50 years and has undergone several iterations. The most current versions, Patriot Advanced Capability (PAC) 2 and 3, are vast improvements over the Patriot system that debuted in the 1991 Iraq War. After going through numerous upgrades, the PAC 2 and PAC 3 systems of today have a high degree of lethality against most TBMs with a range of less than 2000km. The Patriot system is maneuverable, deployable and effective against a wide variety of threats (SRBMs, MRBMs, UAVs, LACMs, and aircraft). The most current version, the PAC 3, experienced great success in the 2003 Iraq War.

In the past 15 years the United States has sold the Patriot system to several members of the Alliance and currently Germany, Greece, the Netherlands, and Spain have Patriot Fire Units (FUs). The U.S. currently has over 30 Patriot FUs deployed throughout the world. The U.S. fire units are the only NATO TMD assets that have successfully engaged TBMs in conflict. The U.S. Patriot system has evolved greatly since its first use in battle during the 1991 Gulf War where it had a less than impressive record.⁴⁹ This enhanced lethality was displayed during Operation Iraqi Freedom in 2003, when every Scud that was launched at a Patriot defended asset was successfully intercepted.⁵⁰ Despite its success, the Patriot system is ageing, and the emerging threats

⁴⁹ Steven A. Hildreth. *Ballistic Missile Defense: A Historical Overview*. CRS Report for Congress, January 5, 2007, Order Code RS 22120, 6.

⁵⁰ Charles A. Anderson, "Air and Missile Defense: Operation Iraqi Freedom," *Army Magazine* (January 1, 2004). <http://www.ousa.org/webpub/DeptArmyMagazine.nsf/byid/CCRN-6CCSBH>.

of UAVs and LACMs have shown its limitations. Its primary deficiencies derive from the fact that it is designed to engage TBMs. As a result it has a limited search sector of 90 degrees and interceptors with a limited range. This means that the Patriot system has to be oriented toward the threat in order to achieve a successful detection.

b. SAMP/T

The SAMP/T system currently fielded by France and Italy is significant because it was developed jointly by the two countries over the course of the past 20 years without American assistance.⁵¹ The design of the system reflects the emergence of UAVs and LACMs as a more serious threat than TBMs from the French and Italian perspective. First, the SAMP/T is the first TMD system to be fielded by any Alliance member that provides 360 degree coverage. Such coverage is crucial to the detection of UAVs and LACMs because they can be launched from anywhere on the battlefield. For example, during the 2003 Iraq War U.S. Patriot batteries maneuvered past Iraqi LACM units and could not detect LACMs launched from behind their positions. Second, the SAMP/T interceptor is a two stage missile with a range of 120km. A two stage missile provides a longer flight time, which is necessary to intercept low-altitude slow moving targets with unpredictable flight paths. Finally, the SAMP/T is designed to be effective only against SRBMs with a range of less than 600km, in addition to aircraft, UAVs, and LACMs.⁵²

c. MEADS

In 1996, NATO created the Medium Extended Air Defense System (MEADS) Management Agency (NAMEADSMA) for the purpose of managing the MEADS project. The MEADS project is significant because it is the first NATO-led project in the field of missile defense. The primary developers are the United States

⁵¹ The acronym SAMP/T stands for *sol-air moyenne portée-terrestre*, that is, a ground based surface-to-air medium-range missile.

⁵² “Aster 30 SAMP/T – Surface-to-Air Missile Platform / Terrain, Europe,” *Army-Technology*. <http://www.army-technology.com/projects/aster-30/>.

(58%), Germany (25%) and Italy (17%).⁵³ In June 2005, NAMEADSMA decided to extend the MEADS contract for another nine years, taking the project through design and development to its projected fielding in 2014. Initial flight tests are planned to begin in 2011.⁵⁴ The goal of the MEADS is to develop a more deployable and maneuverable replacement for the Patriot system with capabilities similar to those of the SAMP/T system. Another MEADS advantage is that it will provide 360 degree coverage while Patriot only provides a limited, directional search sector.

d. ALTBMD

NATO's Active Layered Theater Ballistic Missile Defence (ALTBMD) program is scheduled to produce a Command and Control (C2) system for the coordination of national TMD systems such as Patriot, MEADS, and SAMP-T, and will have an Initial Operational Capability (IOC) of 2010. After completing an initial feasibility study in 2001 with Lockheed-Martin Missiles, a consortium led by Fire Control and Science Applications International Corporation (SAIC) was formally awarded a contract to construct an ALTBMD test bed at the 2006 Riga Summit.⁵⁵

The goal for the ALTBMD system is to integrate lower and upper tier TMD systems into a NATO-developed C2 system. "The system will be able to integrate different TMD systems (such as PATRIOT, the NATO MEADS system, SAMP-T) into a single coherent, deployable defensive network able to give layered protection against incoming ballistic missiles."⁵⁶ When the ALTBMD system is fully functional, the lower tier will be comprised of MEADS (when it is operational). Until that time, the Patriot

⁵³ "MEADS: Medium Extended Air Defense System, Germany/Italy/USA," *Army-Technology*. <http://www.army-technology.com/projects/meads/>.

⁵⁴ Ibid.

⁵⁵ "NATO Agrees On Missile Defence Way Forward," *NATO's Nations and Partners for Peace 3* (2007): 151.

⁵⁶ "Launch of NATO's Active Layered Theatre Ballistic Missile Defence (ALTBMD) Programme," *North Atlantic Treaty Organization*. <http://www.nato.int/docu/pr/2005/p05-036e.htm>.

and SAMP/T systems will serve as the lower tier TMD systems. The objective of the lower tier systems would be to “provide protection from aircraft, cruise missiles and ballistic missiles with ranges below 1,000 km.”⁵⁷

The upper tier will be comprised of the U.S. THAAD and AEGIS BMD systems. The two layers will work in tandem to defeat all types of threats, with the lower tier focusing on the emerging UAV and LACM threats and the upper tier being responsible for TBMs. The ALTBMD will play a critical role by providing the battle management, communications, command and control, and intelligence (BMC3I), as well as early warning dissemination.⁵⁸

2. Upper Tier TMD Systems

Upper tier TMD systems offer many advantages over lower tier systems when it comes to missile defense. First, upper tier systems are capable of midcourse phase engagements. The midcourse phase of flight for a TBM is the period of time after the boost phase ends until the TBM re-enters the earth’s atmosphere. In the midcourse phase, the TBM is traveling at its slowest rate of speed and along its most constant flight path. Additionally, the TBM has not yet reentered the atmosphere and has not been subjected to the stress that leads to break up and tumbling. Second, the radars utilized by the upper tier system are several times more powerful and can detect a TBM earlier than lower tier systems. Finally, since upper tier systems are capable of long range engagements, they still have time to employ the shoot-look-shoot method whereby another interceptor can be fired should the first one miss. Lower tier systems have to launch two missiles (the salvo method of fire) at every TBM since there is not sufficient time to reengage should the first interceptor miss.

⁵⁷ Lothar Ibrugger, “Missile Defences and Weapons in Space,” (Rapporteur before the NATO Parliamentary Assembly, 169 STCMT 04). <http://www.nato-pa.int/Default.asp?CAT2=471&CAT1=6&CAT0=2&COM=497&MOD=0&SMD=0&SSMD=0&ST=&ID=0&PAR=0&PRINT=1>.

⁵⁸ “Missile Defence: What Does This Mean in Practice?” *North Atlantic Treaty Organization*. http://www.nato.int/issues/missile_defence/practice.html.

a. AEGIS BMD

Aegis BMD is a U.S. Navy upper tier system that is operational. By 2009 the Navy expects to have equipped 18 ships with the system.⁵⁹ The Aegis BMD system is capable of both exo- and endo-atmospheric engagements of SRBMs, MRBMs, and IRBMs by using two different missile types. The Standard Missile 2 (SM-2) is utilized for terminal phase engagements while the Standard Missile 3 (SM-3) is used for midcourse engagements. In addition to missile defense, the Aegis radar plays a crucial role in the TMD architecture by providing early warning and cueing to lower tier systems. The United States has already sold Aegis systems to Japan and is in various stages of talks with Germany, the Netherlands, and the United Kingdom.

In addition to its capability as an upper tier system, one of the primary advantages of Aegis BMD is that it is a naval asset. This means that the system can be rapidly deployed and is self-contained. This naval benefit is also its largest draw back as it can only provide coastal defense.⁶⁰ However, the range of the radar is sufficient to provide early warning and cueing for most TMD elements on the ground.

b. THAAD

The U.S. Army's Terminal High Altitude Area Defense (THAAD) system is a ground based, upper tier, long range TMD system that is capable of intercepting SRBMs, MRBMS, and shorter range IRBMs. While the THAAD system is not yet fielded, it is in its final phases of flight testing. This testing is scheduled to be completed

⁵⁹ "Frequently Asked Questions," *Missile Defense Agency*.
<http://www.mda.mil/mdalink/html/faq.html>.

⁶⁰ The footprint of the protected land area depends on numerous factors such as the type of threat, geographic features, and proximity to shore of the ship.

in early 2009 with a subsequent IOC in 2009.⁶¹ Currently, one X-Band THAAD radar is already deployed to Japan to “protect the United States and friends and allies from Intercontinental Ballistic Missiles and medium range threats.”⁶²

Today’s TMD architecture consisting of Patriot and AEGIS BMD is highly capable but does have some shortcomings. First, as noted previously, AEGIS BMD is a naval asset and is restricted in its deployment and defense capabilities. Only assets along the coast and at sea can be defended. It can, however, serve a critical role as an early warning system for Patriot. Second, no capable BMC3I system exists for the integration of air defense and air assets. The lack of integration of battlefield air defense assets had disastrous affects during Operation Iraqi Freedom (OIF). Two separate Patriot FUs, which were not integrated into a common air defense network, mistakenly classified two coalition aircraft (a British Tornado and a U.S. Navy FA-18) as missiles and engaged them as such.⁶³ In addition to these two fratricides, there were numerous “over engagements,” with multiple fire units engaging the same target because they were not integrated into a common air defense network. Integration into a common network, such as the planned ALTBMD, is intended to help prevent the recurrence of such events.

The TMD programs being conducted by NATO and the United States are on convergent paths. Each Ally’s national defense policies determine its level of involvement in TMD efforts, and it would be an impossible task for NATO to create the necessary consensus to develop an Allied TMD system. NATO is filling its role by creating the ALTBMD network, which will integrate Allied lower and upper tier TMD systems into a common network that is designed to reduce the likelihood of “over engagements” and target misclassification.

⁶¹ “Defeating Ballistic Missiles in the Late-Midcourse and Terminal Phase,” *Lockheed-Martin*. <http://www.lockheedmartin.com/data/assets/4474.pdf>.

⁶² “Fact Sheet: Forward Deployable Radars,” *Missile Defense Agency*. <http://www.mda.mil/mdalink/pdf/fdr.pdf>.

⁶³ “Preventing Fratricide,” *Technology Review*. <http://www.technologyreview.com/Biztech/14493/>.

C. DECISION-MAKING FRAMEWORK OF TMD

Because there is a genuine threat and the technology exists to defeat that threat, TMD decision making within the alliance has revolved around capabilities rather than politics. The Dutch view of TMD is similar to that of most Allies – that is, that TMD is an “adaptation of defensive capabilities against potential or already existing threats, made possible by new technologies, particularly...ballistic and cruise missiles of short ranges.”⁶⁴ What has developed is a process in which Canada and the European members of the Alliance have allowed the United States to bear most of the research and development costs, while they have borne limited purchasing costs. With the exception of the SAMP/T, every TMD system fielded within the Alliance was developed almost exclusively by the United States. The United States has had little input from most of the other members of the Alliance in its design and development of TMD systems and has borne willingly most of the costs.

The national development of TMD systems is crucial because NATO relies on the military capabilities of individual member states. Walter Slocombe has summarized the situation as follows:

Practically every defence-procurement decision by a NATO member is ultimately a unilateral choice. While agreed NATO priorities are often a factor, the degree to which NATO’s defence-planning mechanism influences any individual ally’s programme is limited. NATO itself has almost no military assets of its own; virtually all the actual military power the Alliance could muster depends, as would access to European-based missile defence, on national decisions to commit nationally owned assets in particular circumstances.⁶⁵

Because NATO relies on nationally owned TMD assets it is critical that adequate TMD assets be developed within the Alliance, either unilaterally or multilaterally. However, multilateral weapons development, especially of highly technical TMD systems, is a difficult task; and these difficulties help to explain the disproportionate American share of TMD technology. First, group efforts are extremely difficult to

⁶⁴ Philip Everts, “The Netherlands: Procurement Without Debate,” *Contemporary Security Policy* 26:3 (December 2005): 558.

⁶⁵ Walter B. Slocombe, “Europe, Russia and American Missile Defence,” *Survival* 50: 2 (April 2008): 22-23.

manage because of the divergence of interests. Countries have different budgets, different procurement procedures, different levels of technological expertise, and different goals for TMD systems. Second, the motives for participation in a particular TMD project vary substantially and can prove to be a benefit or a hindrance.

An example of the problems associated with multilateral TMD projects is the MEADS project. During the early 1990s the Germans and the Americans had been independently working on a TMD system that would replace Patriot (the American goal) and Hawk (the German goal). When the two sides conducted talks, they discovered that their prototypes were remarkably similar. For economic reasons, the two sides decided to combine efforts to reduce the costs of developing independent systems. However, during this same period, the French-Italian SAMP/T effort was under way, and the French and the Italians had been trying to solicit German participation for economic, technical, and political reasons. The French and the Italians did not want the Germans to commit to the MEADS project because they feared that the Germans would then not support the SAMP/T project. Additionally, the French and the Italians did not want to support MEADS because it was a non-European project which did not meet their needs. Upon German commitment to the MEADS project, the French and the Italians also joined it because they were “concerned about having no role in such a major program that would compete with a SAMP/T upgrade.”⁶⁶

In May 1996 the French withdrew from the MEADS project (most likely because the capabilities of SAMP/T are similar to those of MEADS). However, contention continues among the MEADS project partners in the face of economic and technological issues. The Germans are frustrated that the Americans have dominated the project and have not awarded contracts to German companies; and the Americans have also restricted Allied access to the technology of the system.⁶⁷ “Washington was able to implement a

⁶⁶ David M. D’Agostino, “Transatlantic Cooperative Weapons Development: How Can We Better Ensure Success?” *Acquisition Review Quarterly* (Fall 1996): 140.

⁶⁷ Herman Hagen, “The Current Political and Technical Debate on Missile Defense in the United States and Missile Defense Option for Europe. The Transatlantic Dimension: Patriot and MEADS,” (Paper presented at the Conference of Arbeitskreis Raketeneabwehr der HSFK Arbeitsstelle Friedensforschung Deutscher Wissenschaftler, Bonn, Germany, November 3, 2003).

highly restrictive deal over the sharing of its cutting-edge technology with the European junior partners – this was an outcome which reflects the strictly asymmetrical transatlantic relationship in this area.”⁶⁸

As previously stated, TMD systems receive less political attention than BMD systems because they are justified by a proven threat and the technology’s effectiveness has been demonstrated. TBMs have been launched multiple times in combat, and during both Iraq Wars (1991 and 2003) coalition forces came under TBM fire. With more NATO countries sending troops to out of area missions, most governments have become convinced of the need for TMD. According to Mark Bromley of the British American Security Council, “European government officials recently have been more publicly willing to discuss missile threats. This new public stance could be reflective of an increased willingness on the part of European governments to pursue more ambitious TMD systems.”⁶⁹

In addition to the proven threat and technology, economics has emerged as a strong variable in TMD development. Europeans are becoming increasingly interested in TMD systems because of the emergence of domestic technology firms that are capable of producing systems whose quality is comparable to that of American systems. In a situation similar to American politics, domestic defence companies are beginning to increase their pressure on national governments to award defence contracts to European industries. “One of the factors influencing Europe’s interest in TMD systems is an increasingly resurgent domestic missile industry. The European missile industry is now able to compete globally in a market niche in the past the reserve of the larger US firms, such as Raytheon and Lockheed Martin.”⁷⁰ Gradually, European firms are beginning to win more defence contracts and have a greater stake in the research, development, and production of TMD systems.

⁶⁸ Bernd W. Kubbig, “Introduction: The Domestic politics of Missile Defence,” *Contemporary Security Policy* 26: 3 (December 2005): 402.

⁶⁹ Mark Bromley, “European Missile Defence: New Emphasis, New Roles,” *British American Security Council* (May 15, 2001). <http://www.basicint.org/pubs/Papers/BP36.htm>.

⁷⁰ Ibid.

D. COSTS AND THE EFFECTS THAT TMD MIGHT HAVE ON THE SECURITY STATUS QUO

TMD systems are often viewed as useful only for the protection of forward deployed troops or the point defense of small areas. Because of this perceived limit, the effects that TMD systems could have on the security status quo have been viewed as relatively minimal. This perception is erroneous, however. While TMD systems are limited to only theater effectiveness, they may have an equal or greater impact on the security status quo than the proposed U.S. BMD system, because “a weapon to be used in a ‘theatre’ by one party can be seen as a strategic threat by another.”⁷¹

For southern and eastern European NATO Allies, TMD is more strategically important than BMD because the primary threat posed to them is not from ICBMs, but from IRBMs, MRBMs and possibly SRBMs.⁷² A 1,300km Shahab-3 fired from Iran could strike any location in Turkey and some portions of Greece. As previously mentioned, a 2,000km Shahab-3 could strike anywhere in Bulgaria, Greece, Romania, and Turkey and in small portions of Hungary and Slovenia. While the trajectories of TBMs can be depressed or lofted to achieve the desired distance, it would be impossible to loft an ICBM’s trajectory in order to shorten its distance to strike southeastern Europe. To the countries that are within range of current Iranian missiles, TMD systems could provide a high level of protection and deterrence.

TMD systems possess more than just point defense capabilities. A single Patriot battalion (consisting of 4 fire units) can provide protection for a major metropolitan area and only one THAAD fire unit could provide protection for “ranges well beyond the defended area.”⁷³ The Israeli Arrow system, which is largely based on the THAAD system, offers an example of the area coverage potential of an upper tier TMD system. Israel, which is larger than New Jersey, is protected by only two Arrow fire units. In

⁷¹ Everts, 567.

⁷² Ronja Kempin and Jocelyn Mawdsley, “France: Missile Defence à la Française,” *Contemporary Security Policy* 26:3 (December 2005): 512.

⁷³ “Terminal High Area Altitude Defense,” *Lockheed Martin*.
<http://www.lockheedmartin.com/products/thaad/index.html>.

addition to the area coverage potential, TMD systems can launch more interceptors than the proposed U.S. BMD system. One Patriot fire unit has the ability to launch 16 PAC-3 missiles and 20 PAC-2 missiles, which is substantially more than the proposed 10 interceptors of the BMD system envisaged for deployment in Poland.

Turkey is a prime example of the effect TMD could have on the security status quo within the region as TMD systems in Turkey would nullify the TBM threat posed by Middle Eastern states. Turkey is on the front lines of the missile threat, and “there is a strong feeling among the public that there is a potential threat from the missiles of neighboring countries,”⁷⁴ as debris from a Syrian missile fell in southeastern Turkey in May 2005. However, Ankara is particularly constrained in its options because Turkey is caught between the security dynamics of the Middle East region and its relations with Europe, which involve distinct political considerations.⁷⁵

The primary reason for the mistaken impression that TMD does not affect the security status quo may reside in the legacy that the ABM Treaty has left. Because the ABM Treaty constrained only defense against “strategic ballistic missiles,” as defined in the treaty and associated documents, many observers formed the impression that SRBMs, MRBMs, and IRBMs do not constitute a strategic missile threat. The development and deployment of TMD systems were never restricted under the 1972 ABM Treaty, which was in force until June 2002. As a result, TMD systems have always been much less politically contentious than BMD systems as they are perceived as being only for the protection of forward deployed troops and lack the capability to defend against Inter-Continental Ballistic Missiles (ICBMs) and Sea-Launched Ballistic Missiles (SLBMs).⁷⁶

Additionally, the spread of WMD and the capability to produce missiles that can carry them has meant a change in what constitutes a strategic missile force. Now SRBMs, MRBMs, and IRBMs can constitute strategic missile forces because of the proximity of threatening states and the ability to equip them with WMD.

⁷⁴ Isil Kazan, “Turkey: Where Geopolitics Still Matter,” *Contemporary Security Policy* 26:3 (December 2005): 595.

⁷⁵ *Ibid.*, 597-598.

⁷⁶ Kubbig, 388.

E. DIALOGUE AND COOPERATION WITH RUSSIA AS IT PERTAINS TO TMD

NATO has made extensive efforts through the NATO Russia Council (NRC) to conduct dialogue, research, development, and exercises to enhance TMD cooperation. The Theatre Missile Defence Ad Hoc Working Group (TMD-AHWG) was established in 2004 to:

[D]evelop and assess an Experimental Concept and an Experimental Concept of Operations (CONOPS); to explore and develop opportunities for intensified practical cooperation, including joint TMD training and exercises as well as the development of common terminology; and to conduct consultations and interoperability studies on respective TMD systems and system capabilities in order to analyse and evaluate levels of interoperability and the means to attain such interoperability.⁷⁷

Since 2004, the TMD-AHWG has conducted five joint NATO-Russia TMD exercises, with the most recent occurring in January 2008.⁷⁸

For many of the same reasons that influence the TMD decision-making process within the Alliance, Moscow desires to become a purveyor of TMD technology. “Although generally unenthusiastic about American BMD programs, Russian officials have perennially hoped that NATO countries will purchase Russian TMD technologies and weapons systems.”⁷⁹ However, there are many obstacles to NATO-Russia cooperation on TMD development. First, NATO and Russia encounter numerous interoperability problems that limit the extent to which Russian and NATO systems could be integrated because they were not designed to be compatible. Second, strong ties have already been built with NATO defense firms, and they have limited interest in working with Russian firms. Finally, even if NATO defense firms were not opposed to working with Russian firms, the issue of foreign disclosure presents a serious obstacle. Even among the NATO Allies, there is a high degree of information restriction (illustrated with

⁷⁷ “Theatre Missile Defense Ad-Hoc Working Group,” *NATO Russia Council*. http://www.nato-russia-council.info/htm/EN/structures_8.shtml.

⁷⁸ “NATO-Russia Exercises to Take Place in Germany,” *North Atlantic Treaty Organization*. <http://www.nato.int/docu/pr/2008/p08-003e.html>.

⁷⁹ Richard Weitz, “Russian-American Security Cooperation After St. Petersburg: Challenges and Opportunities,” *Strategic Studies Institute of the U.S. Army War College* (April 2007): 13. <http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?PubID=775>.

the MEADS project), and the amount of information restriction would only increase when dealing with Russia. Additionally, there is the fear that Russia might pass acquired technology to China.⁸⁰

⁸⁰ Weitz, 15.

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III. BALLISTIC MISSILE DEFENSE (BMD)

The United States and NATO appear to be taking divergent paths regarding BMD for the protection of NATO territory, forces and population centers. This chapter explores possible explanations. Five factors that may explain U.S. and NATO policy concerning BMD are investigated and contrasted with the findings regarding TMD in Chapter II. In general, the United States and its NATO allies disagree over threat assessments, the technological feasibility of defending against ICBMs, the decision-making framework, the effects that the proposed BMD system might have on the security status quo, and cooperation with Russia regarding the proposed BMD system.

A. THREAT ASSESSMENT

The threat assessment for BMD is a source of divergence within the Alliance for two reasons. First, the strategic culture that exists in the United States and Europe exerts a strong influence over how various threats are perceived. The development of strategic culture is a continuous process where a state's world view has been, and continues to be, shaped by its historical experience, political culture, and geopolitical situation.⁸¹ These three elements interact with each other to produce "a distinctive political-strategic culture."⁸² The world view that a state has developed will influence what it views as vital interests and potential threats. According to Colin Gray, an expert at the National Institute for Public Policy, "Inter-allied discussion of BMD issues may appear to be about particular threat projections, for example, but in reality it is also about the contrasting worldviews bequeathed by history, culture, and geopolitics."⁸³

Europeans have a similar strategic culture that has been largely shaped by the constant threat of war. Since the 17th century, Europe has plunged itself into continental war multiple times (Thirty-Years War, Napoleonic Wars, and the World Wars). Europeans have become accustomed to a geopolitical situation where vulnerability and

⁸¹ Colin S. Gray, "European Perspective on U.S. Ballistic Missile Defense," *Comparative Strategy* 21 (2002): 280.

⁸² *Ibid.*, 281.

⁸³ Gray, 280.

insecurity are the norm and periods of peace are more akin to interwar periods.⁸⁴ Europeans accept a security environment where they are sharing a continent with well armed neighbors and “they are most reluctant to help fuel any policy commitment (i.e., to homeland missile defense) that might subvert a security order which appears to be working well enough.”⁸⁵

The result of sharing a hostile, crowded continent has meant that Europeans have developed mechanisms for confronting threats that differ from American approaches. Europeans choose either to ally with the threatening state, to balance against the threatening state by entering into alliances with other menaced states, or simply to offer neutrality.⁸⁶ All three of these options rely on varying levels of cooperation, negotiation, and participation in alliances.

The American strategic culture is born from a unique historical experience, political culture, and geopolitical situation. American security has never been seriously menaced and Washington has always had the freedom to conduct geopolitics without being subjected to the constraints that European governments face. “Continental isolation has allowed the United States the luxury of choosing the time, place, and term of its lethal engagement in world affairs.”⁸⁷

The result is that the United States emphasizes a state’s capabilities in lieu of its intentions and prefers unilateral military confrontation as a means of dealing with perceived threats. In addition to the preference for direct military confrontation, Americans are not accustomed to being a part of an alliance where they are not the sole super power. This hegemonic existence means that the United States does not know how to defer to demands of other allies.⁸⁸

In addition to strategic culture, threat assessments concerning future ICBM assets in the hands of regional powers are based more on conjecture than demonstrated

⁸⁴ Colin S. Gray, “European Perspective on U.S. Ballistic Missile Defense,” *Comparative Strategy* 21 (2002): 282-283.

⁸⁵ *Ibid.*, 282.

⁸⁶ *Ibid.*, 283.

⁸⁷ Gray, 284.

⁸⁸ *Ibid.*, 283.

capabilities. China and Russia are the only non-Alliance members to possess operational ICBMs. Allied views differ regarding the progress and speed of ICBM development in Iran and North Korea. The U.S. “Intelligence Community assesses that Iran would be able to develop an ICBM before 2015 if it chose to do so,”⁸⁹ and North Korea tested a multi-staged Taepo Dong 2 ICBM in July 2006. From the American perspective, Tehran’s and Pyongyang’s efforts to acquire ICBMs signal their hostile intent. European members of the Alliance agree that North Korea and Iran are progressing in their missile programs. However, most European Allies appear to believe that the North Korean and Iranian missile programs are progressing at a slower pace than estimated by the United States and that capabilities do not equal intentions.

1. The American Assessment

The United States views ICBMs and WMD as closely related capabilities. From the perspective of American strategic culture, the only reason for a state to develop ICBMs is as a means to deliver WMD. Arming an ICBM with a conventional warhead is not practical as they do not possess the level of precision necessary to ensure destruction of the target. For example, the most accurate American ICBM, the Trident II D-5, only has a Circular Error Probable (CEP)⁹⁰ of 122 meters.⁹¹ Moreover, as discussed in Chapter II, there is a correlation between the proliferation of ballistic missiles and WMD and this influences the American belief that ICBMs and WMD are related capabilities.

A survey of important U.S. BMD documents reveals that the U.S. objectives regarding missile defense have increasingly emphasized the need to counter WMD proliferation. The National Defense Authorization Act for 1996, which identified areas of concern for the future of U.S. BMD strategy, only mentioned the terms WMD and missile defense in the same sentence once:

⁸⁹ Brian Green, Testimony before the Strategic Forces Subcommittee of the House Armed Services Committee. “Hearing on the Fiscal Year Defense Authorization Budget Request for Missile Defense Programs,” March 27, 2007. http://www.house.gov/hasc/hearing_information.shtml.

⁹⁰ CEP is the measure of accuracy for ballistic missiles. The CEP is the size of the circle around a target where 50% of launched ballistic missiles will impact.

⁹¹ “Strategic Missiles,” *Milnet*, <http://www.milnet.com/icbm.htm>.

The deployment of ballistic missile defenses is a necessary, but not sufficient, element of a broader strategy to discourage both the proliferation of weapons of mass destruction and the proliferation of the means of their delivery and to defend against the consequences of such proliferation.⁹²

The 2002 National Security Strategy (NSS) did not mention missile defense independently of WMD, and BMD was presented as a means to defeat WMD. In the introduction to the NSS, President George W. Bush cited ballistic missiles as one of the primary means of delivery for WMD:

Our enemies have openly declared that they are seeking weapons of mass destruction, and evidence indicates that they are doing so with determination. The United States will not allow these efforts to succeed. We will build defenses against ballistic missiles and other means of delivery.⁹³

Section V of the NSS was entitled “Prevent Our Enemies from Threatening Us, Our Allies, and Our Friends with Weapons of Mass Destruction,” and specifically addressed missile defense as follows:

We must be prepared to stop rogue states and their terrorist clients before they are able to threaten or use weapons of mass destruction against the United States and our allies and friends. Our response must take full advantage of strengthened alliances, the establishment of new partnerships with former adversaries, innovation in the use of military forces, modern technologies, including the development of an effective missile defense system, and increased emphasis on intelligence collection and analysis.⁹⁴

The 2008 Threat Assessment of the Intelligence Community continued the U.S. practice of viewing WMD and ballistic missiles as closely related capabilities. J. Michael McConnell, the Director of National Intelligence, in testimony before the Senate Armed

⁹² 104th Congress, House Resolution 1530, National Defense Authorization Act for Fiscal Year 1996, Title II, Subtitle C – Ballistic Missile Defense Act of 1995, Section 232, Paragraph 2. <http://www.thomas.gov/cgi-bin/query/F?c104:3:./temp/~c104ITyFnS:e139706>.

⁹³ 2002 National Security Strategy,” *The White House*, 2. <http://www.whitehouse.gov/nsc/nss/2002/index.html>.

⁹⁴ *Ibid.*, 14.

Services Committee, said, “I note...that two activities [in Iran] relevant to a nuclear weapons capability continue: uranium enrichment that will enable the production of fissile material and development of long-range ballistic missile systems.”⁹⁵

The only two states that the 2008 Threat Assessment of the Intelligence Community mentioned as posing a ballistic missile threat to the United States, owing to their pursuit of ICBM and WMD technology, are Iran and North Korea. The 2008 Threat Assessment of the Intelligence Community concluded that Iran is seeking to enhance its ability to project military power through the development of missiles capable of striking Europe and North America with WMD.⁹⁶ While the assessment noted that Tehran has halted its nuclear weapons program, the authors stated that “We assess with moderate-to-high confidence that Tehran at a minimum is keeping open the option to develop nuclear weapons...And, as noted, Iran continues to deploy ballistic missiles inherently capable of delivering nuclear weapons, and to develop longer-range missiles.”⁹⁷

Senator Jon Kyl expressed the American fear of long range Iranian missiles as a vehicle for WMD as follows:

The latest IAEA report confirms that the Iranian missile threat is real and growing. Of course, as you know, there's very little reason to create a long range missile to carry a conventional warhead. General Obering was recently in Europe reminding the Europeans that within two to three years, Iranian missiles will be able to reach their capitals.⁹⁸

The 2008 Threat Assessment described North Korea as a threat because of its desire to develop missiles and WMD in addition to its existing capabilities. North Korea continues to pose a large threat because of its missile and WMD proliferation activities. “We remain concerned North Korea could proliferate nuclear weapons abroad.”⁹⁹

⁹⁵ J. Michael McConnell, “Annual Threat Assessment of the Intelligence Community,” (testimony before the House Armed Services Committee, Washington D.C., United States, February 27, 2008), 12. <http://armed-services.senate.gov/statemnt/2008/February/McConnell%2002-27-08.pdf>.

⁹⁶ Ibid., 10-12.

⁹⁷ Ibid., 10.

⁹⁸ Jon Kyl, “Missile Defense Priorities: The View From Congress,” (speech before the American Foreign Policy Council’s Conference on Missile Defenses and American Security, Washington D.C., United States, March 10, 2008.) http://www.afpc.org/event_listings/viewConference/65.

⁹⁹ McConnell, 13.

Moreover, despite the failed 2006 test, the Taepo Dong-2 “probably has the potential capability to deliver a nuclear-weapon-sized payload to the continental United States. But we assess the likelihood of successful delivery would be low absent successful testing.”¹⁰⁰

The 2008 Threat Assessment assesses North Korean intentions as follows:

Pyongyang probably views its capabilities as being more for deterrence and coercive diplomacy than for warfighting and would consider using nuclear weapons only under certain narrow circumstances. We also assess that Pyongyang probably would not attempt to use nuclear weapons against US forces or territory unless it perceived the regime to be on the verge of military defeat and risked an irretrievable loss of control.¹⁰¹

2. European Assessment

The European approach to assessing the ballistic missile threat appears to be based less on judgments regarding capabilities than the U.S. approach. Europeans may not feel directly threatened by any state and may judge that any missile threat would be a result of developments outside their “security complex.”¹⁰² In the absence of a current threat, why would Europeans pursue a policy that could “rock the boat”? Some Allies are concerned that, in deploying BMD, “the United States would worsen the security dilemma for its friends and foes without significantly improving security at home.”¹⁰³

Many Europeans share the American view that the proliferation of WMD and the spread of ballistic missile technology are linked. However, from the perspective of European strategic culture, Europeans are more focused on the states intentions than on their proliferation efforts because capabilities do not equal intentions.

Alexander Bitter, arguing from a German perspective, contends that the proposed BMD system should not be justified by threat assessments, but by its capability to deter the proliferation of missiles and WMD.

¹⁰⁰ McConnell, 14.

¹⁰¹ Ibid.

¹⁰² Mark Smith, “Britain: Balancing: Instinctive Atlanticism,” *Contemporary Security Policy* 26: 3 (December 2005): 448.

¹⁰³ Justin Vaisse, “French Views on Missile Defence,” *The Brookings Institution* (April 2001), http://www.brookings.edu/articles/2001/04france_vaisse.aspx.

[C]redible political pressure can only be exerted if it is backed up by military capabilities which deter a potential adversary...If the Federal Republic wishes to retain its freedom of action in foreign policy and not to become vulnerable to political blackmail even without the express threat of intervention, it must convincingly demonstrate to a potential adversary that its military intentions would fail. This is just the function of a shield for missile defence.¹⁰⁴

David C. Gompert (an American expert) and Klaus Arnholt (a German expert) echo Bitter's view that too much emphasis has been placed on the threat "and not enough has been made of the structural-strategic logic."¹⁰⁵ Missiles and WMD have proliferated into today's greatest security threat, and they continue to proliferate despite arms control regimes. According to Gompert and Arnholt, BMD is necessary because it will reduce the likelihood of nuclear weapons being used and decrease the payoff of acquiring missiles and WMD.¹⁰⁶

Sascha Lange and Oliver Thränert acknowledge that ballistic missiles are not themselves WMD but delivery systems for WMD. They argue that this is a key distinction because the nature of the BMD debate changes drastically when a state does not possess WMD technology.¹⁰⁷ Therefore, the debate is actually over the best way to respond to the proliferation of WMD, and a BMD system is one method of nullifying a state's WMD arsenal if the WMD are intended for ballistic missile delivery.

According to Alexander Bitter, a German analyst, "From the European viewpoint, current threat assessments focus on two states: Iran and Pakistan."¹⁰⁸ Iran is considered a threat because it possesses TBMs that can threaten Europe, is developing nuclear weapons, and clearly desires to advance both programs.¹⁰⁹ Lange and Thränert hold that

¹⁰⁴ Alexander Bitter, "NATO and Missile Defence: Implications for Germany Before the Bucharest Summit in 2008," *German Institute for International and Security Affairs*, (December 2007): 9. http://swp-berlin.org/en/common/get_document.php?asset_id=4548.

¹⁰⁵ David C. Gompert and Klaus Arnholt, *Ballistic Missile Defense: A German American Analysis* (Rand, 2001): 6. http://www.rand.org/pubs/issue_papers/IP206/.

¹⁰⁶ Gompert and Arnholt, 7-9.

¹⁰⁷ Sascha Lange and Oliver Thränert, "Missile Defense in and for Europe?" *German Institute for International and Security Affairs* (April 2007):1. http://www.swpberlin.org/en/common/get_document.php?asset_id=3917.

¹⁰⁸ Bitter, 8.

¹⁰⁹ Ibid.

Washington's projection that Iran will possess ICBMs by 2015 is excessive as it does not take into account the technical difficulties of developing such longer range missiles.¹¹⁰ Additionally, in early 2007 the EU imposed sanctions on Iran which prohibited:

[T]he direct or indirect supply, sale or transfer to Iran of items, materials, equipment, goods and technology which could contribute to Iran's enrichment-related, reprocessing or heavy water-related activities, or to the development of nuclear weapon delivery systems.¹¹¹

According to Bitter, Most Iranian missile technology is imported and antiquated, and the 2007 sanctions will certainly slow development.¹¹²

Moreover, Bitter holds that Pakistan poses a threat to European security for several reasons.¹¹³ First, Pakistan has been a nuclear weapons state since 1999 and possesses over 40 nuclear warheads while continuing to build nuclear facilities. Second, Pakistan has achieved a high level of sophistication with its ballistic missile program. While the longest range Pakistani missile has a range of only 2,500km (and Islamabad would need a 5,000 km range to reach Europe), the technology of Pakistani missiles is superior to that of Iranian missiles. Longer ranges could therefore easily be achieved. Third, Pakistan receives technology assistance from China, which also views India as a potential security threat. Finally, internal political instability and regional isolation make Pakistan unpredictable and a potential danger to Europe.

Currently, North Korea does not pose a threat to Europe because its primary security focus is on Japan and the United States.¹¹⁴ Europe could become entangled in a North Korean- American conflict, but the direct threat to Europe is low. Moreover, it appears that North Korea is becoming more receptive to negotiations as its economic situation continues to decline, reducing its threat level. According to the International

¹¹⁰ Lange and Thränert, 2.

¹¹¹ Official Journal of the European Union, Council Common Position 2007/140/CFSP (February 27, 2007): paragraph 4. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:061:0049:0055:EN:PDF>.

¹¹² Bitter, 8.

¹¹³ Ibid., 7-8.

¹¹⁴ Bitter, 8.

Institute for Strategic Studies in London, North Korea's missile program is more for "bargaining leverage and trading for political and economic benefits than for military use."¹¹⁵

When contrasted with the TMD threat, the BMD threat takes a different tone; and this is the primary reason for the divergence between European and American threat assessments. Theater missiles (SRBMs, MRBMs, and IRBMs) are widely viewed as conventional weapons that do not pose a strategic threat, while ICBMs and WMD are viewed as virtually one and the same, and capable of posing a significant strategic threat. As noted in Chapter II, this view is erroneous because numerous SRBMs, MRBMs, and IRBMs have the range and the capability to deliver WMD to European Alliance members. Halting the proliferation of SRBMs, MRBMs, and IRBMs is therefore as crucial as halting the proliferation of longer range missiles. "Thus, the disagreement on the threat is primarily one of timing. Whereas the United States believes that the threat to Europe and North America will become operational sooner rather than later, many Europeans believe the inverse."¹¹⁶

Experts on both sides of the Atlantic share the view that long range missiles are a primary delivery method for WMD and that to stop one is to limit the effectiveness of the other. The United States regards BMD as a key method to counter WMD. From the American perspective, building a BMD system would defeat a primary delivery method for WMD and thus reduce the benefits of acquiring both ICBMs and WMD. Europeans appear to be more concerned with slowing WMD proliferation than acquiring BMD because they believe that the missile threat is not as immediate as the WMD threat. From a European perspective, arms and export control regimes should be used to stop WMD

¹¹⁵ "North Korea's Weapons Programmes: A Net Assessment," The *International Institute for Strategic Studies*. <http://www.iiss.org/publications/strategic-dossiers/north-korean-dossier/north-koreas-weapons-programmes-a-net-asses/north-koreas-ballistic-missile-programme/>.

¹¹⁶ James Ferguson, "The Coupling Paradox: Nuclear Weapons, Ballistic Missile Defense, and the Future of the Transatlantic Relationship," in *NATO and European Security: Alliance Politics from the End of the Cold War to the Age of Terrorism*, ed. Alexander Moens, Lenard J. Cohen, and Allen G. Sens (Westport, CT: Praeger 2003), 159.

proliferation; and BMD capabilities would decrease the benefits of acquiring missile technology should these regimes fail. As a result, Europeans prefer to focus their efforts on strengthening control regimes that the United States considers important but imperfect and subject to failure.¹¹⁷

As previously mentioned, the NATO European Allies do not feel directly threatened by all the states that the United States considers a threat, and European governments generally prefer to deal with threats in a manner different from that favored by the United States. Since the late 1990s, for example, the United States and European governments have often diverged in their approach to dealing with Iran. The United States has preferred to use sticks, while its European counterparts have favored carrots. Europe has a high degree of economic interaction with Iran. “The EU is the first trade partner of Iran, accounting for almost a third of its exports.”¹¹⁸ European observers hold that trade provides Europe with greater access to negotiations with Tehran and decreased vulnerability, as Iran has grown increasingly dependent on European trade.

Finally, strategic culture exerts a large influence in how both sides of the Atlantic perceive potential threats. The United States, fearful of being threatened, views Pyongyang and Tehran’s activities as hostile. From the American perspective, why would Iran and North Korea develop ICBMs and WMD if they did not intend to use them? European strategic culture leads most European governments to focus on the intentions of Pyongyang and Tehran. Just because Iran and North Korea develop ICBMs and WMD does not mean that they will use them. From the European perspective, insecurity and vulnerability lead states to seek protective measures and the proposed U.S. BMD may increase these feelings.

B. TECHNICAL UNCERTAINTIES

There are numerous technical uncertainties associated with the proposed U.S. BMD system because it is relatively new. Despite the level of technical uncertainty

¹¹⁷ Joanna Spear, “Organizing for International Counter proliferation: NATO and U.S. Nonproliferation Policy,” in *Ultimate Security: Combating Weapons of Mass Destruction*, ed. Janne E. Nolan, Bernard I. Finel and Brian D. Finlay (New York: Century Foundation Press, 2003), 204.

¹¹⁸ “Iran,” *The European Commission*.
http://ec.europa.eu/trade/issues/bilateral/countries/iran/index_en.htm.

associated with the BMD system, NATO and the United States agree that it is technically feasible to construct such a system. As stated in the introduction, the Missile Defence Feasibility Study (MD-FS), which was initiated at the 2002 Prague Summit, concluded, as the Allies noted at the 2006 Riga Summit, that “missile defence is technically feasible within the limitations and assumptions of the study.”¹¹⁹ Most recently, at the April 2008 Bucharest Summit the Allies declared that “we therefore recognise the substantial contribution to the protection of Allies from long-range ballistic missiles to be provided by the planned deployment of European-based United States missile defence assets.”¹²⁰

While the NATO Allies have agreed that developing a BMD system is technically feasible, it appears that the debate about the technical uncertainties has shifted to the timeline involved in developing the technology and closing the “gaps” in protection. The United States has proposed to deploy the BMD system in Europe by 2011 despite the fact that its reliability has not been demonstrated. The Government Accountability Office concluded in February 2008 that:

We were unable to assess whether MDA met its overall performance goal because there have not been enough flight tests to provide a high confidence that the models and simulations accurately predict BMDS performance. Moreover, the tests done to date have been developmental in nature, and do not provide sufficient realism for DOD’s test and evaluation Director to determine whether BMDS is suitable and effective for battle.¹²¹

The BMD system that is currently deployed in Alaska and California cannot be considered fully operational. Since 1999, tests of the United States BMD system have produced mixed results with only seven out of 12 tests resulting in a successful

¹¹⁹ “Riga Summit Declaration,” *North Atlantic Treaty Organization* (November 29, 2006): Paragraph 25. <http://www.nato.int/docu/pr/2006/p06-150e.htm>.

¹²⁰ “Bucharest Summit Declaration,” *North Atlantic Treaty Organization* (April 3, 2008): Paragraph 37. <http://www.nato.int/docu/pr/2008/p08-049e.html#missile>.

¹²¹ Paul Francis, “Assessment of DOD Efforts to Enhance Missile Defense Capabilities and Oversight,” (testimony before the Subcommittee on Defense, Committee on Appropriations, U.S. House of Representatives, Washington D.C., February 26, 2008), 1. Government Accountability Office report GAO-08-506T.

engagement.¹²² The United States plans to install a two stage version of the interceptor in Europe instead of the three stage interceptor that is being used in tests and that is currently deployed in Alaska and California.¹²³ According to some observers, the two stage version may be subject to additional uncertainties. However, Lieutenant General Henry Obering, the Director of the Missile Defense Agency, said in November 2008 that the two stage missiles are a “low-risk” version of the three-stage interceptors, with similar software and sensors.¹²⁴

Concern over the ability of the BMD system to perform as intended has led Congress to reduce funding for any European sites and to “set stringent conditions on future work.”¹²⁵ Several years of additional testing could yield a system that is considered fully reliable, and this would be significant for quieting skeptics on both sides of the Atlantic.

The potential “gaps” in protection for portions of southern Europe constitute an additional technical concern. Speaking on Alliance solidarity and the proposed BMD system, NATO Secretary General Jaap de Hoop Scheffer commented that, “In our Alliance, security is indivisible. And that is why, when it comes to missile defence, there simply cannot be an ‘A-league’ and a ‘B-league’ within NATO.”¹²⁶ The Allies stated in the Bucharest Summit Declaration that:

Bearing in mind the principle of the indivisibility of Allied security as well as NATO solidarity, we task the Council in Permanent Session to develop options for a comprehensive missile defence architecture to extend

¹²² “Ballistic Missile Defense Flight Record,” *Missile Defense Agency*.
<http://www.mda.mil/mdalink/pdf/testrecord.pdf>.

¹²³ Gustav Lindstrom, “Missile Defence in Europe- The Political and Security Dimensions.” *European Union Institute for Security Studies Policy Brief*, (February 2008).
[http://www.iss.europa.eu/index.php?id=18&no_cache=1&L=0&tx_ttnews\[tt_news\]=1036&tx_ttnews\[backPid\]=232&cHash=c63c5323ef](http://www.iss.europa.eu/index.php?id=18&no_cache=1&L=0&tx_ttnews[tt_news]=1036&tx_ttnews[backPid]=232&cHash=c63c5323ef).

¹²⁴ Henry Obering quoted in indirect discourse in Bill Gertz, “Inside the Ring,” *Washington Times*, November 13, 2008, B1.

¹²⁵ Martin Butcher and Nicola Butler, “Bucharest Summit: U.S. Missile Defense Bases Continue to Divide NATO,” *Disarmament Diplomacy*, No. 87(Spring 2008): 71.

¹²⁶ Jaap de Hoop Scheffer, “NATO and Missile Defense,” (Speech given at the American Institute of Aeronautics and Astronautics Multinational BMD Conference and Exhibition, Maastricht, the Netherlands, September 3, 2007.) <http://www.nato.int/docu/speech/2007/s070903a.html>.

coverage to all Allied territory and populations not otherwise covered by the United States system for review at our 2009 Summit, to inform any future political decision.¹²⁷

Some European observers contend that even if the southern European “gaps” were filled with TMD systems, this would not provide the same level of protection as that proposed for the rest of NATO Europe.

In comparison to TMD systems, the proposed BMD system is still several years away from becoming technically reliable. This is not to say that the technology does not exist, but that it has not been fully developed yet. As Alexander Bitter, a German expert, has written, “Since 2002 enormous progress has occurred in the USA in this field..the number of military experts and scientists who believe that the US plans are technically feasible is multiplying.”¹²⁸

In contrast with the BMD system, TMD systems have been employed successfully in combat, and new systems that have undergone extensive testing will be fielded within the next year. In comparison to the BMD test results, since 2002 there have been 22 upper tier TMD tests (17 Aegis and 5 THAAD) and 20 of them have resulted in successful engagements.¹²⁹ The BMD system is being deployed before the technology has been as fully proven as with TMD.

C. DECISION-MAKING FRAMEWORK OF BMD

As discussed in Chapter II, the decision-making framework regarding the procurement of TMD systems is relatively straightforward, in that the Allies that wish to procure TMD systems do so. Only the Alliance members that wish to bear the costs and benefits of TMD systems do so. This system of national level procurement also extends to BMD. “From NATO’s point of view it is no doubt regrettable that a major element of the defence of the European continent requiring the cooperation of three NATO allies is not more fully integrated into the Alliance – but that is by no means unusual.”¹³⁰

¹²⁷ “Bucharest Summit Declaration.”

¹²⁸ Bitter, 10.

¹²⁹ “Ballistic Missile Defense Flight Record.”

¹³⁰ Walter B. Slocombe, “Europe, Russia and American Missile Defence,” *Survival* 50: 2 (April 2008): 22.

However, to a greater degree than with TMD systems, the proposed BMD system will affect the Alliance as a whole, and all members will share in its benefits as well as its political costs and security risks, whatever their contribution level. It is for this reason that the decision making framework for BMD has become a contentious issue.

Most European governments express varying levels of support for the proposed BMD system. While some governments express concerns about the proposed U.S. BMD system, most acknowledge its potential benefits. Confirming this view is Paragraph 37 of the Bucharest Summit Declaration, where the Allies agreed to “recognise the substantial contribution to the protection of Allies from long-range ballistic missiles to be provided by the planned deployment of European-based United States missile defence assets.”¹³¹ The primary opposition to the proposed U.S. BMD system has come in the form of public opinion.

Prague and Warsaw have already agreed to host portions of the proposed U.S. BMD system. Polish government support for the proposed U.S. BMD system is strong as Prime Minister Donald Tusk’s Civic Platform party controls a majority of Senate seats and a near majority in the Sejm. While government support for the proposed U.S. BMD system is strong, public support is much lower. According to Polish Defense Minister Bogdan Klich, “About 15 percent of Poles would support the American installation of the shield in Poland, without any other contributions...But 50 percent would support such an installation if it contributed to the modernization of our armed forces.”¹³²

Support in the Czech Republic is much weaker because of the fragile coalition government assembled by Prime Minister Mirek Topolánek. While the Topolánek coalition supports the proposed U.S. BMD system now, low public support may force dissension with in the coalition. In the Czech Republic, public opinion polls indicate that only about 35% of Czechs support basing elements of the proposed U.S. BMD system on Czech soil.¹³³

¹³¹ “Bucharest Summit Declaration.”

¹³² Bogdan Klich quoted by Judy Dempsey, “Poland Wants U.S. to be Third Leg of its Security Plan,” *International Herald Tribune* (April 21, 2008). <http://www.ihf.com/articles/2008/04/21/europe/poland.php>.

¹³³ Andrew Thompson, “Czech Republic: Issues Under the Radar,” *International Relations and Security Network* (June 23, 2008). <http://www.isn.ethz.ch/isn/Current-Affairs/Security-Watch/Detail/?ots591=4888CAA0-B3DB-1461-98B9-E20E7B9C13D4&lng=en&id=57315>.

1. The U.S. Approach (Bilateralism)

The United States has a history of bilateral negotiations concerning BMD within the Alliance. The United States has long had agreements with the United Kingdom and Denmark (Greenland), where portions of its BMD system are located. Recently, the United States concluded several years of talks with formal agreements with the Czech Republic and Poland over the installation of the proposed BMD system. These agreements continue the pattern of Washington conducting bilateral BMD diplomacy outside the North Atlantic Council. However, since early 2007 the bilateral negotiations have received greater attention within the Alliance.

The primary reason why the United States sought bilateral agreements on the current BMD issues is that Washington did not want to subject its plans to decisions of the North Atlantic Council, and has been concerned about relinquishing command and control to NATO. The Bush Administration has viewed the BMD issue as crucial to national security. Therefore, Washington does not want its BMD plans to be subject to the consensus of the 26 member Alliance, where one member could veto a matter of U.S. national security.¹³⁴ While some officials in Washington may fear the loss of U.S. authority over command and control, historically this has rarely been the case.¹³⁵

Martin Butcher and Nicola Butler maintain that the U.S. administration made a diplomatic blunder in attempting to broker bilateral deals with certain Allies instead of making BMD decisions subject to consensus in the North Atlantic Council.¹³⁶ Speaking on American bilateral diplomacy, U.S. Representative Ellen Tauscher stated, “I have been concerned that the administration initially sought to bypass NATO on this issue and move forward on a bilateral basis with Poland and the Czech Republic. I thought this was a mistake and publicly voiced my concerns...sometimes it’s faster to work with a ‘coalition of the willing,’ but such coalitions usually don’t have strong foundations.”¹³⁷

¹³⁴ Green.

¹³⁵ Ellen Tauscher, “European Missile Defense: A Congressional Perspective,” *Arms Control Today* 37:8 (October 2007): 9-10.

¹³⁶ Butler and Butcher, 74.

¹³⁷ Tauscher, 9.

2. The European Approach (Through NATO/Multilateralism)

While NATO has traditionally relied on national efforts to develop and deploy BMD systems, the current debate has taken a tone different from that in previous BMD discussions, at least from the European perspective. While it is acknowledged that missile and WMD control regimes are not 100% effective, they are a less divisive means of dealing with the proliferation of such weapons than the pursuit of BMD.

According to Butler and Butcher, the American BMD system is “damaging European cohesion and security, bringing NATO-Russia relations to their lowest point since the end of the Cold War.”¹³⁸ Ambivalent European reactions to the proposed U.S. BMD system may stem in part from a fear that the United States is creating a security problem for Europe, because the European Allies did not request a BMD system, and the United States has been cautious about subjecting the decision making process to the North Atlantic Council.

In addition to the impact a BMD system might have on the Alliance as a whole, many of the factors that influence the decision making process for TMD systems may also influence the BMD decision making process. First, there is the issue of multilateral weapons development. As with TMD, the United States has a distinct set of priorities in developing a BMD system and the design of the system reflects those priorities. The United States prefers to develop BMD technology alone rather than via a joint development with Alliance members that have expressed interest. Additionally, some European members of the Alliance are showing interest in the creation of a European-developed BMD system. French President Nicolas Sarkozy, in a speech delivered on 17 June 2008, noted that “Europe and France are today more exposed. The task of ‘protecting’ the people and territory must thus be given priority...This is why we must develop advanced ballistic missile launch detection systems.”¹³⁹ It should be noted that President Sarkozy’s “defense” would consist of threatening to retaliate against the attacker, not intercepting the attacking missile.

¹³⁸ Butler and Butcher, 68.

¹³⁹ Nicolas Sarkozy, “On Defence and National Security (excerpts),” (speech given in Paris, France, June 17, 2008). http://www.ambafrance-uk.org/New-French-White-Paper-on-defence.html#sommaire_1.

Second, there is a large technology gap between the United States and the rest of the Allies which inhibits joint development of BMD. The technological advantage of the United States has influenced its strategic culture,¹⁴⁰ and the long-standing pattern has been for the United States to develop advanced military technologies on its own or with few foreign partners.

Finally, domestic economic interests play a large role in the BMD decision making process. As with TMD systems, the American defense companies that rely on the development and sale of missile defense technology wish to see their monopoly on such contracts continue. A multinational BMD project would mean diminished national profits as well as greater technology sharing – two prospects unlikely to appeal to most American companies. Addressing this issue, the 2008 French White Paper on Defence and National Security states:

France must retain its areas of [technical] sovereignty, concentrated on the capability necessary for the maintenance of the strategic and political autonomy of the nation: nuclear deterrence; ballistic missiles; SSNs; and cyber-security are amongst the priorities. As regards the other technologies and capacities that it may wish to acquire, France believes that the European framework must be privileged.¹⁴¹

The United States will probably continue to pursue bilateral arrangements for the deployment of its BMD system in Europe if it feels that working within the Alliance will not achieve satisfactory results. According to Bitter, “If the United States receive no positive signal from NATO, they will continue their programme bilaterally as they have done so far. The beginning of negotiations with Warsaw and Prague has led to considerable tensions in the North Atlantic Council.”¹⁴² If NATO does not become more deeply involved in the U.S. project, it will lose out on the setting up of the missile

¹⁴⁰ Wyn Rees and Richard J. Aldrich, “Contending Cultures of Counterterrorism: Transatlantic Divergence or Convergence?” *International Affairs* 81:5 (2005): 906.

¹⁴¹ 2008 French White Paper on Defence and National Security, Section 2, Paragraph 13. http://www.ambafrance-ca.org/IMG/pdf/Livre_blanco_Press_kit_english_version.pdf.

¹⁴² Bitter, 10.

defense architecture which the Americans are largely paying for; and a “central aspect of the transatlantic security architecture would be dealt with outside the alliance instead of inside it.”¹⁴³

D. COSTS AND THE EFFECTS THAT BMD MIGHT HAVE ON THE SECURITY STATUS QUO

One of the largest European concerns over the proposed BMD system is the unknown effects it will have on the existing security status quo. According to Colin Gray, European fears about the U.S. BMD system revolve around three potential effects that the BMD system could have on the international system and nonproliferation regimes.¹⁴⁴ First, the American pursuit of a BMD system could diminish confidence in the existing forms of deterrence. Second, Europeans are concerned that a BMD system could reduce confidence in existing security systems, hurt current nonproliferation efforts, and result in less attention to “the broad gauged policy effort that is required to bolster and advance the global non-proliferation regime.”¹⁴⁵ Finally, Europeans have expressed concern that a BMD system could undermine strategic stability by leading to an arms race.

The traditional view of deterrence relies heavily on the threat of retaliation to deter potential adversaries. During the Cold War, the Alliance relied heavily on U.S. nuclear forces for deterrence. The European fear is that the United States has embarked on its BMD system because of its reduced confidence in deterrence based on threats of nuclear retaliation.¹⁴⁶ However, European anxieties about the change in Washington’s views on deterrence may be misplaced.

First, the Cold War era style of deterrence is not suited to today’s strategic environment, which is characterized by diverse regional threats instead of a bipolar hegemonic system.¹⁴⁷ U.S. deterrence policies since the end of the Cold War have

¹⁴³ Bitter, 10.

¹⁴⁴ Gray, 299.

¹⁴⁵ Ibid.

¹⁴⁶ Gray, 299.

¹⁴⁷ Wyn Bowen, “Missile Defense and the Transatlantic Security Relationship,” *International Affairs* 77:3 (2001): 499.

placed greater emphasis on deterrence by denial in order to meet today's threats. The BMD system would deter potential adversaries from acquiring missile technology by rendering it ineffective. Additionally, should an adversary still acquire long range missiles, a BMD system could provide a certain level of defence. Second, the proposed BMD system would actually decrease the threat of an outbreak of nuclear conflict by providing the Alliance with a form of deterrence that is based on active defense (deterrence by denial) instead of retaliation.¹⁴⁸

The view that the BMD system could undermine the existing security system and hurt nonproliferation efforts is rooted in a bipolar conception of the international system that is reminiscent of the era when the world was divided between NATO and the Warsaw Pact. Again, regional conflicts and regional powers have replaced the bipolar international system. Each state has to be dealt with on a case by case basis with much less predictable results. The current mainstream European position might be characterized as based 20 years in the past while the U.S. position looks 20 years into the future. Friction occurs between the two as many Europeans do not see a missile threat emerging until well after 2015 while many Americans believe that the threat will develop sooner rather than later.

Strategic culture also influences the different views on the potential impacts of a BMD system on the security system and nonproliferation efforts. According to Joanna Spear, an expert at George Washington University, "European activism on proliferation issues (such as it is) is directed toward improving the performance of the various arms control regimes rather than finding substitutes for them."¹⁴⁹ Many Europeans would prefer to maintain the status quo by way of small adjustments and arms control and nonproliferation regimes.

Europeans tend to place even greater emphasis than Americans on non-proliferation regimes as an essential part of controlling the spread of missile and WMD technology. Joanna Spear has underlined the lack of European cohesiveness:

¹⁴⁸ Ferguson, 163.

¹⁴⁹ Spear, 204.

Just as there are divisions between the United States and Europe, there is no united Europe on proliferation issues. The states of the European Union (EU) have different geostrategic outlooks and preoccupations. Although there are some common concerns, perceptions of the severity of the various proliferation threats differ. The most extreme cleavage is between neutral states and nuclear states.¹⁵⁰

As previously mentioned, Europeans generally do not feel as vulnerable as Americans to “rogue state” proliferation threats. As a result, they believe that these “rogue states” can be dealt with through diplomacy or political or economic pressure.¹⁵¹ “Fundamentally, for Europeans the crux of the proliferation issue is the health of the various nonproliferation regimes...European efforts primarily go into reducing threats by making the multilateral regimes function more effectively, rejecting the apparent U.S. assumption that such regimes are beyond repair.”¹⁵²

The widespread European fear is that the U.S. BMD system could undermine international security by destabilizing a system of arms control that had been working “well enough.” The Russian opposition to the proposed BMD system “has been playing on European concerns about strategic stability, the future of arms control, and arms racing.”¹⁵³

According to Colin Gray, “Europeans are fearful that America’s foes, unable or unwilling to compete directly (offensively or defensively) with a homeland BMD deployment, will instead disseminate missile technology, and perhaps complete systems, to potential ‘rogues.’”¹⁵⁴ This view may have merit. As Dennis Gormley has noted, the spread in cruise missile technology may be stimulated by American TMD and BMD

¹⁵⁰ Spear, 205.

¹⁵¹ Gray, 300.

¹⁵² Spear, 206.

¹⁵³ Ferguson, 168.

¹⁵⁴ Gray, 300.

efforts.¹⁵⁵ “Knowing that defences are not nearly as effective against LACMs as they are against ballistic missiles, some states, including China, Pakistan and Iran, are now developing LACMs to complement their ballistic-missile arsenals.”¹⁵⁶

As noted in Chapter II, because of the spread of WMD and missile technology, TMD systems already have the potential to affect the security status quo in significant ways. Both TMD and BMD will have numerous effects on the international security system and nonproliferation regimes. However, it is likely that the effects of U.S. BMD and U.S. and NATO TMD will be positive as they will provide the Alliance with another form of deterrence and additional flexibility when conducting diplomacy. A new type of deterrence is needed to deal with smaller regional actors and states that are considered to be “rogues” as the threat of nuclear retaliation may not be sufficient to deter regional aggression. A BMD system would strengthen existing arms control and nonproliferation regimes by decreasing the benefits of acquiring missile technology and increasing the incentives to participate in such regimes. Finally, the potential for a BMD system to spur a new arms race may come to fruition through the proliferation of LACMs. While modern U.S. TMD systems offer a level of increased protection against LACMs, this is not sufficient to stop the proliferation of LACM technology. The proliferation in LACM technology can be partially attributed to the weak state of control regimes for LACMs. As Dennis Gormley has observed,

Faulty non-proliferation policies need urgent attention. The second-class treatment of cruise missiles will not change until the Hague Code gives the same normative status to ballistic and cruise missiles. A more progressive approach to addressing missile proliferation within the Missile Technology Control Regime is also required to curb the LACM epidemic.¹⁵⁷

¹⁵⁵ Dennis M. Gormley, “Missile Contagion,” *Survival* 50:4 (August/September 2008): 138.

¹⁵⁶ Gormley, 138.

¹⁵⁷ *Ibid.*, 149.

E. DIALOGUE AND COOPERATION WITH RUSSIA AS IT PERTAINS TO BMD

The most vocal opposition from outside the Alliance to the proposed BMD system has come from Russia. The Russian reaction to the proposed BMD system can best be described as schizophrenic. Moscow's primary objection to the proposed U.S. BMD system is that it will pose a threat to Russia. Secretary of Defense Robert Gates argues that the proposed U.S. BMD system would not be able to defeat any missile originating from Russia. Gates has added that "the geometry that is involved makes it impossible for these...missile defense interceptors to be used against Russian missiles to start with...[T]he notion that the Russian arsenal is any way put in jeopardy, by 10 interceptors, I think, is laughable."¹⁵⁸

The United States has made continued efforts to address Russian fears of the proposed European elements of the U.S. BMD system. The first step for the installation of the BMD system in Europe was the U.S. withdrawal from the ABM Treaty. In 2002 this withdrawal took effect without arousing much Russian opposition. In fact, at the time some analysts even believed that Russia welcomed the U.S. plans to build the BMD system as it would provide a chance for cooperation and the creation of new military and business links to NATO.¹⁵⁹

Since 2002, Russian opposition to the U.S. plan has steadily increased, and it appears to have intensified since early 2007. In an attempt to derail U.S.-Polish negotiations, Russian officials announced that they would place a large number of medium range missiles in Belarus and Kaliningrad to counter the U.S. missile sites in Poland.¹⁶⁰ Henryk Szlajfer, a Polish expert, assesses Russian motives and goals as follows:

¹⁵⁸ Robert Gates, "Nuclear Weapons and Deterrence in the 21st Century," (speech given at the Carnegie Endowment for International Peace, Washington D.C., October 28, 2008), <http://carnegieendowment.org/events/index.cfm?fa=eventDetail&id=1202&&prog=zgp>.

¹⁵⁹ Andrei Shoumikhin, "Evolving Russian Perspectives on Missile Defense: The Emerging Accommodation," *Comparative Strategy* 21 (2002): 332.

¹⁶⁰ Radoslaw Sikorski, Interviewed by Izabela Leszczyńska. *Dziennik*. May 3, 2007, Translation by Polish News Bulletin of the British and American Embassies.

The Russians, for example, seem to understand the quintessence of Missile Defence correctly, and consider the American plans with calm. Notwithstanding occasional expressions of “concern,” which fluctuates depending on the general situation in Polish-Russian relations, this concerns the possible deployment of the system elements on the territory of Poland just as well. Incidentally, we know precious little about their own missile development plans. We know more about their TMD systems. What we do know, however, is that the US’s withdrawal from the ABM treaty, which obstructed the development of new active anti-missile defence technologies, generated but a feeble protest on their part. Also, it is by no means insignificant that the US authorities quite regularly inform Russia about their plans to develop and deploy missile defence. The occasional “rumblings” coming from the Kremlin are thus given with other goals in mind. Hence, the opinions sometimes encountered in Poland, which link the missile defence issue with the repelling of a possible threat from Russia, are not well-founded.¹⁶¹

Former U.S. ambassador to the United Nations John Bolton contends that “Russia's threats against Poland are aimed at intimidating Western Europe.”¹⁶² By playing on European concerns about strategic stability and arms control, Russia has been able to place a wedge in the Alliance over the missile defense issue.¹⁶³ According to Walter Slocombe, “The view in Washington, and in Central Europe, is that Russia cannot be permitted to assert a right to veto security cooperation between the United States and sovereign countries, especially when the cooperation poses no threat to Russian security.”¹⁶⁴

While NATO has already engaged in cooperation with Russia in TMD efforts, cooperation with Russia in BMD efforts would present another set of challenges to overcome. One of the largest obstacles to Russian cooperation with regard to BMD is that locations in Russia are not suitable for the U.S. BMD system, which is designed to protect North America and most of Europe from attacks originating in the Middle East.

¹⁶¹ Henryk Szlajfer, “The USA and the European Family,” *The Polish Quarterly of International Affairs* 4 (2006): 23.

¹⁶² John Bolton, “Russia Unromanticized,” *The Washington Post*, October 20, 2008, A15.

¹⁶³ Ferguson, 168.

¹⁶⁴ Slocombe, 21.

Additionally, the usual problems associated with joint projects would arise. Restrictions on information and technology transfers, as well as interoperability issues, would present problems, for example.

In spite of the potential issues that could inhibit cooperation with Russia on BMD efforts, Secretary Gates has outlined American efforts as follows:

[W]e have gone a long way toward providing the necessary assurances, to Russia, that this system is not aimed at them but is aimed at a very limited threat coming from Iran. And we have made a number of proposals to them, to provide them that reassurance, including having their representatives at both sites, in the Czech Republic and in Poland...[W]e have offered transparency in a variety of ways...[T]he Russian military has shown some interest in this. But I think for political reasons, the Russians have chosen to make an issue of it.¹⁶⁵

Many agree that the best way to assuage Russian fears and quiet Moscow's opposition might be through the incorporation of Russia into BMD efforts. The Russian motivation to participate in BMD efforts might be similar to Moscow's desire to participate in TMD efforts. "Russian aerospace, defense, and other firms have evinced a long-standing interest in such collaboration—and have persistently overestimated U.S. interest."¹⁶⁶ Despite the qualified American interest in giving Russia a significant role in U.S. BMD activities, incorporating Moscow into the BMD process might help to reduce the tension that has built up over the past two years.¹⁶⁷

¹⁶⁵ Gates.

¹⁶⁶ Richard Weitz, "Russian-American Security Cooperation After St. Petersburg: Challenges and Opportunities," *Strategic Studies Institute of the U.S. Army War College* (April 2007): 13. <http://www.strategicstudiesinstitute.army.mil/pubs/display.cfm?PubID=775>.

¹⁶⁷ Gormley, 149.

IV. CONCLUSION

TMD of forward deployed troops is the type of missile defense associated with the least amount of discord within the Alliance. TMD is an acceptable form of missile defense because the Allies agree on the threat, the technological capabilities exist to defeat the threat, the decision making framework for the procurement of TMD systems is well established, and TMD cooperation activities with Russia have not caused controversy. However, as discussed in Chapter II, TMD systems do have the potential to disrupt the security status quo; and this is one of the major arguments against a BMD system.

BMD for the protection of NATO territory, forces and population centers is an area in which the United States and NATO appear to be taking divergent paths. As discussed in Chapter III, the United States and its NATO Allies disagree over the threat, the political and strategic necessity to counter long range ballistic missile threats via active defenses, and the decision making framework for the procurement of a BMD system. Cooperation with Russia over the proposed BMD system – and, indeed, Russian opposition to U.S. BMD deployment plans in Europe – have become an issue dividing the Allies.

A. SUMMARY

Of the five factors examined that could explain the divergence in BMD policy, the decision making process regarding the procurement of BMD systems and cooperation with Russia are the primary reasons that explain the divergent positions on BMD. The economic benefits of participation in a BMD system appear to be a large incentive in the decision making process regarding the procurement of a BMD system. Russia continues to place a wedge in the Alliance over its objection to the proposed U.S. BMD system and European governments are very sensitive to these concerns. The threat assessment, technical uncertainties, and possible effects that a BMD could have on the status quo are not sufficient to explain the transatlantic divide over BMD policy.

The threat assessment is the first step towards the creation of a missile defense system because the threat provides the impetus for action. As it relates to TMD, there is a proven threat to the Alliance as SRBM, MRBM, and IRBM technology is widespread and has been used in combat on numerous occasions. The threat has provided the justification for the development and acquisition of TMD systems.

The threat assessment for BMD differs sharply from that for TMD as few countries have developed ICBM technology, and no ICBM has ever been launched in aggression. Therefore, the disagreement within the Alliance over the BMD threat appears to have several different aspects.

First, the disagreement is over timing; it is not a matter of whether an ICBM threat will emerge, but of when it will emerge. From a European perspective, the emergence of an ICBM threat is not as imminent as in U.S. assessments. Moreover, many Europeans hold, when this threat emerges is when it will be time to consider whether to deploy a BMD system. Even in the presence of Iranian ICBMs, some Europeans might well argue that state capabilities do not equal intentions. From the perspective of the United States, waiting until an ICBM threat has emerged to deploy a BMD system would be imprudent as several potentially threatening states are continuing to develop ICBM technology, and their intentions may well be – or could rapidly become – hostile.

Second, the divergent threat perception is partially influenced by differing judgments of the effect that a BMD system could have on Alliance efforts concerning arms control and nonproliferation regimes. Would a BMD system help or hinder WMD nonproliferation efforts? Governments on both sides of the Atlantic agree that WMD proliferation is a serious threat, that there is a correlation between WMD proliferation and ballistic missile proliferation, and that to limit one is to reduce the effectiveness of the other. From a European perspective, a BMD system could have unintended negative effects on WMD nonproliferation efforts – for example, encouraging adversaries to seek non-ballistic means of attack, such as terrorist agents. From the perspective of the United States, a BMD system would enhance existing arms control and nonproliferation regimes by increasing the incentive for regional states to participate in such regimes and

discouraging the acquisition of ballistic missiles. Additionally, a BMD system could add a layer of security should these regimes fail. Finally, the United States and its European Allies view different states as potential threats. While all NATO Allies agree that Iran will possess long range missile technology in the future, North Korea is not viewed as a potential threat in the near to medium term by European governments and Pakistan is not viewed as a potential threat by the United States.

Despite the disagreement over certain aspects of threat assessment, the view on both sides of the Atlantic is that the threat will exist at some time in the future and that a BMD system should be strongly considered to defend against this threat. Many European observers acknowledge that Iran will possess MRBMs capable of striking most of Europe in the not to distant future and that this threat that cannot be ignored. It is for these reasons that the differing threat assessments cannot explain the divergence in BMD policy.

TMD systems present fewer technical uncertainties than the proposed U.S. BMD system for several reasons. First, TMD technology has been continuously developed over the past 50 years. While BMD test and development activities also have a long history, the first test of the U.S. BMD system proposed for deployment in Europe occurred in 1999.¹⁶⁸ Second, it is technically easier to design a TMD system than a BMD system because of numerous factors, such as reduced radar detection range, reduced protection footprint, and less complicated interceptors. Third, the development of TMD was necessary to protect forward deployed troops from a demonstrated threat. Alliance members had no choice but to develop TMD after the 1990-1991 Iraq War, in which TMD was ineffective against Iraqi ballistic missiles that caused numerous coalition casualties. Finally, because relatively few technical uncertainties are associated with TMD, cost considerations are less significant than with BMD; and this encourages multilateral efforts such as SAMP/T and MEADS.

¹⁶⁸ “Ballistic Missile Defense Flight Record,” *Missile Defense Agency*.
<http://www.mda.mil/mdalink/pdf/testrecord.pdf>.

In a situation that is comparable to that with the divergent BMD threat assessments, the technical uncertainties associated with BMD can be primarily attributed to time factors. As noted in Chapter III, the Missile Defence Feasibility Study (MD-FS), which was initiated at the 2002 Prague Summit, concluded, as the Allies noted at the 2006 Riga Summit, that “missile defence is technically feasible within the limitations and assumptions of the study.”¹⁶⁹ While NATO member governments on both sides of the Atlantic believe that BMD is technically feasible in the future, there are reservations about the proposed BMD system capabilities available today. Europeans are skeptical about the deployment of a system that, in their view, cannot today be considered fully reliable; and Congress has restricted funding for deployment until the system has achieved a higher level of demonstrated reliability.

Moreover, the fact remains that the proposed U.S. BMD system would leave portions of southeastern NATO Europe unprotected, especially from threats originating from Middle Eastern states. The deployment of a capable TMD architecture consisting of Aegis BMD, THAAD and Patriot linked together via NATO’s ALTBMD might not provide the same level of protection as that proposed for the rest of NATO Europe against long-range ballistic missile threats. However, the NATO countries in southeastern Europe might be at greater risk from shorter-range missiles than from ICBMs.

The technical uncertainties regarding the proposed U.S. BMD system are not sufficient to explain the divergence in BMD policy. As previously noted, the MDFS concluded that missile defense is possible with current technology. While portions of southeastern NATO Europe would not be protected by the proposed U.S. BMD system, this is actually a benefit to these Alliance members. Proven TMD systems would have to be deployed to the region to protect those Alliance members. Patriot, Aegis BMD, and THAAD are considered more reliable, better suited to engage shorter range threats (such as SRBMs, MRBMs, and IRBMs), and they both offer greater flexibility than the proposed BMD system.

¹⁶⁹ “Riga Summit Declaration,” *North Atlantic Treaty Organization* (November 29, 2006): Paragraph 25. <http://www.nato.int/docu/pr/2006/p06-150e.htm>.

The decision making frameworks regarding the procurement of TMD and BMD systems are similar in that in each case NATO relies on national efforts to provide the Alliance with missile defense assets. As a result, the Alliance members that are willing to bear the financial costs to develop or purchase missile defense systems are the only ones to do so.¹⁷⁰ Domestic economic pressures – including defense industries, technology firms, and labor unions – are strong factors in the decision to develop missile defense systems. As the technical uncertainties decrease, the number of Alliance members pursuing national missile defense projects may increase.

The key difference between the decision making process for TMD and that for BMD is that BMD has the potential to affect the Alliance as a whole, regardless of an individual Ally's desires. With TMD systems, only the Allies that wish to participate are affected in specific situations by operations involving TMD assets. In contrast, a successful engagement by the proposed BMD system might produce debris that could fall on the soil of Alliance members that opposed the acquisition (or use) of the BMD system and that would nonetheless be affected by it.

The Missile Defense Agency has addressed this concern by stating that three factors combine to virtually eliminate debris. First, the kinetic kill interceptor impacts the ballistic missile with a closing velocity of over 7km per second and the “[r]esulting kinetic energy vaporizes much of the reentry vehicle, warhead, and kill vehicle.”¹⁷¹ Second, engagements occur at an altitude of 200km, which means that the debris that is not destroyed by the intercept will most likely be burned up upon reentry into the earth's atmosphere. Finally, “flight tests have shown that very little debris reaches the earth – pieces average no more than 21 cm long.”¹⁷²

The decision making framework is one of the two reasons that could explain the divergent BMD policies. As noted previously, European defense industries, technology firms, and labor unions are very interested in playing a greater role in the development of

¹⁷⁰ NATO's ALTBMD project is an exception, in that it is a commonly funded endeavor, with a high level of participation by Allies. ALTBMD will offer a means to link national TMD systems.

¹⁷¹ “Proposed U.S. Missile Defense Assets in Europe,” Missile Defense Agency. <http://www.mda.mil/mdalink/pdf/euroassets.pdf>.

¹⁷² Ibid.

military systems, especially missile defense systems. The economic benefits of developing a missile defense system appear to exert a strong influence on the level of support a government shows for the proposed BMD system. As previously noted, French, Polish, and Russian officials have commented on the willingness of their governments to support a BMD system if their countries had a greater economic stake in the project.

The effects that TMD and BMD could have on the security status quo are comparable in some ways. The proliferation of missile and WMD technology and the shift from an international system characterized by the bipolar stalemate of the Cold War era to one dominated by regional conflicts between regional powers mean that shorter range ballistic missiles now constitute strategic security threats for states within range of these missiles. During the Cold War the United States and the Soviet Union were mainly concerned with each other's ICBMs and SLBMs, and defenses against strategic ballistic missile threats were constrained by the 1972 ABM Treaty. As noted in Chapter II, Iran can threaten several Alliance members with WMD-armed SRBMs and MRBMs. The European fear that a BMD system could lead to an arms race, undermine existing forms of deterrence, or reduce confidence in existing arms control and nonproliferation regimes ignores the fact that TMD has not led to any of these problems while virtually nullifying the strategic arsenals of regional powers armed with SRBMs and MRBMs. It is for this reason that the possible effects a BMD system may have on the security status quo are not sufficient to explain the divergent BMD policies.

TMD and BMD cooperation as it pertains to Russia sees the Allies dealing with Russia in different capacities. Through the NATO-Russia Council, NATO is the primary interlocutor when it comes to TMD cooperation with Russia; and Russia has regularly participated in NATO TMD exercises. The United States is the primary interlocutor with Russia on BMD issues. Russia continues to oppose the proposed deployment of the U.S. BMD system in Europe, and Russia's objections have created problems within the Alliance despite Washington's efforts to broker an acceptable deal with Moscow.

In addition to the decision making process regarding the procurement of a BMD system, Russian opposition to the proposed U.S. BMD system explains the divergence in BMD policy. Geopolitics, geoeconomics, and proximity to Russia make Europeans more sensitive to Russian objections. The view from Washington is that Moscow is intentionally attempting to place a wedge in the Alliance over the BMD issue. While this may be the case, the fact remains that, from the European perspective, Moscow's objections must be dealt with.

B. POLICY RECOMMENDATIONS

As previously mentioned, three factors seem to form the foundation of the disagreement within the Alliance over the proposed U.S. BMD system. Differences regarding threat assessments, the political and strategic necessity of BMD to counter long-range missile threats, and the decision making process involved in procuring a BMD system are posing significant obstacles for the Alliance. In order for the Alliance to move forward regarding the proposed U.S. BMD system, a stronger consensus must be reached on at least two of the three major issues.

1. Washington should encourage dialogue with fewer preconditions with WMD and missile proliferants.

The divergent threat assessments reflect disagreements over the speed at which regional powers are developing ICBM technology, the possible effects that a BMD system could have on arms control and nonproliferation regimes, and the threat posed by regional powers. These differing perceptions will probably persist as they are difficult to reconcile and derive from differences in judgment about controversial issues. However, NATO governments on both sides of the Atlantic agree that ballistic missiles are a primary delivery vehicle for WMD, and this agreement should be the basis for formulating a consensus on threat assessment. The United States and its NATO Allies might play a greater role in promoting support for WMD nonproliferation and arms control regimes by agreeing to less stringent requirements for nuclear discussions with Pyongyang and Tehran.

In exchange for an increased American commitment to less restrictive dialogue with WMD and missile proliferants, the Alliance could reconfirm its support for the installation of the U.S. BMD system in Europe. The BMD system could strengthen arms control and nonproliferation regimes. The BMD system could increase the incentive for regional powers to negotiate by decreasing the payoff of acquiring missile technology. Moreover, the proposed BMD system could provide a level of protection should negotiations fail.

2. Washington should offer to deploy a TMD architecture to southeastern NATO Europe before the deployment of the proposed BMD system in Poland and the Czech Republic.

The technical uncertainties of the proposed BMD system are straightforward in that, European observers hold, it has not yet demonstrated a high level of operational effectiveness and leaves portions of southeastern NATO Europe exposed. As noted previously, there is a consensus within the Alliance that BMD is technically feasible and within U.S. capabilities to produce. However, the proposed system is not yet regarded by European Allied observers as fully reliable, and it is not known if its reliability will have been fully demonstrated by the proposed 2011 deployment date. This is one of the primary reservations expressed by European and American critics of the proposed BMD deployment in Europe. Since the deployment of the system is a politically contentious issue and there are continuing disagreements on certain threat assessments, critics argue that the system's technical reliability must be demonstrated before it can be deployed. It would be much easier to persuade the Allies about the system's merits in the absence of full consensus regarding a common threat if the system's technical reliability had been convincingly demonstrated. Washington projects that Iran will develop missiles capable of striking most of Europe by 2015, and this timeline allows the United States and its NATO Allies more time for BMD development. Moreover, critics note, delaying BMD deployment would allow more time for arms control and nonproliferation regimes to operate.

As noted in Chapter II, because of the proximity of southeastern European Allies to the Middle East, a BMD system would not be able to protect them from long-range missile threats. Threats to these Allies originating from the Middle East would have to be

of a shorter range variety. IRBMs and ICBMs could not be used. This means that the ballistic missile threat posed to southeastern NATO Europe is only from MRBMs and SRBMs. In order to protect this region, a missile defense architecture consisting of lower and upper TMD systems would have to be deployed. Since the TMD systems are considered fully reliable and the TMD threat currently exists, the United States should propose that a TMD plan be established and implemented for the region before the deployment of the U.S. BMD system. This would be a perfect opportunity for the implementation of NATO's ALTBMD and could facilitate Allied cooperation at the TMD level, which might also promote cooperation at the BMD level.

3. The BMD system would have an effect on the Alliance as a whole, and therefore Washington should encourage Allied participation in the development, testing, and fielding of the BMD system.

The decision-making framework for BMD is different from that for TMD in that a BMD system has the potential to affect the Alliance as a whole, not just the states that participate in the system and in operations involving TMD. This “group” effect combined with the rising pressures of domestic industries means that Washington should find ways to involve European governments and industries in BMD development and procurement. It is difficult to win support for a politically unpopular plan when there is little domestic pressure on European governments to accept it.

4. Washington should emphasize the fact that TMD systems have not altered the security status quo while performing the strategic defense function envisaged for the proposed BMD system.

From the perspective of some European observers, the possible undesirable effects that a BMD system could have on the security status quo – above all, in provoking negative Russian reactions – are excessive in relation to the probable benefits of deploying a BMD system. Moreover, critics contend that the pursuit of BMD neglects the shift in the international system from the bipolar stalemate of the Cold War to today's system, which is dominated by regional security threats. TMD systems have already

created a security dilemma for regional powers contemplating the pursuit of shorter-range ballistic missiles, because to some extent these strategic capabilities have already been nullified by TMD.

5. Washington should maintain its current offers to Moscow of transparency and cooperation while striving to enhance Alliance solidarity in the face of Russian opposition.

The split cooperation with Russia, with NATO being the primary TMD interlocutor and the United States being the primary BMD interlocutor, is not achieving results that are satisfactory to Russia, the United States, or the European members of the Alliance. U.S. and Allied efforts to include and negotiate with Russia over BMD issues have been exemplary. However, Moscow continues to create tension within the Alliance through its opposition to the proposed U.S. BMD system. Despite the fact that Washington, Prague, and Warsaw have agreed to allow Russian observers at the proposed U.S. BMD system locations under specified conditions, Moscow continues to press for more concessions. It appears that Moscow is pushing for a joint project. In April 2008, Russian Foreign Minister Sergei Lavrov commented, "We are convinced that the best way to assuage Russia's concerns . . . will be to abandon such plans and turn to a truly collective project."¹⁷³

It is likely that the Russian opposition will not change, so the United States should take measures to change Allied perceptions of this opposition. By increasing Alliance involvement and solidarity on the BMD system, the United States and its Allies can change how the Russian opposition is perceived by European public opinion.

Finally, Russian objections may or may not be quelled. Washington could take Moscow up on its offer to use the Azerbaijan radar site without incurring significant additional economic cost. At the very least, an early warning radar could be established at this location or at another location acceptable to Moscow. This might enable Moscow to feel that it is participating in collaboration and not being subjected to a unilateral deal.

¹⁷³ Sergei Lavrov quoted by Richard Weitz, "Russian Missile Defense Dispute," *World Politics Review* (April 7, 2008). <http://www.worldpoliticsreview.com/article.aspx?id=1904>.

The long-range ballistic missile threat will emerge at a date in the not too distant future. The proposed U.S. BMD system is highly capable, but many European observers maintain that it has not yet been demonstrated to be fully reliable. Since the threat is continuing to mature, the United States should sustain efforts to develop and improve its BMD system. In the mean time, because southeastern Europe is already threatened, the United States should install a TMD system. This would show the U.S. commitment to missile defense to the NATO European Allies and to regional powers pursuing long-range ballistic missiles.

The United States has to include the Alliance in key BMD decisions, as with the North Atlantic Council decisions at Prague (2002), Riga (2006), and Bucharest (2008). Because the project has implications for all the Allies, it must involve collective decision-making. An increased role for European governments and industries may change European perspectives. Washington might be able to generate support from European governments through the incorporation of European industries in BMD endeavors.

To address European fears that the BMD system might disrupt the security status quo, Washington should point out that TMD systems have not destabilized the security of the Allies while performing the same strategic function – protection of territory and population centers, as well as deployed forces – against shorter-range missiles.

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