Extended Deterrence and Allied Assurance: Key Concepts and Current Challenges for U.S. Policy

Justin V. Anderson and Jeffrey A. Larsen
with
Polly M. Holdorf

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FOREWORD

We are pleased to publish this sixty-ninth volume in the Occasional Paper series of the United States Air Force Institute for National Security Studies (INSS). This study was sponsored and released by the United States Government and conducted by a team from the Science Applications International Corporation (SAIC). While this research was not sponsored by INSS, it is both compatible with our efforts and objectives, and its authors are associated with INSS in other aspects of their positions. It is published here to support the strategic education of national security professionals in the Air Force and across the government.

INSS Occasional Papers are currently published electronically and in limited numbers of hard copies specifically to support classroom use for strategic education. Other INSS research is published exclusively electronically as "Research Papers" or "Strategic Papers" for general national security education and to inform the security policy debate.

INSS found this study to be particularly significant because of its focus on an important topic that has been receiving attention from across the United States and allied governments over the past four to five years, yet it is little understood outside of the government strategic policy communities. INSS completed its own three-year series of workshops and studies on this topic and the current strategic implications changes here are presenting to the US Air Force. We hope that the study published here provides deeper and broader understanding, and that it contributes to the ongoing discussion in this policy arena.

About the Institute

INSS is primarily sponsored by the Strategic Plans and Policy Division, Headquarters US Air Force (HQ USAF/A5XP), and the Dean of the Faculty, USAF Academy. The mission of the Institute is "to promote national security research for the Department of Defense within the military academic community, to foster the development of strategic perspective within the United States Armed Forces, and to support national security discourse through outreach and education." Its research focuses on the areas of greatest interest to our sponsors: enduring and emerging strategic security issues, controlling and combating weapons of mass destruction, and 21st century air, space, and cyber conflict.

INSS coordinates and focuses outside thinking in various disciplines and across the military services to develop new ideas for defense policy making. To that end, the Institute develops topics, selects researchers from within the military academic community, and administers sponsored research. It reaches out to and partners with education and research organizations across and beyond the military academic community to bring broad focus to issues of national security interest. And it hosts workshops and facilitates the

dissemination of information to a wide range of private and government organizations. In these ways, INSS facilitates valuable, cost-effective research to meet the needs of our sponsors. We appreciate your continued interest in INSS and our research products.

JAMES M SMITH
Director

EXECUTIVE SUMMARY

The United States provides extended deterrence and assurance guarantees in vital strategic regions across the globe to protect U.S. allies and friends from intimidation, coercion, or attack. These guarantees currently play a central role in maintaining regional stability and strongly influence the national security strategies of both allies and adversaries. From the Asia-Pacific to Europe, however, these guarantees – and the military strategies and capabilities that support them – are showing signs of strain. Decisions and actions in the near-term are critically important to determining whether these commitments remain firm or begin to crack under the pressure of adversary capabilities, allied anxieties, and resource constraints.

This paper provides a conceptual framework for the strategic concepts of extended deterrence and allied assurance and an overview of the key issues and current challenges faced by the U.S. strategists and planners responsible for developing and implementing these concepts across the globe.

Deterrence and Extended Deterrence

The strategic concept of deterrence involves the protection of the U.S. homeland, its national interests, and its freedom of action by convincing a potential adversary that any attempt to attack the United States will prompt a response imposing unacceptable costs against it and/or denying the realization of the objectives it seeks. Deterrence exists in the eye of the beholder; it is an effort to persuade a foreign actor at the psychological level that the United States has both the military capability and the political resolve to carry out its threatened response. The effective exercise of deterrence strategies prevents adversaries from implementing courses of action detrimental to U.S. national security.

The United States has long recognized, however, that its own security is closely linked with the safety and security of its allies around the world. As a result, in addition to taking steps to deter attacks against the United States, U.S. leaders have also sought to protect America's friends by extending deterrence against their potential adversaries. This extension of deterrence over U.S. allies and partners has often led to the use of an "umbrella" or "shield" analogy to describe policies or strategies protecting U.S. allies from hostile third parties.

A U.S. extended deterrence guarantee to a foreign ally or partner is likely to significantly impact the plans and strategies of that ally's enemies, who are forced to calculate the potential costs of the United States intervening if they precipitate a crisis or conflict. The corollary to the U.S. extension of deterrence against these adversaries is the assurance such a commitment brings to the ally. In addition to strengthening ties between the

United States and the ally in question, an extended deterrence guarantee can also have the ancillary effect of contributing to U.S. nonproliferation goals by convincing an allied government it does not need to develop weapons of mass destruction (WMD) to counter an adversary equipped with nuclear, biological, or chemical weapons. By simultaneously implementing assurance strategies focused on allies and extended deterrence strategies focused on potential adversaries, the United States acts as the key security provider and central power broker in important regions around the world, ensuring its policies serve as a bulwark against geopolitical instability and armed conflict.

The effectiveness of these strategies relies on the careful orchestration of the full spectrum of geopolitical and military resources available to the United States. Simultaneously assuring allies and deterring their enemies requires nimble diplomacy, strong relationships with allied political and military leaders, well-equipped armed forces, and the consistent demonstration of the United States' steadfast commitment to accept risks and, if necessary, bear costs, in order to protect its allies across the globe. Extended deterrence and assurance strategies thus represent political-military frameworks whose maintenance depends on the close coordination of decision-makers, diplomats, intelligence officials, defense strategists, and military planners. The scope of the task reflects the central importance of these strategies to international peace and security, and leads to constant scrutiny by foreign parties – both adversary and allied – of U.S. extended deterrence and assurance commitments in order to determine whether they show any signs of weakness or fatigue.

Bedrock Security Commitments and Flexible Strategies

Allies placing their trust in U.S. defense guarantees must believe the United States commitment to their security will not waver; at the same time, the strategies and plans that implement these commitments must flexibly adapt to geopolitical change and evolving regional security environments.

During the Cold War, strategies such as "massive retaliation" initially relied heavily on nuclear forces to counter the numerical imbalance in conventional forces favoring the Soviet Union and the Warsaw Pact. The United States and its allies, however, wrestled with the implications of threatening the Soviet Bloc with Armageddon over conventional provocations or attacks, and throughout the Cold War U.S. decision-makers and strategists attempted to find the balance between credible and incredible threats, particularly as Moscow developed an increasingly capable nuclear arsenal of its own. Would the United States be willing to sacrifice New York in order to protect Hamburg? And would Washington devote enough military resources to extend an effective defensive shield over its far-flung allies? These questions bedeviled U.S.-allied relations for decades, but from the 1960s onward they also sharpened U.S. efforts to develop a family of

"flexible response" extended deterrence strategies. By using a combination of conventional and nuclear forces, U.S. strategists and planners sought to frustrate Soviet efforts to coerce allies or engage in brinkmanship by threatening to impose costs or deny benefits at specific flashpoints or on key battlefields.

The end of the Cold War replaced the challenge of extending deterrence against a global superpower with the challenge of extending deterrence against a host of potential adversaries, to include peer and near-peer competitors, regional "states of concern," and non-state actors. The United States also sought to assure a broader range of allies, with former Warsaw Pact adversaries joining NATO, and states in the Middle East and Asia-Pacific seeking to establish or strengthen security ties with the world's sole superpower. While the development of increasingly effective missile defense systems granted the United States a new deterrence by denial capability, the expanding number of actors involved in extended deterrence and assurance strategies – to include potential adversaries with very different views on nuclear forces from those held by the Cold War superpowers – added new variables to the calculations of U.S. strategists and planners.

Obama Administration Extended Deterrence Policy

The Obama administration has sought to re-examine and revise U.S. deterrence strategies and concepts for the 21st century. Finding previous U.S. deterrence thinking too focused on Cold War concepts centered on nuclear forces, President Obama and his national security team have sought to strike a balance between reducing the U.S. nuclear arsenal and maintaining the ability to defend the United States and its allies from nuclear threats. In order to protect U.S. allies and partners from actors armed with nuclear weapons and/or other forms of WMD, the administration has sought to develop strategies featuring a combination of nuclear, missile defense, and conventional forces, with the latter two assuming a larger role relative to the former. The administration's views on extended deterrence and assurance are also shaped by a desire to establish "strategic stability" relationships with the Russian Federation and People's Republic of China. As a result, the administration has focused its development of these strategies on two sets of challenges: threats posed by regional "risk taker" states such as Iran and North Korea; and efforts by a number of foreign actors to develop anti-access/area denial (A2/AD) strategies focused on countering the speed, flexibility, and global reach of U.S. military forces. The first challenge has led the administration to question the utility of past U.S. deterrence strategies due to Tehran and Pyongyang's willingness to threaten the United States and its allies despite the ability of the U.S. military to exact heavy costs against either government in the event of a conflict. The second has prompted an interest in extending deterrence beyond allied borders to the "global commons," with the United States

committed to defending free access to international waters, outer space, and cyber space.

Current Issues, Challenges, and Regional Considerations

These changes to U.S. extended deterrence and assurance concepts, along with recent geopolitical developments, have raised a number of issues and questions for U.S. strategists and planners. With the United States attempting to extend deterrence across land, sea, air, space, and cyber space, for example, what is the threshold of adversary action the U.S. military should seek to deter? How will the United States distribute scarce resources across its critically important strategic domains?

The Obama administration is attempting to increase its defense engagement with U.S. allies and partners to better tailor its extended deterrence and assurance strategies to specific regional challenges, to include substantive discussions with foreign governments on U.S. nuclear strategies, forces, and posture. While broadly appreciated by many allies, this direct engagement on issues raises the possibility that in the future the United States may have to turn down direct allied requests regarding the U.S. "nuclear umbrella" or other defense arrangements, potentially reducing the influence of Washington over allied national security decision-making processes. In addition, U.S. allies generally support Washington's efforts to negotiate verifiable reductions of nuclear forces, but are increasingly concerned about the possible effect these reductions will have on the ability of the United States to protect them from nuclear threats.

U.S. nuclear-capable aircraft – long-range bombers such as the B-52 and fighter-bombers such as the F-16 – currently represent the linchpin of U.S. assurance strategies and are also critical to extended deterrence strategies. These visible, flexible nuclear forces assure allies and deter their adversaries, providing a clear demonstration of the U.S. nuclear umbrella through their presence in theater either through permanent basing, regular rotations, or strategic forward deployment in times of crisis. However, this reliance on nuclear-capable aircraft raises questions regarding the current and future placement and rotation of these assets. U.S. allies also hold mixed views regarding the relative decline of the role of nuclear forces within U.S. plans and policies for their defense.

Tailored Regional Considerations

The distinctive assurance requirements of each ally, and the differing deterrence challenges posed by each of their potential adversaries, require the United States to individually tailor its assurance and extended deterrence strategies.

Each region poses its own unique challenges to the development of these strategies. The United States' stated intent to "rebalance" to the strategically vital and dynamic region of East Asia, for example, has raised

questions abroad regarding both the future U.S. defense posture across the Asia-Pacific and its current extended deterrence/assurance strategy of maintaining a "continuous presence" of nuclear-capable bombers in theater. This has led some U.S. allies in East Asia to express a desire for more visible extended deterrence capabilities.

In the Middle East, Iran's pursuit of an independent nuclear weapon capability has led regional allies and partners to seek closer defense cooperation with the United States, albeit outside of a formal alliance structure. If Iran becomes a nuclear power, regional rivalries and political sensitivities will complicate efforts to develop a "nuclear umbrella" concept for the region. While missile defenses are playing an increasingly important role in regional extended deterrence and assurance strategies, Iran's large number of ballistic missiles will continue to pose a threat to U.S. regional allies and forward deployed forces for the foreseeable future. How the United States counters this and other regional threats in light of an increased focus on East Asia and other potential global demands upon missile defenses presents a complex challenge for U.S. defense planning.

Finally, in Europe the traditional security commitments to NATO members remain in place. The 2012 NATO Deterrence and Defense Posture Review (DDPR) confirmed that NATO remains a nuclear alliance. The DDPR did not address, however, looming challenges to the alliance's current nuclear strategy and nuclear sharing arrangements. Most allied dual-capable aircraft are slated for retirement within the next decade, and there are no plans in place for their replacement. NATO's current embrace of missile defenses has provided an avenue for close cooperation on one aspect of extended deterrence/assurance strategies, but also represents an irritant to Russia. Ongoing European military force reductions and general uncertainty about NATO's future strategic direction raise broader questions about the future of extending deterrence in this region when the alliance has no clear enemy.

U.S. extended deterrence and assurance guarantees remain vital to U.S. and allied national security, and play a critical role in ensuring stability in strategically vital regions across the globe. They face pressure, however, not only from geopolitical developments but also from changing requirements reflecting evolving adversary capabilities and shifting allied requests. Washington's present role as chief national security partner of critical allies, its influence in key regions, and, ultimately, U.S. security and prosperity within an increasingly globalized and interconnected world, will all depend on how successfully the United States tailors policies and strategies to assure its friends – and deter their enemies – in a dynamic international security environment.

EXTENDED DETERRENCE AND ALLIED ASSURANCE

PART 1: INTRODUCTION

The United States' global network of defense alliances and security partnerships is critical to U.S. national security, regional stability, and international order. In the complex 21st century geopolitical environment, U.S. allies and partners face potential threats from a range of state and non-state actors. In addition to protecting the American homeland through deterrence of adversary threat or attack (called central deterrence), the United States has also made solemn commitments to defend certain key allies and friends around the world from enemy coercion or assault (called extended deterrence). In other words, in order to protect itself, its allies, and its vital geostrategic interests, the United States must simultaneously:

- Protect the U.S. homeland, national interests, and freedom of action through *central deterrence* of adversaries;
- Protect its allies and partners from intimidation, coercion, or attack by deterring their potential adversaries, a strategic concept known as *extended deterrence;* and
- Assure its allies and partners that the United States is fully committed to defending them against a host of potential threats, a strategic concept known as *assurance.*

The successful exercise of extended deterrence and allied assurance requires the combined efforts of national leaders, policy makers, diplomats, defense strategists, and military planners. The effective tailoring of extended deterrence and assurance strategies requires constant communication with allies and constant intelligence on adversaries conducted by diplomatic posts, intelligence services, defense officials, and relevant commands operating in concert across the diplomatic, information, military, and economic domains. In order to successfully apply all the instruments of national power to the realization of U.S. extended deterrence and assurance commitments, all of these actors must leverage their unique expertise on national security matters and share information on the views, goals, and capabilities of the country's allies and adversaries. These actors must also work closely with each other in order to effectively synchronize U.S. policies, strategies, actions, and operations designed to communicate the credibility of U.S. security guarantees to foreign audiences (both friendly and hostile). This credibility is not solely a function of military plans or actions. It is dependent on convincing both adversaries and allies that

the United States possesses the political resolve to maintain its allied defense commitments in times of crises and has the military capability to fulfill these promises in times of conflict.

This paper provides a baseline framework – in the form of definitions, concepts, current guidance, and historical background – that can assist civilian defense officials and military officers tasked with developing strategies, plans, and operations for extended deterrence and assurance. Its research and analysis is focused on defense and military strategy issues; the strategic concepts of extended deterrence and assurance issues are not solely defined by national security considerations, but they are centered on the potential use of armed force to protect U.S. allies and, if necessary, punish their enemies. A broad range of government and non-government sources informs this paper's research, assessments, and conclusions. The authors interviewed a number of U.S. government (USG) subject matter experts and also analyzed official policy documents, Department of Defense (DoD) guidance, joint U.S.-foreign government statements, and other sources of information guiding the development of extended deterrence/assurance strategies, plans and operations. Non-government sources included academic literature and recent reports by research institutions on the topics of extended deterrence and assurance.

The paper is divided into five parts:

- *Part 2* defines extended deterrence and allied assurance and proposes a model for illustrating these strategic concepts;
- *Part 3* provides a historical overview of the evolution of U.S. deterrence, extended deterrence and assurance concepts from the Cold War to the present day;
- *Part 4* examines continuity and change in U.S. extended deterrence and assurance policies, strategies, and forces during the Cold War and post-Cold War era through 2008;
- *Part 5* summarizes current administration guidance documents and policy statements on deterrence, extended deterrence, and allied assurance, and identifies a number of issues and challenges facing U.S. extended deterrence and assurance policies strategies;
- *Part 6* discusses U.S. extended deterrence and assurance commitments and directives by geographic region, to include assessments of the unique challenges each region presents to developing and implementing strategies for defending local allies and deterring their potential adversaries.

PART 2: DEFINITIONS AND FRAMEWORK

Definitions

As noted by National Defense University scholar Elaine Bunn, "[o]f course, in order to *extend* deterrence, the United States must first be able to deter."[1] Extended deterrence and assurance cannot be defined or understood separate from the concept of central deterrence. The three represent closely related, but nonetheless distinct, strategic concepts. Careful definition and use of each is important, as public statements, national security analyses, and academic publications sometimes confuse or conflate the terms. This section provides operating definitions of *deterrence*, *central deterrence*, *extended deterrence*, and *assurance* as strategic concepts (defined here as concepts that inform the development of national security policy, defense strategies, and military operations); discusses the relationships between the four; and identifies two key challenges embedded within these concepts.

Deterrence

Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms* defines "deterrence" as "the prevention from action by fear of the consequences. Deterrence is a state of mind brought about by the existence of a credible threat of unacceptable counteraction."[2] The 2006 Department of Defense (DoD) document *Deterrence Operations Joint Operating Concept* provides further detail by placing the concept of deterrence within an operational context:

> [deterrence operations] convince adversaries not to take actions that threaten US vital interests by means of decisive influence over their decision-making. Decisive influence is achieved by credibly threatening to deny benefits and/or impose costs, while encouraging restraint by convincing the actor that restraint will result in an acceptable outcome.[3]

Practitioners, analysts, and scholars also differentiate between two main categories or types of deterrence:

1) *Deterrence by punishment:* A geopolitical actor elects not to undertake a particular action due to its fear the action will trigger a response from a second party capable of imposing unacceptable costs against it;

2) *Deterrence by denial:* A geopolitical actor elects not to undertake an action due to its belief a second party has taken, or

will take, steps to ensure this action will fail to achieve its desired result.

Both types of deterrence are included within current U.S. government policy. The 2012 DoD guidance document "Sustaining U.S. Global Leadership" states:

> Credible deterrence results from both the capabilities to deny an aggressor the prospect of achieving his objectives and from the complementary capability to impose unacceptable costs on the aggressor.[4]

These definitions provide a baseline understanding of deterrence as a theoretical construct and an operational concept. When discussing deterrence in terms of strategies and operations, it is important to supplement the definitions above with the following understandings:

1) Deterrence is in the eye of the beholder; it is rooted within the internal beliefs, fears, and other internal/psychological processes of the actor the United States is attempting to deter;

2) Deterrence is a dyadic or two-party construct involving the United States and the party it seeks to deter;

3) Deterrence includes the strategic use of all tools of state power, to include the use of diplomatic actions, economic sanctions, and military force;

4) In terms of military forces, both offensive and defensive capabilities play a role in deterring potential adversaries; deterrence is not limited to nuclear forces and the massive destructive power they can visit upon a potential adversary;[5] and

5) Deterrence is an overarching concept that is applicable to a broad spectrum or series of actions the United States wishes to deter. *Central deterrence* and *extended deterrence* are distinct subcategories within this broader concept, as explained below.

Central Deterrence

Central deterrence (sometimes called general, core or national deterrence) refers to U.S. policies, strategies, and operations that threaten costs, deny benefits, or encourage restraint in regard to an adversary taking an action against the United States (defined as the United States government, U.S. citizens, or U.S. territory). Within the Cold War context of the nuclear rivalry between the United States and Soviet Union, for example, central deterrence was often understood as "attempts

to discourage attacks upon the deterrer's homeland, e.g., dissuading Soviet nuclear attacks against the United States."[6]

Using generic terms, a basic description of central deterrence is Blue deterring potential adversary Red from taking actions to undermine, intimidate, coerce, or attack Blue.

Extended Deterrence

As a country with global interests, the United States has long recognized that international peace and stability is essential to U.S. national security. Unrest, conflict, and disorder overseas give rise to transnational threats that threaten all international actors, including the United States. In this geopolitical environment, the safety and prosperity of the United States is closely intertwined with the security of its allies and partners abroad. As a result, the United States has a vested interest in deterring threats or attacks against countries far from its own borders.

The United States thus seeks to *extend* deterrence beyond simply deterring attacks against the U.S. homeland. As a strategic concept, extended deterrence involves the United States using all the tools of state power, to include the use of military force, to deter a foreign actor from undertaking hostile actions against *a third party*. This third party is often an ally or partner; however, in the protection of vital regions or interests, the United States may also extend deterrence to prevent harm against neutral or even adversarial states.[7] This extension of geopolitical capital and national resources to cover or protect a third party from attack has often led to the use of "umbrella" or "shield" analogies to describe the phenomena of extended deterrence.

Using generic terms, extended deterrence can be described as Blue deterring adversary Red from taking actions to intimidate, coerce, or attack third-party Green. While the desired outcome of extended deterrence is the preservation and protection of Green, the focus and object of extended deterrence as a strategic concept is Red. Green may be passive, indifferent, or even unaware of the actions of Blue. For Blue, extended deterrence is centered on the following question: What deters Red from coercing, threatening, or attacking Green? In today's multipolar environment, the question is often a complex one for the United States to answer, as there are several possible "Reds" and many "Greens," and each Blue-Red and Blue-Green interaction can have second-order effects on other states.

Assurance

In extending deterrence beyond its own borders, the United States seeks to convince foreign parties that if an aggressor chooses to

attack a third party under U.S. protection, it will suffer costs and/or fail to achieve its goals. As noted above, the focus of extended deterrence is on the potential adversary and not the third party the United States is attempting to protect from coercion or attack.

If the third party does not know or believe that the United States will take action to deter threats against it, however, it may act in a manner that complicates or abrogates U.S. efforts to extend deterrence against its potential adversary. As a result, extending deterrence against states of concern is not sufficient for ensuring regional order or international peace and stability.

This underlines the critical importance of close engagement with U.S. allies and partners in developing the policies, strategies, and operations that will protect them from potential adversaries. The United States must convince its allies and partners they are protected by credible U.S. security guarantees. This requires consistent, constant, and visible demonstrations of U.S. political resolve and military capabilities to reinforce the communication of assurance messages.

The *assurance* of allies or partners thus represents a strategic concept closely related to, but nonetheless separate from, extended deterrence. As a strategic concept, assurance represents the means and methods employed to convince a U.S. ally or partner that the United States can guarantee its safety from intimidation, coercion, or attack by foreign actors. In many cases, this includes a pledge by the United States to use military force to protect the ally or partner from potential adversaries. It can also include the visible conduct of exercises and operations to demonstrate resolve, either conducted unilaterally by the United States or in concert with the ally or partner.

Using generic terms, allied assurance is Blue undertaking actions to assure Green it will deter Red from threatening or harming Green. The goal is the same as extended deterrence: preventing Red from intimidating, coercing, or attacking Green. For assurance, however, the focus of Blue's attention is on Green, and taking steps to demonstrate that it is protected from Red. It may also require Blue to shape Green's actions in order to prevent complicating the dyadic deterrence relationship between Blue and Red. For the purposes of assurance, Blue must balance the development of deterrence strategies for Red with the needs and requests of Green. Importantly, as discussed in further detail below, *the requirements of assurance may differ from the requirements of extended deterrence*. Discussions with allies, for example, may reveal that their views of what deters a potential adversary differ from those of the United States. If the United States concludes it must realign its position to more closely match the views of a particular ally, it may find

it necessary to employ two separate (if not necessarily distinct) strategies – and two sets of associated plans, operations, and forces – for preventing Red from attacking Green, with one set tailored to deter Red from attacking Green, and a second tailored to assure a specific Green it is protected from Red.[8] Strategists and planners must recognize that the demands of extended deterrence and assurance may prove "additive and cumulative, despite some fungibility between them."[9]

Conceptual Framework for Extended Deterrence and Assurance

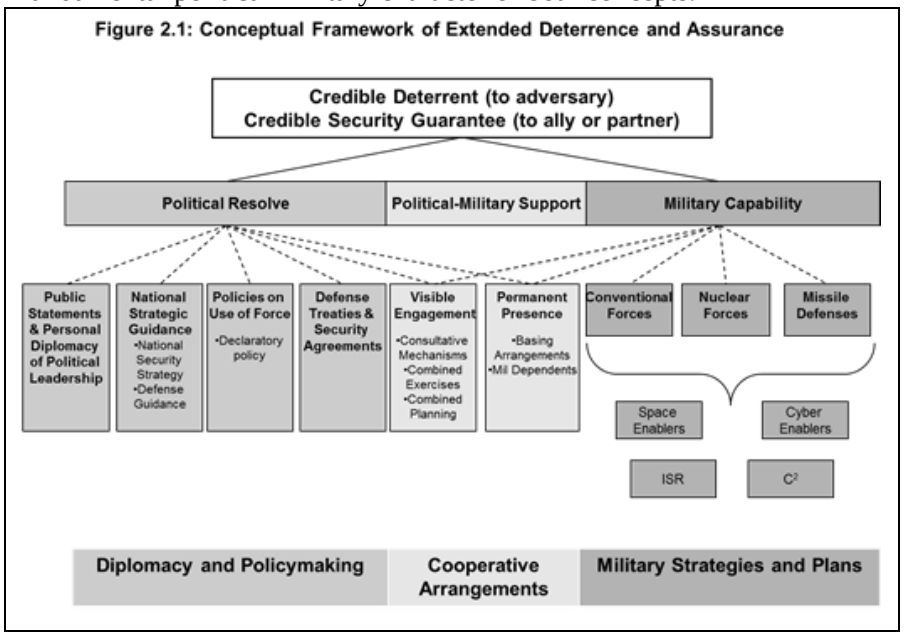
The effectiveness of extended deterrence and assurance relies upon the successful integration of a range of diplomatic, informational, military, and economic elements into strategies, plans, and operations. Together these elements must demonstrate the credibility of U.S. defense guarantees to both adversaries and allies by doing the following:

- *Demonstrating Political Resolve:* Foreign actors must believe that U.S. security pledges to allies and partners are fully supported by U.S. political and military leaders, are fully complementary to broader U.S. geopolitical objectives, and are sealed by a politically or legally binding commitment the United States will, in fact, fulfill. In addition, allies and their possible adversaries must believe the United States is prepared to bear the potential costs an adversary can impose against it when the U.S. government and military forces respond in defense of an ally (to include attacks on U.S. troops deployed abroad or even retaliatory strikes against the U.S. homeland).

- *Applying Effective, Tailored Military Capabilities:* Foreign actors must also believe the United States will match its political commitment with a robust, diverse mix of forces capable of projecting power and deterring aggression across all relevant strategic operating environments. In addition, the United States must convince foreign actors it is capable of developing and implementing strategies, plans, and operations for protecting allies that are tailored to directly address the unique threats and challenges they face.[10]

Figure 2.1 presents a model of extended deterrence and assurance as political-military strategic concepts. It is illustrative rather than exhaustive; not all potential components of extended deterrence and assurance are included within the model. In its depiction of extended deterrence and assurance as frameworks constructed on twin pillars of political resolve and military capability, however, it reflects a consensus

between national security practitioners and scholars regarding the fundamental political-military character of both concepts.[i]



The political and military components of this model represent a range of potential means and methods for developing extended deterrence and assurance strategies. A combination of both is critical to deterring adversaries and assuring allies. However, the specific mix of these components, or balance between them, will differ based on the specific requirements necessary to assure a particular ally or deter a potential adversary. Importantly, this drives a requirement for the United States to consider developing individually tailored assurance strategies

[i] Figure 1.1 represents a model developed from an earlier extended deterrence model constructed by Darci Bloyer and Zechariah Becker of SAIC. It also combines elements of a model presented within the Center for Strategic and International Studies 2008 report titled *Exploring the Nuclear Posture Implications of Extended Deterrence and Assurance* and is further informed by discussions with key subject matter experts. Darci Bloyer and Zechariah Becker, "Building a U.S. Extended Nuclear Deterrent for the 21st Century," briefing, CSIS Project on Nuclear Issues, October 9-10, 2008, and Clark Murdock et al. *Exploring the Nuclear Posture Implications of Extended Deterrence and Assurance* (Center for Strategic and International Studies: Washington D.C., November 2009).

for each ally or partner and to also develop individually tailored extended deterrence strategies for these actors' potential adversaries.

The political and military means and methods included within this conceptual model, and their role within extended deterrence and assurance, are discussed in further detail below. The next three sections – "Political Resolve," "Political-Military Support," and "Military Capability" – also provide historical and contemporary examples to illustrate how the United States uses these various political, political-military, and military elements to provide assurance in response to specific allied and partners' concerns and/or to deter specific threats from the latter's potential adversaries.

Political Resolve

The political dimension of extended deterrence and assurance includes a range of geopolitical and national policy means, methods, and messages. These components are vital to establishing the United States as a credible, reliable ally that is strategically invested in the defense of foreign states. Through statements and actions, it is critically important the United States communicate and demonstrate it possesses the political resolve to fulfill its security guarantees, even if they may entail significant costs – up to and including the risk of retaliation against the U.S. homeland. This section will discuss four elements of political resolve: (1) public statements and personal diplomacy by national leadership; (2) national strategic guidance; (3) national policies on use of force, and; (4) defense treaties and security agreements.

Public Statements and Personal Diplomacy by National Leadership. Due to its status as a global superpower, the speeches, press briefings, and other public statements of U.S. leaders are closely monitored by U.S. allies, partners, and potential adversaries. This close reading by foreign parties of statements by the U.S. president and high-ranking U.S. government officials occurs regardless of whether they are delivered before a domestic or foreign audience.[11]

Strong statements from U.S. leaders pledging support to the defense of friends abroad plays a critical role in assuring allies.[12] Recognizing this fact, U.S. presidents from the Cold War to the present day have often included expressions of support for allies and partners – along with warnings for potential adversaries – within major speeches, such as the annual State of the Union address delivered to Congress.[13]

Stating – and restating – security guarantees to allies and partners is also a necessary component of initial responses to regional security crises and U.S. diplomatic visits to foreign states. It is difficult

to overemphasize the degree to which U.S. senior leadership statements are pored over by government officials and members of the media in foreign capitals. Foreign governments, and their publics, require clear, direct confirmation from the United States that its leaders are personally and politically invested in protecting them from coercion and aggression.[14] Moreover, in cases where political or other circumstances prevent the United States and a partner from concluding formal defense arrangements, assurance relies heavily on the word of the president (or his/her designated representative), which in lieu of a written treaty or agreement, may serve as the basis for the two states' security relationship.

National leadership statements affirming the defense of allies and partners are also important for extended deterrence. They communicate a strong signal to potential adversaries that certain countries are under the protection of the United States. When delivered by the president, they are understood to represent promises backed by the commander-in-chief of the world's sole superpower. As a result, the text of speeches articulating "red lines" that, if crossed, will provoke a military response by the United States, can effectively deter foreign actors from threatening or attacking U.S. allies and partners abroad.

For strategists and planners, the statements of U.S. leaders and key officials may occasionally signal a shift in extended deterrence and assurance priorities, but will usually underscore existing strategic guidance (see "Statements on National Strategy" section below). In either case, addresses and other official public remarks represent extended deterrence and assurance guidance and messaging at the highest level. Policies and plans to implement the geopolitical vision of national leadership must align with the key themes and overall narrative presented within these public statements.

Example of Public Diplomacy. In March 2010, the Republic of Korea (ROK) corvette *Cheonan* suffered a sudden explosion and sank in the Yellow Sea with the loss of 46 South Korean sailors. Two months later, following an investigation of the incident by a team of international experts, the ROK government publicly accused the Democratic People's Republic of Korea (DPRK) of launching an unprovoked attack against the vessel.[15] The White House immediately issued a statement backing its ally and pledged to defend it against any further DPRK attempts to coerce or attack the ROK:

> U.S. support for South Korea's defense is unequivocal, and the President has directed his military commanders to coordinate closely with their Republic of Korea

> counterparts to ensure readiness and to deter future aggression …. The U.S. will continue to work with the Republic of Korea and other allies and partners to reduce the threat that North Korea poses to regional stability.[16]

President Obama followed up on this and other U.S. government statements of support for the ROK during a visit to South Korea the following November. At a joint press conference with ROK President Lee Myung-bak held at the Blue House (the ROK equivalent of the White House), he criticized the DPRK for the *Cheonan* sinking and its ongoing pattern of "belligerent behavior." Within his remarks, President Obama also emphasized the enduring strength of U.S. security guarantees to ROK, stating "we can never say it enough – the United States will never waver in our commitment to the security of the Republic of Korea."[17] In terms of timing, delivery, and content, the White House crafted the public statements in May and November 2010 to simultaneously assure the ROK of U.S. support throughout the *Cheonan* crisis and deter the DPRK from launching any further attacks.

National Strategic Guidance. As a country with an open political process, U.S. strategic guidance is often readily available for reading by any interested party, whether U.S. or foreign. Most U.S. presidential administrations in the modern era openly publish and distribute a *National Security Strategy* (NSS), *Quadrennial Defense Review* (QDR), and other key defense guidance documents (such as the Obama administration's decision to publish the 2010 *Nuclear Posture Review Report* (NPR)). These public documents articulate their perspective on current world affairs, identifying strategic priorities and stating the strategies and policies they intend to implement in pursuit of these goals. Together, these documents orient the U.S. government within the contemporary geopolitical environment and communicate key strategic objectives to individual departments and agencies, to include the Department of Defense and U.S. armed forces.

Similar to the public pronouncements of U.S. leaders and officials, the national strategic guidance documents of the U.S. government are closely (and often painstakingly) scrutinized by foreign audiences.[18] America's friends abroad, and their potential enemies, read these documents for any U.S. statements or signals (whether direct or implied) concerning Washington's views on international security threats and the costs it is willing to bear in order to defend allies and partners overseas.[19] For the purposes of extended deterrence and assurance, it is important for adversaries reading these documents to understand that U.S. geopolitical strategy closely links the national security of the United

States with the safety and security of its allies and partners abroad. Potential adversaries reviewing examples of U.S. national strategic guidance should also readily and unambiguously conclude the United States is strongly committed to devoting significant resources to planning and preparing to defend its friends overseas against a range of threats.

For strategists and planners, national statements of strategic intent provide direct guidance establishing the key objectives of extended deterrence and assurance strategies, expressly identifying regions and states that require the protection of the United States. Presidential and Department of Defense strategic guidance documents also present U.S. leadership perspectives on deterrence concepts (sometimes to include specific discussion of force requirements) that direct the development of specific extended deterrence and assurance strategies and operations. As discussed in further detail below, U.S. views on extended deterrence and assurance have evolved since the end of the Cold War, with the guidance documents of each post-Cold War administration contributing to this process. This underscores the critical importance of strategists and planners closely studying both past and present guidance to understand how the U.S. government practice of extended deterrence and assurance has changed over time and the corresponding impact of these changes on military plans, operations, and capabilities.

Examples of National Strategic Guidance. Written during a period of warming relations between the two Cold War superpowers, but prior to the collapse of the Soviet Union, President George H.W. Bush's 1990 National Security Strategy articulated a global strategy balancing increased diplomatic engagement with Moscow with the continued sustainment of robust deterrent capabilities:

> The U.S. will seek to engage the USSR in a relationship that is increasingly cooperative … [however, the] United States must continue to maintain modern defenses that strengthen deterrence and enhance security. We cannot ignore continuing Soviet efforts to modernize qualitatively even as they cut back quantitatively.[20]

The guidance document also included direct reassurances to U.S. allies uncertain of the regional implications of a potential thaw in the Cold War rivalry between the United States and Soviet Union. A section on Asia within the document, for example, highlighted the enduring importance of relationships with longtime allies such as Japan: "[o]ur alliance with Japan remains a centerpiece of our [regional] security policy and an important anchor of stability."[21]

Current guidance documents, such as the 2010 NSS and the 2012 DoD publication "Sustaining U.S. Global Leadership," (2012 DSG) present a global strategic vision stressing America's vital role in promoting international stability, to include the identification of a number of specific extended deterrence and assurance objectives. The two documents include strong statements emphasizing the United States' continuing commitment to the security of traditional allies, describing NATO as the world's "pre-eminent security alliance" and pledging to work with European allies to "strengthen our collective ability to promote security, deter vital threats, and defend our people."[22] The documents also stress the critical importance of U.S. military forces – particularly those located in theater – to deterring "destabilizing" states such as Iran, stating "*the United States will continue to place a premium on U.S. and allied military presence in –and support of – partner nations in and around this region.*"[23] Citing the growing strategic importance of the Asia-Pacific region, the 2012 Defense Strategic Guidance (DSG) also directs the DoD to "rebalance" toward this theater, shifting resources toward security challenges such as maintaining open sea-lanes in the Western Pacific and protecting East Asian allies and partners.[24]

Current guidance documents thus provide express guidance regarding capabilities and regional objectives for U.S. extended deterrence and assurance strategies. They also communicate messages to foreign audiences regarding the vital strategic importance the United States assigns to protecting key allies (e.g., Japan, Korea, and other allies and partners in the Asia-Pacific), deterring specific actors (such as Iran and the DPRK), and deterring actions that could jeopardize regional stability and international peace (such as efforts to restrict freedom of navigation).

Policies on the Use of Force (Declaratory Policy). Policies regarding when, where, and how to use force are an important component of extended deterrence and assurance strategies, identifying potential "trip wires" regarding when adversary actions against allies will prompt a U.S. military response and shaping foreign perceptions of the potential costs this response will impose upon the targeted actor. This section focuses on declaratory policy, which refers to unclassified U.S. policy documents and public statements on the potential use of nuclear weapons, to include U.S. government statements on the circumstances or adversary actions that could lead the president to contemplate ordering a nuclear strike.

With many U.S. allies and partners facing potential adversaries armed with nuclear arsenals or committed to the development of nuclear

weapons, U.S. declaratory policy plays a key role in extended deterrence and assurance. Allies and partners concerned about nuclear threats are particularly interested in U.S. policies regarding a response to nuclear provocations or attacks aimed against them rather than at the United States; they require a clear commitment within U.S. declaratory policy that Washington will extend a U.S. "nuclear umbrella" over their states, protecting them from the nuclear forces of their potential adversaries.

For the purposes of extending deterrence, U.S. declaratory policy also communicates to nuclear-armed adversaries that a central role of the U.S. nuclear arsenal is deterring nuclear attacks against U.S. allies and partners and that any such attack on a U.S. friend abroad will trigger a devastating response by the United States.[25] Beyond this clear linkage between a nuclear response to a nuclear attack on an ally or partner, however, the United States has generally practiced a degree of ambiguity in regard to its declaratory policy in terms of possible use of nuclear forces should it conclude extended deterrence was failing or at risk of failure. This often reflected an interest in deliberately sowing uncertainty in the minds of potential adversaries of allies and partners; during the Cold War, for example, the United States rejected Soviet efforts to propose a mutual declaration of "no first use" of nuclear weapons in part to leave Moscow and its Warsaw Pact allies uncertain as to what level of escalation or incursion in Western Europe might prompt a U.S. nuclear response.[26]

For allies and partners that face adversaries building or wielding nuclear arms, U.S. declaratory policy may represent the linchpin of their security relationship with the United States. Some U.S. allies and partners have had longstanding concerns with regard to the willingness of the United States to use nuclear weapons on their behalf and to expose themselves to possible nuclear retaliation as a result of this intervention.[27] Their assurance in the face of an existential nuclear threat requires the United States to publicly declare it is prepared to use nuclear force to deter a nuclear attack on an ally and, if necessary, will respond to a nuclear attack even if this risks an adversary response against the American homeland.[28]

For strategists and planners, declaratory policy provides critical context and overarching guidance for nuclear forces at the public, unclassified level. The implementation of this guidance, however, is necessarily discussed and directed at a highly classified level. Strategists and planners must recognize that much or all of these latter discussions will remain unknown to foreign parties. As a result, the development and implementation of nuclear strategies, plans, and operations should be

sensitive to (potentially premature or inaccurate) conclusions drawn by allies and partners from their reading of U.S. declaratory policy.

Examples of Declaratory Policy. U.S. declaratory policy has evolved over time; during the early Cold War, for example, the United States issued a number of statements communicating its readiness to use nuclear weapons to prevent the numerically superior conventional forces of the Warsaw Pact from overwhelming NATO.[29] Declaratory policy has changed to reflect the declining threat of major nuclear attack in the post-Cold War era while also recognizing the enduring challenges posed to the United States and its allies by a number of potential adversaries possessing nuclear and other WMD. Current U.S. declaratory policy is stated in the 2010 NPR. The key guidance statements within the document are summarized below:

- *The United States will only contemplate nuclear weapon use in "extreme circumstances."* "The United States would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners."[30]

- *The United States is not prepared to adopt a "sole purpose" policy for nuclear weapons.* Due to the fact that a number of states with nuclear weapons programs remain outside the NPT regime, the United States is "not prepared at the present time to adopt a universal policy that deterring nuclear attack is the sole purpose of nuclear weapons, but will work to establish conditions under which such a policy could be safely adopted."[31]

    - *The United States will continue to consider a possible nuclear response in "extreme circumstances to defend the vital interests of the United States or its allies or partners" to include chemical, biological, and/or conventional attacks by states with nuclear weapons and/or outside of the NPT regime.* For "states that possess nuclear weapons and states not in compliance with their nuclear non-proliferation obligations – there remains a narrow range of contingencies in which U.S. nuclear weapons may still play a role in deterring a conventional or CBW [chemical or biological warfare] attack against the United States or its allies and partners."[32]

- *The United States will provide "negative security assurance" to states in good standing with the Nuclear Non-proliferation*

Treaty (NPT). "The United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT and in compliance with their nuclear non-proliferation obligations;"[33]

- *In addition, the United States will not respond with nuclear weapons to chemical or biological weapon attacks by non-nuclear and NPT states:* For states without nuclear weapons or nuclear weapon programs outside of the NPT regime, the United States, at the present time, will use overwhelming conventional force – but not nuclear weapons – in response to a chemical or biological weapons attack. The 2010 NPR also states, however, that the United States reserves the right to amend the preceding policy if the lethality and general risk posed by biological weapons increases in the future.[34]

Current declaratory policy seeks to reduce the salience of nuclear weapons for foreign states by reducing their role within U.S. defense planning and emphasizing the security benefits of adhering to the NPT and other nonproliferation standards. The 2010 NPR also emphasizes, however, that the U.S. "nuclear umbrella" will continue to deter nuclear and – in certain circumstances – CBW and conventional attacks against U.S. allies and partners.

Defense Treaties and Security Agreements. In some regions, United States assurances to security partners are primarily based upon interactions centered on the personal relationships between U.S. and foreign leaders, with unwritten guarantees offered verbally during councils held behind closed doors. The majority of U.S. defense commitments to allies and partners, however, are codified within official texts laying out the terms of the security partnership. These can take the form of either politically binding agreements or legally binding treaties.

The United States attaches a high degree of importance to meeting its defense treaty and security agreement commitments to U.S. allies and partners abroad. In order to fulfill these obligations, it has military forces stationed across the globe and has repeatedly demonstrated its willingness to rapidly respond with overseas deployments – and, when necessary, offensive and defensive operations – to defend its allies and partners.

The close ties represented by a legally binding security pact highlight the importance attached by the United States and foreign

parties – both allied and adversary – to written extended deterrence and assurance commitments. For potential adversaries of U.S. allies and partners, the existence of formal security arrangements between the United States and these governments considerably raises the costs of any effort to coerce, intimidate, or attack these actors. They must account for the likelihood the United States will meet its defense commitments and militarily intervene on behalf of its allies and partners.

Similarly, many U.S. allies and partners view these texts as the foundational, contractual documents sealing their friendship with the United States and ensuring the latter's enduring commitment to protect them against foreign adversaries. Many U.S. allies view defense treaties and agreements with the United States as central to their national security. The ROK Embassy in the United States, for example, describes the ROK-U.S. Mutual Defense Treaty negotiated in 1953 as "the bedrock supporting the growth of democracy and prosperity in Korea."[35]

For strategists and planners, treaties and agreements establish firm U.S. commitments to the defense of certain allies and partners and may also shape when, where, and how this commitment is realized. In some cases, these commitments may include provisions discussing or identifying certain strategies, plans, operations and forces associated with this response. Strategists and planners must be aware of the expectations of U.S. policymakers – and friends abroad – in regard to the expected timing, placement, and provision of U.S. military force associated with treaty and agreement guarantees.

Example of Defense Treaty. Perhaps the best-known example of a U.S. treaty commitment to the defense of allies is Article V of the 1949 Washington Treaty (also known as the North Atlantic Treaty), which established the North Atlantic Treaty Organization (NATO). Article V commits all members of the alliance to mount a common response against any attack directed against an individual NATO state:

> The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them … will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.[36]

During the Cold War, the U.S. commitment to upholding Article V assured members of NATO that the United States would defend

Western Europe if it came under attack by the Soviet Union and its allies. This belief was critical to the integrity of an alliance whose strongest member was the United States. The central involvement of the United States in an alliance where an armed attack upon any member would prompt an immediate military response from Washington also deterred the Soviet Bloc from using military force to interfere with, coerce, or overwhelm NATO's European members.

Political-Military Support

A number of key elements of extended deterrence and assurance represent the intersection of

- U.S. political decisions to protect allies and partners against foreign threats;
- Military forces assigned to foreign regions or states in order to achieve these missions and objectives; and
- Direct engagement of foreign states to support the above processes.

The political-military elements discussed here bring together the political credibility of the United States as a committed ally, the military capabilities of a superpower capable of dispatching forces and defeating potential opponents across the globe, and the direct support of a U.S. ally or partner providing critical national resources (such as territory and/or military forces) to support U.S. extended deterrence and assurance strategies. Open political decisions visibly designating U.S. forces to the defense of specific allies and partners are extremely valuable for the purposes of assuring allies and deterring their potential adversaries. In general, the greater the permanence of the assignment of U.S. military personnel abroad, the greater the assurance value, with permanently based forces – in some cases, to include non-strategic nuclear forces – often representing the highest form of assurance the United States can provide to its allies and partners.

This section discusses two elements of political-military support to extended deterrence and assurance: (1) visible engagement, to include both direct consultations with U.S. defense officials and joint exercises with U.S. military forces, and; (2) basing arrangements and regular rotations whereby allies welcome U.S. forces and host them on their home territory, either stationed at permanent bases or as part of a regular troop rotation for joint defense and training purposes.

Visible Engagement (Consultative Mechanisms). While alliances and partnerships are frequently forged through the drafting of

written agreements, the maintenance of these relationships is often realized through the diplomatic engagement that follows. In order to implement security agreements, adjust to changing threats, and sustain ties between states after the U.S. and foreign leaders negotiating the initial terms leave office, the United States and a number of allies and partners have established formal consultative mechanisms to discuss and resolve defense issues. These mechanisms can take various forms, to include permanent council bodies tasked with addressing alliance matters, the establishment of annual meetings between high-level defense officials, and the creation of ad-hoc groups of subject matter experts tasked with addressing a specific, pressing national security challenge.

The smooth functioning of these mechanisms is important for extending deterrence against potential adversaries of U.S. allies and partners. These adversaries are likely to observe regular U.S.-allied consultations and conclude it will prove difficult to politically or militarily fracture security relationships that become stronger and closer over time. In addition, they may also conclude that decisions reached by U.S.-allied defense councils aligning defense plans and processes (such as agreements to procure and train with interoperable systems) will put them at a distinct disadvantage in future conflicts by fostering the development of a combined, well-coordinated U.S.-allied military force.

Consultative mechanisms are also important to allied and partner assurance, providing forums for these actors to directly interact with U.S. officials on a range of defense issues and allowing them to communicate their views regarding how the United States can best work with them to jointly ensure their defense. Public statements following these meetings reaffirming the importance of specific security commitments (such as pledges regarding an ally's coverage by the U.S. "nuclear umbrella") can also ease allied concerns regarding emerging threats.[37] Moreover, by encouraging detailed discussions of issues beyond the views exchanged during brief interactions between national leaders, bilateral consultations can address many of the critical nuts-and-bolts decisions important to combined defense plans and operations.

For strategists and planners, the decisions and agreements reached during U.S.-allied consultations are critically important to ensuring strategies, plans, and operations developed to deter potential adversaries are also tailored to address the assurance needs and requests of allies and partners. Allies and partners, for example, can offer key insights into the mindsets of potential adversaries that U.S. strategists and planners may find vital to the development of effective deterrence strategies.[38]

The results of U.S.-allied talks may also reveal, however, that threats the United States views as secondary in importance are considered critical or even existential threats by allies and partners. While the work of resolving these differences begins with U.S. and allied diplomats and defense officials at the negotiating table, bridging these gaps will also require specific military advice regarding what forces can be brought to bear against a particular threat. Civilians will also turn to their military counterparts with questions regarding combined command arrangements, combined operations, and other alliance military matters that may emerge as key aspects of assurance during closed-door deliberations. It is vital for the purpose of assuring allies that the verbal or written agreements reached during defense consultations ultimately take the form of plans and operations capable of mobilizing troops and equipment.

Example of Consultative Mechanism. The U.S.-ROK Security Consultative Meeting (SCM) is regularly held between the U.S. Secretary of Defense and ROK Minister of Defense, occurring annually or biennially. First initiated in 1968, the SCM is an established mechanism for the two allies to address high-level defense matters, to include questions regarding U.S. extended deterrence strategies for the DPRK. As Secretary of Defense Robert Gates stated in a press conference following the 42nd SCM in 2010:

> North Korea's nuclear and conventional-weapons threat continues to be the focal point of our alliance's deterrent and defense posture. We are committed to providing extended deterrence using the full range of American military might, from our nuclear umbrella to conventional strike and ballistic-missile defense.[39]

The 42nd meeting of the SCM also concluded an agreement to develop an additional "cooperative mechanism" to focus on discussing issues of extended deterrence.[40] This led to the formation of the US-ROK Extended Deterrence Policy Committee, a consultative body that allows additional discussion and close cooperation on a range of questions regarding nuclear and other forces critical to deterring the specific threats faced by the ROK. This body is currently responsible for the development of a "tailored bilateral deterrence strategy" through table-top exercises and other activities.[41]

Visible Engagement (Combined Exercises). U.S. forces have long conducted combined exercises with allied and partner military forces. Through combined maneuvers, simulated combat operations, and

collaboration between headquarters, these exercises provide valuable experience to all the militaries involved, allowing them to fight together against a common enemy within a future conflict.[42]

Combined exercises are recognized as an important element of allied assurance. For many allies and partners, they demonstrate the United States is willing to prepare for the possibility of fighting "shoulder to shoulder" with an ally or partner's military forces in a future armed conflict.[43] Many U.S. friends abroad also believe the opportunity to conduct training operations alongside U.S. armed forces improves their own defense capabilities.

Combined exercises also play a valuable role in extending deterrence. They provide a clear regional display of U.S. military power, often involving forces sufficient to critically damage or even defeat the conventional forces fielded by the potential adversaries of allies and partners. Over time they can also demonstrate the increasing interoperability between U.S. and allied military forces, presenting potential adversaries with the challenge of facing a robust regional competitor backed by a superpower.

For strategists and planners, combined exercises can provide opportunities to directly prepare for potential combat scenarios. They also serve as invaluable opportunities to better understand allied and partner capabilities and test combined command-and-control arrangements. Beyond their value in honing combined operations, however, strategists and planners must also recognize the potential geostrategic impact of any combined exercise. Any visible combined demonstration of U.S.-allied military power overseas will be closely observed by all parties within the region in question, with its timing, operations, and capabilities viewed as potential signals to other states. The United States should be prepared for the possibility that potential adversaries of U.S. allies and partners may respond to combined exercises with inflammatory rhetoric or even hostile acts against participating states.

Example of Combined Exercise. Following the sinking of the ROKS *Cheonan*, the United States agreed to send the aircraft carrier USS *George Washington* to participate in a maritime and air exercise with the ROK titled "Invincible Spirit." In a joint public statement announcing the exercise, U.S. Secretary of Defense Robert Gates and ROK Defense Minister Kim Tae-young described the deterrence signal it would send to DPRK:

> [T]hese defensive, combined exercises are designed to send a clear message to North Korea that its aggressive

> behavior must stop, and that we are committed to together enhancing our combined defensive capabilities.[44]

Invincible Spirit represented a combined exercise specifically designed to address a regional defense crisis. An example of a regularly scheduled combined exercise that provides assurance to U.S. allies by strengthening interoperability and cooperation between forces is the "Rim of the Pacific" (RIMPAC) exercise, a major air, naval, and amphibious forces exercise hosted by the United States every two years. RIMPAC 2012, for example, included armed forces from 22 states and featured operations conducted by 40 ships and 200 aircraft.[45] At the conclusion of the exercise, Admiral Cecil Haney, commander, U.S. Pacific Fleet, noted "The partnerships, cooperation and camaraderie forged during this exercise are essential to the promotion of peace in the Pacific region and will be invaluable during future contingencies, wherever and whenever they might be."[46] Participating forces also noted the exercise's importance in allowing states to "share understanding of operational level planning," engage in combined training drills, and learn about allied and partner defense capabilities.[47]

Basing Arrangements and Rotations. During the Cold War, a number of U.S. allies offered to host permanent bases for U.S. conventional forces (joined in some cases by nuclear forces) on their home territory, convinced any attack against them resulting in the loss of American life would provoke a swift military response by the United States against the aggressor.

In the present era, U.S. troops based or regularly rotated abroad continue to play a key role in assuring allies and partners.[48] Although U.S. allies and partners do not currently face a superpower threat akin to that posed by the Soviet Union during the Cold War, many remain convinced the presence of U.S. "boots on the ground" on their home territory remains a powerful defense against a range of potential adversaries and threats.[49] If these forces are threatened or attacked, they believe the United States will mobilize the full force of a military superpower to dismantle the attacker and effectively secure their state and region.

The regular rotation of U.S. forces within a country or region, or the temporary forward deployment of U.S. forces to an allied or partner state, also has value for the purposes of assurance. Although representing a less permanent commitment than basing, these actions can allow the United States to regularly, visibly reaffirm security guarantees and quickly respond, as necessary, to emerging threats or sudden

provocations against its friends abroad. These deployments may also be an ideal option for security partners who – for political or cultural reasons – are unable to host a fixed U.S. military facility on their home territory.

U.S. bases are also a highly effective deterrent to potential adversaries of U.S. allies and partners. The permanent presence of U.S. forces in theater forces these actors to take into account the potential U.S. involvement in any local conflict they initiate, particularly if their plans include an attack on a nation hosting U.S. military facilities.

The decision to establish a base on foreign territory, expand existing facilities, or forward deploy troops abroad, is often negotiated and resolved at the highest political levels of the United States and an ally or partner. Policymakers concluding these agreements, however, will seek advice from strategists and planners regarding what types of forces should be posted to the territory of an ally or partner. Bases represent long-term, resource-intensive investments by the United States and the host nation.[50] The United States must look beyond the short term to determine what types of facilities and forces can best address a range of evolving regional threats, while also seeking to minimize vulnerability to potential future adversary capabilities. In order to make the best use of available resources, planners must balance the advantage of having forces close to potential threats against the reality that forces based in region X may be unavailable – or very difficult to shift – to region Y.

Example of Regular Rotation. In November 2011, the United States and Australia announced an agreement to expand the two states' defense relationship through major rotational deployments of U.S. Marines to military facilities and training areas in Australia's Northern Territory. In announcing the agreement, President Obama stated the deployments would "strengthen the security of both of our nations" while also "send[ing] a clear message of our commitment to this region." He also linked the decision with his administration's determination to "rebalance" U.S. national security strategies and resources toward the Asia-Pacific.[51] For Australia, Prime Minister Julia Gillard presented the agreement as an important opportunity to strengthen the two countries' 60-year military alliance and noted that one of its benefits was an increase in joint training between the U.S. and Australian armed forces. In addition, she also cited the role of America as a "force for stability" in the Asia-Pacific as an important reason for Australia to agree to host regular rotations of U.S. Marines.[52]

Military Capability

The 2010 Quadrennial Defense Review states that fielding "dominant" military forces capable of projecting power across the globe is essential to the "integrity of U.S. alliances and security partnerships."[53] Within a diffuse and dangerous 21st century geopolitical environment, the effectiveness of U.S. extended deterrence and assurance strategies relies on foreign actors – allies, partners, and their potential adversaries – believing the U.S. military is capable of quickly and decisively defeating any potential opponent of a U.S. friend abroad. This is particularly important in terms of potential adversaries armed with WMD, as U.S. allies and partners (particularly those without nuclear or other WMD) rely heavily or completely on the United States to destroy or neutralize these weapons before they can cause serious harm.

Key requirements of extended deterrence and assurance include, but are not limited to, military forces with superior combat power, flexibility, mobility, and the ability to conduct stand-off and long-range strikes.[54] The depth and breadth of characteristics required for forces assigned to protect allies reflects the reality that assuring allies and extending deterrence against their enemies involves operations carried out far from home. Moreover, U.S. military forces deployed abroad rarely have the luxury of focusing on one mission; they may be required to simultaneously deter a range of adversaries while also shielding a diverse network of allies with widely varying security needs. Furthermore, U.S. forces must also maintain a high degree of visibility to all parties in areas of vital strategic interest in order to deter and dissuade anti-area/access denial efforts. In many important regions, the U.S. military is the only actor capable of protecting key aspects of the "global commons;" for example, U.S. naval and air platforms are often the only available options for operations ensuring the safety and freedom of international waters and airspace, missions that are critically important to the economic health and national security of both the United States and its allies.[55]

As a result, extended deterrence and assurance guarantees place requirements across the full spectrum of U.S. military power. Strategies, plans, and operations for protecting allies and partners from foreign threats require the utilization of conventional, missile defense, and nuclear forces, with additional support provided by space and cyber enablers.

Conventional Forces. During the Cold War, nuclear forces were often the focus of U.S. extended deterrence concepts and strategies.

While nuclear forces remain critical to extended deterrence and assurance today, they play an increasingly narrow role within U.S. defense strategy.[56] This reduced emphasis on the U.S. nuclear arsenal highlights the central importance of U.S. conventional forces to the deterrence of adversaries and the protection of allies and partners abroad.[57]

U.S. conventional forces are critical to extended deterrence, representing the principal means by which the United States responds to provocations or attacks that threaten to either harm its friends or destabilize key strategic regions abroad. Extending deterrence globally poses a number of challenges to any military force, including that of a superpower. For the United States to effectively deter foreign actors distant from the continental United States (CONUS), these actors must believe the U.S. military is capable of conducting rapid, accurate, and effective attacks without imposing unacceptable risks to its own security. The long-range strike and stand-off capabilities of U.S. conventional forces, together with other advanced qualities that permit operations in risky or degraded environments, allow the United States to develop and employ deterrence strategies against potential opponents of allies and partners in vital regions far from CONUS.[58] As recently demonstrated by Operation Odyssey Dawn, the United States must maintain military forces capable of launching accurate, devastating strikes into geographic areas where it has no permanent bases, as circumstances may require the rapid elimination of key adversary military assets in the initial phase of combat operations in order to protect allied forces (and, in this case, the civilian populations Libyan rebels were attempting to protect).[59]

Indeed, with the 2010 QDR noting the United States "remains the only nation able to project and sustain large-scale operations over extended distances," the U.S. military is currently the only force capable of putting into practice extended deterrence strategies featuring conventional forces.[60] While scholars and analysts continually debate whether potential adversaries view the potential use of U.S. nuclear weapons for extended deterrence as a credible threat, there is little doubt among foreign governments regarding the lethal capabilities of U.S. conventional forces.[61] The present advantages enjoyed by U.S. conventional forces, however, act as a key driver for a number of unconventional weapons programs by potential adversaries. Several have essentially accepted they cannot hope to win any near-term conventional military-to-military conflict where the United States intervenes on behalf of its allies or partners, prompting them to seek WMD capabilities in order to deter the conventional might of the United States.

U.S. conventional forces are also essential to assuring allies and partners. In addition to the latter's persistent belief in the value of hosting U.S. boots on the ground, U.S. conventional forces are more mobile and adaptable than other U.S. military assets. Their ability to quickly respond to threats against allies and partners is important to calming allies anxious for a visible, tangible sign the United States is prepared to sacrifice blood and treasure on their behalf. The ability to rapidly dispatch carrier groups, bomber wings, combat brigades, or other U.S. military forces anywhere in the world has repeatedly allowed the United States to assure allies and partners that they are protected – and in many cases, prevent the latter from undertaking destabilizing actions of their own.

The implementation of many extended deterrence and assurance strategies, plans, and operations relies heavily upon U.S. conventional forces. Strategists and planners should understand, however, that the deployment or use of U.S. conventional forces to assure an ally or deter an enemy may prompt the latter to contemplate the deployment or even use of unconventional forces to attempt to counter the United States. For example, some adversaries may view the deployment of U.S. conventional forces near their territory as placing their WMD arsenals – potentially their only trump card against the United States – at risk, forcing them to bolster these weapons' defenses, move them, or even consider their use early in a conflict. Other potential adversaries of U.S. allies may believe unconventional attacks are the only means to delay or halt the U.S. military from quickly responding to defend a beleaguered ally.

Strategists and planners should also recognize that, for the purposes of assurance, U.S. military forces stationed abroad are viewed as highly credible and reliable by the allies or partners permanently or regularly hosting these troops – but in many cases, they are also assumed to represent a "trip wire" initiating a much larger U.S. response in the event they are attacked.

Example of Conventional Forces (Extended Deterrence). In June-July 2012, in response to a number of Iranian threats against U.S. allies, partners, and the free navigation of the Persian Gulf, the United States significantly increased the number of U.S. naval and air forces deployed to the Middle East. These moves were expressly intended to achieve a number of regional assurance and extended deterrence objectives. The United States sought to assure friendly states concerned by Iran's increased bellicosity that Tehran could not prevent the deployment of U.S. military forces capable of quickly overwhelming any

Iranian attempt to harass or halt shipping in the Persian Gulf. Furthermore, the United States sent capabilities tailored to effectively deter specific Iranian naval threats to U.S., allied, and international shipping, such as the use of mines or small "fast attack" boats. A U.S. defense official involved in planning the deployment bluntly noted in a newspaper interview:

> The message to Iran is, 'Don't even think about it …. Don't even think about closing the strait. We'll clear the mines. Don't even think about sending your fast boats out to harass our vessels or commercial shipping. We'll put them on the bottom of the Gulf.[62]

Nuclear Forces. The slow but ongoing proliferation of nuclear weapon technology, and the determination of states of concern such as Iran and North Korea to develop and field their own nuclear forces, represent critical threats to the United States and to its friends abroad.

Even as the overall role of nuclear weapons in U.S. national security strategy is reduced, nuclear forces remain an essential element of extended deterrence and assurance strategies.[63] Potential adversaries of U.S. allies and partners develop and field nuclear weapons in order to assert regional hegemony, intimidate neighbors, and present an existential threat to their potential opponents – to include the United States. When facing a nuclear-armed opponent, nuclear weapons remain the only effective deterrent against nuclear attack.

Extending deterrence against regional risk-taking states in possession of limited nuclear arsenals – or determined to develop these weapons – requires the United States to clearly demonstrate it possesses nuclear forces capable of imposing "unacceptable costs" against any actor contemplating a nuclear attack against a U.S. ally or partner.[64] While each leg of the U.S. nuclear triad possesses this capability, nuclear-capable aircraft (bombers and dual-capable aircraft (DCA)) are particularly important to extended deterrence against this type of opponent. In response to nuclear saber-rattling by a risk-taking state with a limited nuclear arsenal, the United States can rapidly fly these delivery systems into the region in question, showing this state – and local U.S. allies – that it can immediately respond to any provocation with superior nuclear capabilities.[65]

U.S. nuclear forces are also essential to the assurance of allies and partners. Other than the United Kingdom and France, no U.S. ally or partner openly possesses their own nuclear arsenal. As a result, many allies and partners are entirely dependent upon the United States for the provision of a nuclear deterrent against potential adversaries armed with

nuclear weapons. The importance of this fact – which is a day-to-day reality for many U.S. friends abroad – cannot be overemphasized; for these states, the only weapon they view as fully effective against nuclear coercion or attack is not in their possession.[66] This highlights the importance of the U.S. "nuclear umbrella" to nuclear nonproliferation efforts; it is vital for the United States to convince allies and partners they have no need to consider developing their own, independent nuclear deterrent.[67]

Within the U.S. nuclear arsenal, allies and partners particularly value visible and mobile U.S. nuclear forces.[68] As noted above, within current U.S. nuclear forces these characteristics are associated with nuclear-capable aircraft. U.S. allies and partners recognize the United States can also deliver nuclear payloads globally with submarine-launched ballistic missiles (SLBMs) and intercontinental ballistic missiles (ICBMs). Many find greater assurance, however, in forces they can directly observe stationed or forward deployed on their territory, or regularly rotating in theater. They also share the U.S. conviction that the rapid, visible generation or deployment of U.S. nuclear forces can prevent nuclear-armed potential adversaries from engaging in nuclear brinkmanship.

Planners and strategists must demonstrate to allies, partners, and potential adversaries that U.S. nuclear forces are not solely restricted to central deterrence. Potential adversaries must also recognize that the United States is capable of rapidly matching any type of nuclear provocation or escalation. In addition, U.S. strategists and planners need to balance allied requests for nuclear forces sufficient to deter and defeat prospective opponents against allied concerns regarding the potential consequences of nuclear conflict (such as fallout drifting across their borders). At present, due to the threats posed by risk-taker states, the role of nuclear airpower is critically important to a range of U.S. extended deterrence and assurance strategies. As such, strategists and planners must understand the unique (and differing) capabilities and requirements of bombers, DCA, and the warheads they can deliver.

Example of Nuclear Forces (Extended Deterrence and Allied Assurance). By rotating aircraft from CONUS to Guam, U.S. Air Force B-2 and B-52H long-range nuclear-capable bombers maintain a "continuous presence" in the Pacific. The use of these rotations for extended deterrence and assurance purposes began in 2003 after the deployment of U.S. forces to Iraq. They were intended to assure regional allies and deter potential adversaries by visibly demonstrating to all regional actors that the deployment of significant forces to the Middle

East would not curtail the U.S. ability to project power into a second vital strategic theater.[69] The aircraft continue to serve a dual "deter and assure" mission today.[70] By visibly deploying nuclear-capable forces into a region with three other nuclear powers (China, Russia, and the DPRK), "continuous presence" signals to all key players within the region the United States is committed to extending a nuclear umbrella over its friends – and stands prepared, if necessary, to use nuclear forces against their enemies.

Missile Defenses. U.S. theater missile defenses first played a significant assurance role during Operations Desert Shield/ Desert Storm, when Patriot batteries were deployed to protect U.S. troops and allies in the Middle East.[71] Today Patriot Advanced Capability (PAC-3) batteries, Aegis systems, and other components of U.S. theater missile defenses play an increasingly prominent role in regional defense architectures.

U.S. missile defenses extend deterrence against potential adversaries of allies and partners by counteracting ballistic missiles, a key weapon within the arsenals of regional states of concern. Missile proliferation in the post-Cold War era has provided a number of states with otherwise limited military capabilities a relatively inexpensive delivery system for threatening regional neighbors with either conventional or unconventional strikes. By providing a defense system that can neutralize ballistic missile attacks, U.S. theater missile defenses allow the United States to implement deterrence by denial strategies on behalf of allies and partners.

Missile defenses are also vital to assurance, as a number of U.S. allies and partners face potential adversaries that possess ballistic missile arsenals, WMD programs, and a track record of taking risks to coerce or attack neighbors.[72] Against this type of adversary, allies and partners may fear that an advantage in conventional forces alone will prove insufficient to extend deterrence against actions such as ballistic missile strikes. Effective theater missile defenses, however, can assure U.S. allies and partners they are shielded from these types of attacks. Moreover, missile defenses also show U.S. allies and partners that ballistic missile threats will not deter the United States from intervening on their behalf, nor will adversary missile attacks significantly degrade U.S. military operations in theater.[73] Furthermore, by combining theater missile defenses with offensive strike capabilities, the United States can show allies it possesses the capability to both neutralize the weapon of choice of potential adversaries while also conducting a range of strikes that will quickly defeat an opponent's land, air, and naval forces.

For strategists and planners, theater missile defenses provide a capability to counter opposition ballistic missile arsenals – as noted above, a key weapon for several adversaries who recognize they cannot match the conventional strength of the United States and its allies and partners. Missile defenses are also an important component of any force package assembled for assurance purposes in response to provocations such as ballistic missile tests by a potential adversary that terminate outside of their national territory. Beyond crises and conflicts, theater missile defenses are also critical to the construction of long-term regional defense architectures. An enduring goal of U.S. strategies, plans, and operations abroad is to present both friend and foe with a seamless offense-defense, deterrence-by-punishment and deterrence-by-denial combination of forces. Missile defenses can play an important role in leading foreign actors to conclude ballistic missile threats will not dissuade the United States from intervening on behalf of an ally. Furthermore, when regionally deployed by the United States, and/or networked with allied missile defenses, these capabilities may also convince potential adversaries that U.S. allies and forward deployed forces are effectively shielded from ballistic missile attacks.

Example of Missile Defenses (Allied Assurance). For decades, the DPRK has directed bellicose rhetoric against Japan, reflecting both the bitter legacy of Japan's occupation of Korea during the Second World War and Tokyo's close alliance with the United States. In recent years, the DPRK has conducted several ballistic missile tests with trajectories that carried the systems either toward or over Japan. With the DPRK also widely believed to possess a small nuclear arsenal, Japan views Pyongyang's ballistic missile forces as a direct threat to its national security.[74]

In response to the DPRK's missile tests, the Japanese government decided in 2006 to pursue – "with a sense of urgency" – close cooperation with the United States on missile defenses.[75] Missile defenses are now integral to the U.S.-Japan alliance, with the two states working together to jointly fund, develop, and test systems such as the Standard Missile 3 (SM-3) Block II-A interceptor.[76] Japan also purchased and now fields the Aegis missile defense system on several of its naval destroyers.[77] In addition, it hosts U.S. missile defense interceptors and key enabling systems such as AN TPY-2 radars.[78]

Missile defenses are essential to U.S. assurance of Japan. They grant Japan a degree of protection against the DPRK's missile arsenal, which in combination with its nuclear weapons program has led Tokyo to conclude Pyongyang represents an immediate, pressing security threat.

The ability of missile defenses to protect U.S. forces in the Pacific from ballistic missile attack, allowing the United States to conduct operations in theater despite the threat posed by the DPRK's missiles, is also acutely important to the assurance of Japan. While Japan's Self-Defense Force is a capable military force, constitutional law, historical norms, and other factors limit its ability to conduct major offensive strikes against foreign states. The Japanese government and Japanese defense analysts thus stress the importance of missile defenses to the country's national security in part due to their ability to strengthen the deterrent value of regionally based U.S. military forces, allowing its ally to swiftly attack and eliminate these missile capabilities without fear of reprisal against either their facilities in Japan or its home territory.[79]

Tailoring Extended Deterrence and Assurance Strategies

The framework presented in Figure 1.1 is intended to communicate the critically important concept that assuring allies, and extending deterrence against their potential adversaries, requires the United States to carefully tailor policies, strategies, and plans combining effective military capabilities with clear demonstrations of political resolve. This requires national leaders, policy makers, diplomats, intelligence analysts, defense strategists, and military planners to work together to ensure the seamless integration of U.S. extended deterrence and assurance strategies and policies – despite their differing requirements. Moreover, it also requires all of these U.S. actors to understand that any changes to these strategies and policies – to include *perceived* changes – can have a ripple effect affecting the cost-benefit calculations of numerous U.S. allies and/or their potential adversaries. This reflects the central importance of U.S. extended deterrence and assurance strategies to the security of allies and the strategizing of their opponents. It also throws into sharp relief the degree of difficulty associated with tailoring these strategies for individual actors within a complex, dynamic geopolitical environment.

PART 3: DETERRENCE, EXTENDED DETERRENCE, AND ALLIED ASSURANCE FROM THE COLD WAR TO THE WAR ON TERROR (1945-2008)

Continuity and Change in U.S. Deterrence, Extended Deterrence, and Assurance Concepts

Across the Cold War and into the 21st century, the United States has committed itself to the protection of allies around the globe, viewing the defense of friendly regimes as critically important to its own national security. As a result, for decades the United States has invested significant amounts of diplomatic and military capital, to include permanent deployments of large numbers of troops overseas, in order to encourage the stability of key strategic regions and protect its friends from their potential adversaries. For the United States, many of the general geopolitical principles and national security policy imperatives underlying its efforts to assure allies and extend deterrence against their enemies have remained largely unchanged over time. The development and implementation of extended deterrence and assurance strategies, plans, and operations, however, have adapted and evolved to reflect major geopolitical changes, the development of new military capabilities, fluctuation in the number and types of U.S. adversaries and allies, and other factors.

This section provides a historical survey of deterrence, extended deterrence, and assurance concepts and strategies from the early stages of the Cold War to the eve of the Obama administration. Given the preponderance of literature on NATO during the Cold War, the focus is on NATO and Europe rather than other regions of the world in which the United States provided extended deterrence guaranties such as East Asia and the Middle East. This chapter analyzes this history in order to determine general trends in the strategies and forces associated with extended deterrence and allied assurance, and closes with an assessment of the enduring challenges U.S. policymakers and strategists face in ensuring that U.S. defense guarantees remain credible in the face of geopolitical change, shifts in U.S. defense priorities, and questions in foreign capitals (both allied and adversary) regarding U.S. commitments overseas.

Cold War Deterrence

During the long Cold War confrontation with the Soviet Union and its proxies, the United States faced a number of fundamental

challenges in developing effective deterrence, extended deterrence, and assurance strategies.

First, the Soviet Union represented a formidable military adversary. Just four years after the United States used nuclear weapons against Japan to hasten the end of the Second World War, the Soviet Union conducted its own successful atomic test. While initially lagging behind the United States in delivery system and warhead development, the Soviet Union eventually caught up with its rival and surpassed it in terms of numbers of fielded and stockpiled nuclear forces. The Soviet Bloc also enjoyed a significant advantage over the United States in numbers of soldiers and stocks of military equipment, a mismatch that left American strategists with limited and unpalatable options for developing a credible defense against a major conventional attack aimed at Western Europe or other vulnerable allies.

Second, as the leader of the "free world," the United States found itself attempting to defend friendly regimes scattered across the globe. These allies varied widely in terms of their defense capabilities and their views on how to address the Soviet threat, complicating U.S. efforts to mount a coherent common defensive strategy against Moscow.

Third, throughout the Cold War the United States had to convince allies it would not abandon them in the event of Soviet aggression backed by implicit or explicit nuclear threats. U.S. policymakers and strategists also found themselves repeatedly addressing allied concerns that U.S. capabilities devoted to their defense were insufficient for deterring Moscow.

These challenges – mitigated, but never fully resolved, by U.S. technological advances – shaped U.S. deterrence, extended deterrence, and assurance strategies across the Cold War.

Early Cold War: Massive Retaliation. In the first years of the nuclear age, the United States had a monopoly on nuclear weapons. Initially its arsenal was small, but the fact that it was the only state to successfully harness the power of the atom was militarily and psychologically significant, providing a powerful form of assurance to allies early in the Cold War. Although the Soviet Union soon developed its own nuclear capability, and went on to match the United States in successfully designing and testing thermonuclear weapons, during the 1950s the U.S. military enjoyed a significant quantitative and qualitative edge in nuclear forces. The strategic balance between the superpowers was much

different, however, in regard to other types of forces. After the Second World War the Soviet Union continued to field massive land, naval, and air forces at levels that the United States could not match. In addition, the Korean War demonstrated shortcomings in America's peacetime armed forces and the vulnerability of distant allies with limited military capabilities.

Dissatisfied with the Truman administration's handling of the Korean War and its broader foreign and security policies with regard to the challenges posed by global Communism, President Eisenhower came to office in 1950 determined to take a "New Look" at U.S. geopolitical strategy, to include a reexamination of the military means required to defend the United States and its friends from the massive conventional forces of the Soviet Union and its proxies. At the same time, however, Eisenhower was concerned that any strategy forcing the United States to indefinitely maintain heightened levels of defense spending would ultimately sap the nation's economic strength. President Eisenhower expressly directed his National Security Council to develop "a reasonable and respectable posture of defense … without bankrupting the nation."[80] The United States needed to invest in capabilities that could offset this disadvantage in conventional forces without breaking the budget. In addition, the United States needed to field capabilities that would allow it to quickly and decisively exact significant costs on the Soviet Union in the event of armed provocation. The Soviets had proved they could keep fighting despite absorbing fantastic costs in terms of personnel and resources, and that it could win a brutal, drawn out war of attrition. This led Eisenhower's National Security Council to conclude the United States needed to rapidly develop "a strong military posture, with an emphasis on the capability of inflicting massive retaliatory damage by offensive striking power" in order to deter the Soviet Union.[81]

Eisenhower's national security team believed nuclear forces – which at the time were cheaper to build and deploy than permanently stationing large numbers of conventional military forces around the globe – were the answer. The president and his advisers concluded that emphasizing nuclear weapons, an area in the 1950s where the United States enjoyed a distinct advantage over the Soviet Union in delivery systems, warheads, and production capabilities, represented the best use of scarce defense dollars to develop an effective deterrent against Soviet aggression. They were also the only weapon within the U.S. arsenal capable of threatening the Soviet Union with "massive retaliatory damage" in the event it attempted to attack the United States or its allies. The Eisenhower administration also hoped that increasing the U.S.

nuclear arsenal would allow it to significantly cut back on other military expenditures, to include drawing down the number of U.S. conventional forces deployed abroad. It subsequently invested heavily in a broad range of nuclear weapons; in addition to significantly boosting existing numbers of long-range nuclear-capable bombers, the United States also increased research, development, and deployment of a wide variety of short-range nuclear delivery systems expressly intended for defending the free world's defense perimeter.[82]

U.S. strategists also developed military doctrines and war plans that attempted to take advantage of the country's superiority in nuclear forces. U.S. deterrence strategy in the early years of the atomic age thus relied on threatening the Soviet Bloc with "massive retaliation" in response to an attack on the United States or its allies. Core deterrence took the form of aerial bombardment using nuclear weapons, the ultimate form of deterrence by punishment. The bombers of the U.S. Air Force's Strategic Air Command (SAC) would strike at the cities in the center of the Soviet motherland, destroying the Soviet Union, its industries, and most of its population, in one paroxysm of violence – what SAC planners called a "knock-out preemptive blow." Initially reliant upon aircraft mounting attacks from bases abroad, SAC was later equipped with bombers that, with tanker assistance, possessed intercontinental range. In time, SAC would develop and implement plans to keep bombers aloft 24 hours a day, ready at a moment's notice to launch a major nuclear attack on targets across the Soviet Union.[83]

The strategy of massive retaliation reflected both an assessment that only the threat of massive punishment could deter the Soviet Union and the military technology of the era. With the US nuclear force reliant on bombers carrying unguided gravity bombs, factors such as possible attrition from enemy air defenses, the requirement to use multiple bombs to assure the destruction of a target, and the relatively limited intelligence available on key military targets (to include adversary nuclear forces and stockpiles) in the pre-satellite era required a strategy using large numbers of bombers, large numbers of munitions, and large fixed targets located in the Soviet homeland. All of this was meant to deter Moscow from contemplating attacks on the United States.

The strategy of massive retaliation also applied to strategies for extended deterrence, with the United States bolstering allied conventional forces and U.S. forward-deployed troops with significant numbers of U.S. nuclear forces. Eisenhower's Secretary of State, John Foster Dulles, explained that conventional forces, while important to U.S. and allied defense, were insufficient to extend deterrence against Moscow

> Local defenses must be reinforced by the further deterrent of massive retaliatory power …. Otherwise, for example, a potential aggressor, who is glutted with manpower, might be tempted to attack in confidence that resistance might be confined to manpower.[84]

In order to ensure that a potential aggressor could not rely on a U.S. response remaining restricted to conventional forces, the Eisenhower administration deployed nuclear-capable delivery systems, from long-range bombers to short-range artillery, to directly support U.S. conventional forces engaged in the local defense of U.S. allies. U.S. declaratory policy for these nuclear forces remained deliberately vague, with Dulles explaining, "[i]t should not be stated in advance precisely what would be the scope of military action if new aggression occurred ….that is a matter as to which the aggressor had best remain ignorant."[85] The Eisenhower administration also sought to deliberately blur the line between conventional and nuclear operations within theater defense plans, with Chairman of the Joint Chiefs Admiral Arthur Radford publicly stating in December 1953, "atomic weapons have virtually achieved conventional status within our armed forces."[86]

Combined with the visible deployment of nuclear systems down to very low echelons, these policy and strategy statements were intended to signal the Soviet Union and its proxies that *any* form of incursion over allied borders could lead the United States to launch a major retaliatory nuclear strike. By leaving their principal opponent in doubt regarding the potential use of U.S. nuclear weapons, the Eisenhower administration hoped to deter a broad range of aggressive actions against U.S. allies and partners abroad.

In addition to extending deterrence against the Soviet Union, the United States also hoped the strategy of "massive retaliation" would assure U.S. allies, convincing them that U.S. nuclear forces were central to their defense and not simply intended to shield the United States. Maintaining a direct, visible U.S. nuclear presence in-theater or on allied territory was also vital to addressing allied concerns regarding the Soviet Bloc's advantages in conventional forces. The local presence of nuclear forces would enhance the assurance value of U.S. conventional forces based overseas (and soften the blow of potential U.S. troop reductions). Over time, for example, most NATO allies came to accept that the primary purpose of U.S. conventional forces in Europe was to serve as a nuclear "trip wire."[87] They were expected to slow – rather than defeat – the massive armies of the Warsaw Pact in the event of an invasion of Western Europe; if Moscow continued to press its war machine forward after the initial series of conventional engagements, it faced the

possibility the United States might attempt to blunt its offensive through the use of "tactical" battlefield nuclear strikes.

The adoption of the strategy of massive retaliation was viewed by the Eisenhower administration as critical for deterring Communist aggression against the United States and its allies given the conventional force imbalances favoring the Soviet bloc. Eisenhower and Dulles also believed equipping U.S. armed forces with a range of tactical and strategic nuclear systems, and deploying nuclear-armed units to both the European and Pacific theaters, would reassure allies nervously watching the decline in post-Korean War U.S. defense budgets and significant drawdowns in the number of U.S. troops deployed abroad. U.S. nuclear forces, whether forward deployed or capable of rapidly rotating to overseas bases, would serve as a visible demonstration of Washington's willingness to directly commit nuclear weapons to the protection of its friends and allies abroad and risk nuclear war on behalf of their defense.[88]

Flexible Response. By the early 1960s, however, U.S. policymakers and strategists began searching for viable alternatives to a strategy dependent on deterring the Soviet Union with a massive outpouring of destruction over any conventional provocation. In addition, significant Soviet improvements to its nuclear strike capabilities and expansion of its nuclear arsenal put the entire American homeland at risk in any future conflict, raising new questions for U.S. deterrence and extended deterrence strategies that relied on America enjoying a decisive advantage in nuclear forces. Both sides were also developing and fielding nuclear forces with intercontinental range, to include ground-launched ICBMs (the first U.S. ICBM, the Atlas D, was fielded in late 1959) and submarines capable of launching SLBMs, to supplement their existing forces of nuclear-capable manned bombers.

These developments immensely complicated targeting decisions and game theoretical approaches to war fighting. If both sides had some forces that could survive a nuclear first strike, either could respond by hitting the other's homeland with these remaining "second strike" weapons. In an era lacking effective ballistic missile defenses, both societies were totally vulnerable to these potential second strikes. U.S. strategists realized that even if the United States withheld Soviet cities from an initial nuclear strike (in hopes that the enemy would do the same), those population centers would be vulnerable to a second strike, essentially serving as hostages to intra-war negotiations.

As a result, some U.S. strategists and policymakers began to question whether massive retaliation still represented a credible threat; it

appeared unlikely to achieve its military objectives without enormous loss of life on both sides, with costs so high that decision-makers would likely dismiss it out of hand. The Soviet Union also appeared willing to test the resolve of the United States and its allies by using military and security forces to take actions that damaged Western interests – such as physically dividing Berlin – in a manner that did not result in shots being fired. How could the United States deter limited provocation if its only strategy was to counter Soviet aggression with the threat of total nuclear Armageddon?

Forced to consider these questions against the backdrop of a series of superpower crises over Berlin and other issues, the John Kennedy administration became convinced it needed to explore new ideas for deterring the global Soviet threat. President Kennedy recognized that U.S. nuclear forces remained essential to U.S. deterrence, extended deterrence, and assurance strategies. The Soviet advantages in manpower and the defense requirements of a globally dispersed set of allies could not be addressed by conventional forces alone. He was dissatisfied, however, with war plans that left him with little recourse to respond to Soviet Bloc incursions or harassment with anything other than a major nuclear attack. In response, he directed his national security team to develop options for U.S. responses to Soviet provocations in Europe and elsewhere that did not begin or end with a massive U.S. nuclear attack against a broad range of Soviet targets. Thus began the search for more flexible, discrete nuclear options that could deter the Soviet Union from attacking the United States or its allies short of the threat of an all-out nuclear war.

Accordingly, the Kennedy administration moved U.S. policy away from massive retaliation toward a new concept called "flexible response." This approach, although still dependent on the deterrent value of large numbers of nuclear weapons to keep Soviet strategic nuclear forces at bay, was designed to provide the United States and its allies with a plausible range of conventional and nuclear options for reaction to Soviet aggression or provocation short of a resort to a general nuclear war. These options sought to match U.S. military capabilities (and the potential costs of a conflict) to the level of adversary provocation and would, in theory, allow a conflict to remain limited in its early stages.[89]

One approach to developing flexible nuclear options for the president was selecting targets that did not imply the destruction of the adversary's population – at least not right away. Such an approach might emphasize certain adversary targets, such as first and second strike nuclear capabilities, economic recovery industries, national leadership, command and control locations, and so on. These limited, selective, or

regional attack options would represent alternatives to launching an all-out nuclear war that would include strikes on Moscow and other Soviet cities – and, it was hoped, grant time for the superpowers to pull back from the brink of nuclear Armageddon.[90]

The concept of assured destruction, however, was not abandoned in this new approach to deterrence; in fact, it was embraced by Secretary of Defense Robert McNamara as an empirical measure for determining force structure requirements for the U.S. nuclear arsenal. Indeed, robust nuclear forces were vital to the credibility of U.S. conventional response options, as the latent threat of a possible nuclear attack was viewed as limiting Moscow's moves in a crisis or conflict.

*Allied Assurance***.** The development of the flexible response concept also attempted to balance competing – and sometimes conflicting – requests from American allies, who asked for the protection of America's nuclear umbrella while also seeking assurances from Washington that U.S. nuclear forces would never be used in anger. This challenge was particularly acute within NATO, whose European members were wary of the two superpowers using their territory as either a testing- or proving-ground for superpower brinkmanship. NATO states feared a "limited" superpower conflict in Europe might leave Washington and Moscow intact but devastate their home territories. The Kennedy administration's efforts to press NATO members to decrease their reliance on U.S. nuclear weapons by expanding and improving their conventional forces, however, met with little success. Allied political leaders were wary of increasing defense spending at the expense of social and economic programs at home, while their military staffs believed nuclear options represented the only way to deter the Warsaw Pact.

The NATO allies, joined by the General Lauris Norstad, the U.S. general in command of all alliance forces from 1956-1963, raised two major objections to the Kennedy administration's concept of flexible response. First, they argued that any conventional conflict in Europe, however limited, was likely to end with the Warsaw Pact in control of allied territory. They believed NATO should maintain a policy of strongly implying that any adversary attack, however limited, could trigger a nuclear response from the alliance. They worried that even discussing the possibility of preparing options for fighting a limited conflict with limited means might lead the Kremlin to conclude they could threaten the alliance – particularly on the European continent – with little significant or direct risk to themselves. Second, they were deeply skeptical of the assumption that two nuclear-armed superpowers,

and their proxies, could effectively limit and manage an escalating military crisis. They feared that any limited conventional conflict was unlikely to remain either limited or conventional for very long, with potentially disastrous consequences for the governments and civilian populations of NATO's European states.

NATO allies were not in a position to flatly reject the Kennedy administration's ideas on flexible response, and the concept became official NATO policy in 1967. The alliance's Defense Planning Committee stated that

> The overall strategic concept for NATO should be revised to allow NATO a greater flexibility and to provide for the employment as appropriate of one or more of direct defence, deliberate escalation, and general nuclear response, thus confronting the enemy with a credible threat of escalation in response to any type of aggression below the level of a major nuclear attack.[91]

The non-U.S. members of the alliance, however, never fully embraced flexible response as a substitute for massive retaliation In the 1960s and beyond, members of NATO firmly believed the alliance should rely on a strong nuclear deterrent to protect Western Europe and to prevent the superpowers from seriously contemplating any kind of a land war on the continent. Faced with a Warsaw Pact opponent able to call on seemingly inexhaustible reserves of manpower, NATO militaries backed the alliance's reliance on a nuclear deterrent largely dependent on U.S. strategic and tactical nuclear forces. Moreover, most political leaders of NATO states – regardless of their ideological views, and despite the fact nuclear forces were often unpopular with their domestic publics – ultimately accepted nuclear weapons as the only cost-effective means for guaranteeing their national security. As a result, both during and after the Kennedy administration the concepts of flexible response and assured destruction existed side-by-side – not always comfortably – in informing U.S. extended deterrence policies and strategies.

Trading New York for Hamburg? The U.S. ability to defend Western Europe with nuclear forces capable of deterring a superior conventional opponent (and, in time, a nuclear peer) thus represented the cornerstone of NATO Cold War defense strategies. It was also vital to U.S. efforts to assure each of the alliance's member states that they enjoyed the protection of a nuclear-armed superpower. With the United States representing far and away the most powerful member of NATO, the cohesion of the alliance depended on member states believing that U.S. political leaders were prepared to put their military forces – and

perhaps even their homeland – at risk in order to defend allies on the other side of the Atlantic.

As the Soviet Union began developing nuclear forces capable of ranging U.S. cities, however, not all U.S. allies were convinced this was the case. By the 1960s, President Charles de Gaulle of France was openly speculating the United States would never trade New York for Hamburg – i.e. it would never risk a Soviet nuclear strike against a major U.S. city in order to protect a vulnerable allied target from an attack by the Warsaw Pact.[92] He also argued that NATO was dangerously dependent on the United States and its uncertain (in his mind) nuclear deterrent, effectively ceding sovereign decision-making and national security decisions to American policymakers in Washington. This, he asserted, was extremely dangerous given tensions between the United States and the Soviet Union, holding NATO's European members hostage to decisions in foreign capitals. De Gaulle's doubts about the credibility of U.S. extended deterrence commitments to NATO led him to strongly support France's development of an independent nuclear deterrent. Neither assured destruction nor flexible response appeared credible to him in light of the Soviet Union's ability to directly threaten the United States with nuclear attack. These doubts and his broader concerns that France's membership in the alliance hindered its national security and ability to independently engage in Cold War geopolitics informed his decision to withdraw France from the NATO's military structure in 1966.[93]

The questions raised by de Gaulle posed a significant challenge to U.S. efforts to assure its European allies as the Soviet Union began to develop ICBMs and other long-range nuclear forces.[94] By the late 1960s Moscow possessed a significant edge in conventional forces and appeared capable of credibly threatening the United States, even if its overall numbers of forces were still several years from catching up to the U.S. arsenal. Some allies wondered if an American president would engage in brinkmanship with the Kremlin over Hamburg, Berlin, or other vulnerable areas of the alliance. U.S. domestic politics also contributed to allied unease in the 1960s, with a number of members of Congress voicing their displeasure over what they viewed as a failure of other NATO states to shoulder what they considered a fair share of the burden of defending Europe.[95]

The loss of one of its strongest members was a blow to NATO, but it remained intact through the end of the Cold War because U.S. leaders clearly demonstrated their willingness to risk blood and treasure on behalf of Germany and other members of NATO. When France's exit from NATO threatened to leave the alliance homeless and deprive it of a

number of key military facilities, the Johnson administration worked to quickly and seamlessly transition NATO's headquarters from Paris to Brussels and U.S. forces stationed in France to the United Kingdom, Belgium, and Germany. President Lyndon Johnson also used his skills in domestic politicking to head off efforts in the Congress to halve the number of U.S. forces in Europe, and ensured the provision of continued military and economic support to key NATO members.[96]

Furthermore, for many European allies de Gaulle's argument that nuclear weapons represented the only true guarantee of national security in the superpower era ultimately solidified their commitment to NATO. Like de Gaulle, they had become convinced of the importance of nuclear deterrence to the defense of their home countries. They differed from de Gaulle, however, in their assessment of the U.S. commitment to their defense. For most NATO states during the Cold War, U.S. conventional and nuclear forces posted to bases on or near their home territory provided a visible demonstration of Washington's preparedness to fight for Western Europe.

In addition, the support of U.S. leaders, beginning with President Eisenhower, for NATO "nuclear sharing" arrangements (which would make certain types of U.S. nuclear weapons stored in Europe available to allies in the event of a major Warsaw Pact attack) also addressed concerns the United States would reserve nuclear forces for use only in defense of its narrow national interests.[97] As aptly summarized by Sir Lawrence Freedman in his study *The Evolution of Nuclear Strategy*, most NATO allies during the Cold War "prefer[ed] to live with the known uncertainties of the US nuclear guarantee than with the political and strategic uncertainties of nuclear independence."[98] Despite significant stresses upon the alliance later in the Cold War, after 1966 no other states would defect from NATO, and U.S. nuclear forces would remain the linchpin of NATO defense strategies and plans until the fall of the Berlin Wall.

De Gaulle's defection also raised questions about the role of U.S. extended deterrence strategies within the broader geopolitics of the Cold War. The French president charged that these strategies could actually interfere with the development of stable, productive relations between European states and the Soviet Union. While disagreeing with de Gaulle's decision to break away from the alliance, other members of NATO agreed the alliance needed to determine its views on the relationship between deterrence and diplomacy during an era of competition between two superpowers and their respective blocs. Recognizing the importance of this relationship to assuring its NATO allies, the Johnson administration supported Belgian Foreign Minister

Pierre Harmel's suggestion in late 1966 that the members of the alliance conduct a comprehensive study of its first 20 years and use the results to assess its future military and diplomatic goals. The initiative was recognized as a key effort to rally the alliance in the wake of France's withdrawal and internal disagreements over whether and how to diplomatically engage the Soviet Union. The report found that the alliance could exercise deterrence and conduct diplomacy at the same time, concluding that "military security and a policy of détente are not contradictory but complementary."[99] While the Johnson administration would have preferred stronger language in support of deterrence, the report's findings generally aligned with the president's conviction that the alliance's bargaining power was directly linked with its military strength:

> [a] strong NATO remains essential if we are to reach a solid agreement with the Soviet Union that reflects the common interests of each of the allied nations in peace and security.[100]

The United States' endorsement of the report and its unanimous acceptance by the other members of NATO in late 1967 effectively ended questions about the alliance's viability in the wake of France's departure. It also addressed allied concerns regarding the superpower relationship. NATO members believed the U.S. nuclear umbrella over the alliance was important to their national security. However, they also wanted the United States to leave the door open for diplomacy with the Soviet Union, arguing that a cold peace with the Soviet bloc was better than a hot war that would destroy Europe. As a result, the willingness of U.S. leaders in the late 1960s and beyond to stake political capital on both the defense of NATO and on diplomacy with the Kremlin was an important component of U.S. assurance strategies during the remainder of the Cold War.

Supporting Nuclear Deterrence and Arms Control; Rejecting Missile Defenses. Most U.S. political and military leaders reluctantly accepted deterrence and extended deterrence strategies based on the concept of assured destruction as the price of maintaining a stable relationship with Moscow and ensuring the defense of U.S. allies around the globe. Flexible response provided an alternative approach that appeared to broaden the scope of potential U.S. responses to enemy provocation to include options below the threshold of a nuclear exchange. But the risk of losing control over a limited conflict haunted U.S. presidents and strategists alike after the Cuban Missile Crisis.

The two Cold War superpowers were famously described by J. Robert Oppenheimer as "two scorpions within a bottle, each capable of

killing the other, but only at the risk of his own life."[101] The search for a way out of this "bottle" led some U.S. strategists to suggest developing sophisticated defense systems capable of shielding the U.S. homeland from Soviet ballistic missile strikes. In the 1950s and 1960s the U.S. Army sponsored feasibility studies and technology demonstrators aimed at developing an anti-ballistic missile that could intercept and destroy a ballistic missile in flight.[102] These efforts progressed slowly and by the mid-1960s did not appear close to offering the prospect of a foolproof defense against a Soviet nuclear strike featuring hundreds or thousands of missiles. Nevertheless, the development of even a rudimentary missile defense system held forth the prospect of some type of limited defense against nuclear-armed ballistic missile attacks. In 1967 Secretary of Defense Robert McNamera announced a decision to deploy a missile defense system ("Sentinel") intended to provide a "thin" defense for major U.S. cities against the relatively limited ICBM capabilities of China.[103]

This decision would subsequently lead the Johnson administration to hold discussions with NATO allies regarding the possibility of deploying missile defenses to Western Europe in the future. Allied capitals, however, opposed the idea.[104] By the late 1960s they had remained under the U.S. nuclear umbrella for nearly two decades, and had accepted the idea that the threat of mutual assured destruction (MAD) ensured strategic stability between the two superpowers. They feared missile defense systems might upset this deterrence relationship, and concluded they preferred the familiarity of MAD over an unproven technology only capable of providing a very limited defense against an adversary ballistic missile attack.

Instead of attempting to find a high-technology solution to the existential threat posed by the Soviet Union's growing nuclear arsenal, U.S. allies sought to address this threat through a combination of nuclear deterrence – primarily in the form of U.S. nuclear forces, supplemented in NATO by British SSBNs and allied DCA – and superpower diplomatic negotiations aimed at limiting their numbers of nuclear delivery systems and warheads. Within NATO, the allied states remained committed to the Harmel report's recommendation that the alliance should present the Soviet bloc with a sword in one hand and an olive branch in the other.

Many U.S. allies also concluded that very large numbers of warheads were not necessary to guarantee the credibility of the U.S. nuclear umbrella. Those allies that feared their territory might become a nuclear battleground between the superpowers, for example, recognized that even a limited nuclear exchange on or above their home soil would

have devastating consequences for their civilian populations. Given this context – which applied to parties on both sides of the superpower divide – many allied strategists believed relatively small nuclear arsenals were sufficient for the purposes of stable nuclear deterrence.

Most U.S. allies thus supported the United States and Soviet Union negotiating an agreement establishing a ceiling for their strategic nuclear arsenals, convinced this form of superpower nuclear parity could provide sufficient weapons for their protection and prevent a spiraling arms competition that threatened to destabilize relations between Washington and Moscow.[105] As a result, NATO allies backed the Nixon administration's decision to initiate the Strategic Arms Limitation Talks (SALT) with the Soviet Union in November 1969, recognizing that the limits on strategic nuclear forces sought at the negotiating table would not affect the U.S. provision of extended deterrence to the alliance. Importantly, however, states such as the United Kingdom worked hard to coordinate allied efforts to keep non-strategic systems such as DCA, which they viewed as critical to NATO's defense, out of the negotiations.[106] As NATO noted in a December 1970 communiqué titled "Alliance Defence for the Seventies," the alliance "hoped that success in strategic arms limitation talks will be achieved" but also reaffirmed that "Allied strategic nuclear capability will in any event remain a key element in the security of the West during the 1970s."[107]

Throughout the SALT process, a number of key NATO allies stressed that ongoing consultations on the progress of negotiations were important to their assurance. The Nixon administration agreed to do so, and in 1971 members of the alliance noted their "satisfaction … for the close Alliance consultation which has been conducted throughout the course of the Strategic Arms Limitations talks" and also "expressed the hope that these negotiations will soon lead to agreements which would curb the competition in strategic arms and strengthen international peace and security."[108] With many U.S. allies remaining deeply skeptical of the strategic value of missile defenses, the successful negotiation through SALT of the 1972 Anti-ballistic Missile Treaty was favorably received by most allied governments, who did not believe the accord's limits on missile defense systems would impact the ability of the United States to fulfill its mutual defense obligations.[109]

From Countervalue to Counterforce Strategies. The concepts of flexible response and assured destruction continued to shape U.S. nuclear strategies and the development and posturing of forces into the 1970s. For the purposes of deterrence, extended deterrence, and allied assurance, these concepts remained important to Washington's efforts to

protect the United States and its allies from the Soviet Bloc's nuclear and conventional arsenals. During the Kennedy administration, the United States had retained significant qualitative and quantitative advantages in nuclear forces. By the 1970s, however, the Kremlin fielded both nuclear and conventional forces larger than the capabilities fielded by the United States and its allies.

Working within the general constructs of these two overarching concepts, U.S. strategists continued to develop plans that could use escalating levels of conventional or nuclear forces to respond to Soviet provocations without triggering Armageddon. This balancing act was reflected in documents such as NATO's Military Committee document 14/3, published in January 1968. The guidance document stated that the alliance "must be manifestly prepared at all times to escalate the conflict, using nuclear weapons if necessary" in response to a potential attack by the Warsaw Pact. It also noted, however, that

> [t]he effects of nuclear war would be so grave that the Alliance should engage in such action only after the possibilities of preserving or restoring the integrity of the NATO area through political, economic and conventional options had been tried and found insufficient.[110]

Document 14/3 also maintained the alliance's strategy of calculated ambiguity in regard to possible nuclear weapons use, which member states agreed remained critical to leaving the Warsaw Pact in doubt regarding what type of aggression might lead to a nuclear response. As noted by the NATO commander responsible for the defense of its vulnerable central front,

> We had one great advantage … Despite all its knowledge of NATO, the Soviet General Staff could never be certain of the exact circumstances in which we would 'go nuclear' [for the simple reason that the members of NATO themselves did not know] [111]

The United States continued its efforts to assure its allies that it possessed a broad range of military forces and attack options (both conventional and nuclear) to remain fully in control of a clash with the Soviet Bloc, to include nuclear strikes of limited scope (such as battlefield use against Soviet tank columns). Until the early 1970s, however, U.S. delivery systems lacked the technological sophistication required to fully realize these strategies or accompanying plans. Amongst other requirements, limited or flexible nuclear options required delivery systems and warheads that could maintain a very high degree of

reliability and accuracy in even the most hostile operating environments. In the absence of these systems, the U.S. military found it needed to develop plans featuring significant numbers of nuclear forces to guarantee the destruction of even a relatively small set of target objectives. It also found it difficult to effectively limit the effects of a nuclear strike.

This posed a major problem to efforts to develop either "limited" or "flexible" strike options. For several years "flexible response" represented a U.S. deterrence/extended deterrence concept that was important in theory but difficult to implement in practice. As a result, it was not until the mid-1970s that specific niche categories of targets came into U.S. war plans, first appearing within the 1974 Nuclear Weapons Employment Policy as part of the Schlesinger Doctrine (named for Richard Nixon's Secretary of Defense, James Schlesinger). As Schlesinger testified to Congress, the United States needed

> [o]ptions which did not imply immediate escalation to major nuclear war… What we need is a series of measured responses to aggression which bear some relation to the provocation, have some prospect of terminating hostilities before general nuclear war breaks out, and leave some possibility for restoring deterrence."[112]

Innovations in military technology coming to fruition during the Nixon and Gerald Ford administrations finally allowed the United States to develop nuclear delivery systems and weapons capable of carrying out deterrence by denial strategies that only targeted Soviet nuclear forces.

The central document marking this shift from countervalue to counterforce deterrence strategies, NSDM-242, emphasized the goal of early war termination on grounds acceptable to the United States, with limited nuclear employment options a key approach to fighting any conflict. At the same time as nuclear forces were becoming more accurate, better intelligence gathering assets were also becoming available, thus granting the United States additional tools to better identify targets and minimize collateral damage.[113]

While the United States retained significant deterrence by punishment options, by the mid-1970s deterrence by denial strategies were receiving greater emphasis in U.S. guidance documents. Improvements in military technology granted the United States the ability to develop strategies and plans that better reflected the doctrine in documents such as NATO 14/3. Increased accuracy, precision, and the ability to limit damage were associated with increased credibility; in theory, the president would not be "self-deterred" by fears that the only

available options would cause large numbers of adversary casualties and might trigger a massive nuclear exchange destroying both superpowers. U.S. leaders and strategists hoped that in the eyes of both adversaries and allies the significant qualitative improvements to U.S. nuclear forces realized during the 1970s demonstrated the United States possessed both the political resolve and military capability to effectively respond to potential threats and attacks against its friends around the globe.

The SS-20 Crisis. Soviet leaders recognized the United States faced a number of challenges in extending a nuclear umbrella over the European members of NATO. In the mid-1970s, they began deploying the SS-20 intermediate-range ballistic missile (IRBM) in its western regions, hoping the threat posed by the new weapon system would strain and fracture the alliance.[114] The SS-20 was a mobile missile that upon initial deployment could lay a credible claim to representing the most sophisticated and highly capable nuclear delivery systems in Europe.[115] It could not, however, reach U.S. territory, nor did it change the overall balance of nuclear forces between the two superpowers, both of which possessed hundreds of longer-range "strategic" delivery systems and thousands of warheads.

As such, the SS-20 was clearly designed for the European theater and intended for NATO targets on the continent. The Soviet IRBM thus posed a direct challenge to U.S. assurance strategies for the alliance. A failure to adequately respond to the threat would leave NATO allies wondering if the United States was prepared to challenge the Soviet Union over a weapon system that did not pose a direct threat to the U.S. homeland. A 1978 briefing to the Secretary of State on the SS-20 and other recent improvements to Soviet nuclear forces summarized the assurance problem facing Washington: the deployment of the IRBM had "reawakened Allied concerns about the credibility of NATO's posture and the US commitment [to their defense]."[116]

As a result, the SS-20 precipitated a slow-burning crisis for the Jimmy Carter administration that continued into Ronald Reagan's presidency. U.S. allies pressed the United States for a direct response to the SS-20. At the same time, however, they were also wary of hosting additional U.S. nuclear forces on their own soil. Several faced determined internal political opposition and vocal protest movements demanding they either block the placement of additional nuclear forces on their home territory or calling for the removal of all U.S. nuclear weapons from Europe. In addition, many NATO states also continued to strongly support further superpower arms control talks, and asked that

the alliance's response to the SS-20 not jeopardize further bilateral diplomacy on nuclear weapons issues between Washington and Moscow.

These factors led the United States and NATO to adopt a "dual track" approach in response to the challenge posed by the SS-20. In keeping with the Harmel Report, the alliance would combine efforts to boost its nuclear deterrent by adding U.S. intermediate-range nuclear forces to counter the Soviet IRBM while simultaneously communicating a willingness to start a new round of superpower nuclear arms control negotiations focused on this class of weapons. The first track would focus on developing nuclear forces capable of acting as a direct counterweight to the SS-20, with the United States deploying ground-launched cruise missiles (GLCMs) and Pershing II IRBMs to its bases in Western Europe. At the same time, the United States would pursue a second diplomatic track focused on bringing the Soviet Union to the negotiating table in order to discuss a treaty eliminating IRBMs and other nuclear-delivery systems that posed a threat to each side's allies in Europe.[117]

The strategy sought to restore the credibility of U.S. nuclear commitments to NATO while also addressing calls from European allies for additional nuclear arms control. It continued the trend, dating to the Harmel report, of committing the alliance to both maintaining a strong (nuclear) deterrent and supporting initiatives promoting détente between the superpowers and their respective blocs. Despite facing a number of serious challenges – to include major political protests in NATO states against the deployment of the new U.S. systems, and a serious breakdown in U.S.-Soviet arms control talks in November 1983 – the strategy ultimately proved successful on both tracks. The deployment of U.S. nuclear-delivery systems matching the SS-20 reassured NATO allies of the U.S. commitment to protect them from Warsaw Pact nuclear provocations or attacks. Further reassurance was provided by the U.S. willingness to initiate nuclear arms control talks with the Kremlin and place systems such as the Pershing on the table in exchange for the SS-20. The diplomatic track also bore fruit. U.S.-Soviet arms control negotiations focused on IRBMs and related systems led to the successful negotiation of the 1987 Intermediate- and Shorter-Range Nuclear Missiles Treaty (INF), which eliminated all U.S. and Soviet missiles with ranges of 500-5500 km.

Rejecting "Star Wars" and Re-Affirming Nuclear Extended Deterrence. President Reagan came to office determined to improve the U.S. military's conventional and nuclear forces in order to respond to quantitative and qualitative improvements in Soviet military hardware.

His administration also continued the trend of shifting U.S. nuclear strategy to emphasize counterforce and deterrence by denial approaches. A significant increase in U.S. defense spending led to considerable progress in developing the capabilities necessary to actually implement such a strategy, to include new weapons and intelligence, surveillance, and reconnaissance (ISR) systems. As with a number of his predecessors, however, Reagan was dissatisfied with the options available to him in the event of a nuclear crisis or conflict. This led to an interest – first publicly expressed in 1983 – in seeking means to shield the United States and its allies from Soviet ballistic missile strikes with a true national missile defense system.

Allied political and military leaders were divided over Reagan's efforts in his first term to bolster U.S. conventional and nuclear forces. Some welcomed U.S. efforts to respond to recent Soviet arms build-ups, but others preached caution, fearing that U.S. and Soviet leaders were each taking steps that were inadvertently ratcheting up tensions between the superpowers.[118] U.S. allies during the early 1980s recognized the Soviet Bloc continued to pose a formidable military threat to their security. They also worried, however, that the United States and Soviet Union were endangering the limited – but in their view, critically important – progress on nuclear arms control that had led to agreements such as the 1972 ABM and SALT I Treaties.

As a result, most reacted negatively to President Reagan's March 23, 1983 speech announcing his intent to investigate a high-technology solution to the existential threat posed by nuclear-armed ballistic missiles. In his speech the president stated that the challenges of the nuclear age had led him to ask:

> What if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?[119]

Reagan hoped the answer to these questions could be provided by researching and ultimately developing a cutting-edge, effective missile defense system capable of fully protecting the United States and its allies from the Soviet ballistic missile fleet. He also believed effective defenses could significantly reduce both sides' dependence on nuclear deterrence and precipitate serious discussions on major superpower arms reductions.[120] This effort – officially titled the Strategic Defense Initiative (SDI), but soon dubbed "Star Wars," due to the possibility a future U.S. missile defense system might include components deployed in space – met with broad skepticism, and in some cases strong

opposition, in most allied capitals. U.S. allies shared Reagan's interest in finding a way to eliminate the threat posed by Soviet nuclear forces, but many viewed the missile defense shield proposed by SDI as an expensive gamble that threatened the ABM Treaty and other limited gains realized during the SALT talks of the late 1960s and 1970s and the ongoing INF talks. They also feared SDI would destabilize the nuclear deterrence relationship between the superpowers and their respective blocs, perhaps leading the Soviet Union to further increase its nuclear arsenal or take other steps to offset U.S. efforts to develop an effective active defense system against its nuclear forces. As one contemporary commentator observed in discussing the trepidation of NATO's European members regarding SDI, "[m]any Europeans instinctively regard the introduction of major new military technologies as either a threat to stability or as a futile attempt to provide hardware answers to political questions."[121]

Some allies also worried that Reagan's efforts to make nuclear weapons irrelevant to the superpower relationship might leave them outside of U.S. strategic planning and defenseless against the conventional superiority of the Warsaw Pact. If SDI worked and the United States decided to dismantle many of its nuclear weapons, what would prevent the Red Army and its allies from using its conventional superiority to steamroll over Western Europe? "Increased security for the territories of the Soviet Union and the United States," argued Helmut Schmidt, German Chancellor from 1974-1982, "could only be added [at] the cost of reduced security in Europe."[122]

U.S. allies responded to SDI by arguing they were better assured by a combination of U.S. conventional forces (particularly those deployed to overseas bases on their home territory), a robust U.S. nuclear deterrent (to include both strategic and "non-strategic" systems), and commitment from Washington to superpower diplomacy aimed at reducing tensions and limiting nuclear forces. Their objections to SDI also reiterated concerns expressed regarding previous U.S. missile defense proposals such as Safeguard. Twenty years later, they still believed the systems proposed were too uncertain, expensive, and risky to provide a reliable defense against nuclear attacks. Furthermore, in rejecting SDI they re-affirmed their commitment to the status quo of the U.S. nuclear umbrella guaranteeing their security against the conventional and nuclear threats of the Soviet bloc.

This status quo remained largely in place for the remaining years of the Cold War. Neither SDI nor tentative discussions between U.S. and Soviet leaders on major nuclear reductions were realized during the 1980s. While superpower arms control talks moved beyond the systems of the INF Treaty to consider limits on conventional and strategic nuclear

forces, these discussions took place against the backdrop of significant numbers of U.S. conventional and nuclear forces (both tactical and strategic) remaining in place in Europe and East Asia – forces that continued to assure U.S. allies and serve as a deterrent to their prospective adversaries.

The 1991 Presidential Nuclear Initiatives. The dissolution of the Warsaw Pact in February 1991 removed a critical threat to NATO. Six months later, fearing the Soviet Union itself was falling apart, hardliners attempted a coup against President Mikhail Gorbachev. While the attempted takeover failed, U.S. officials became deeply concerned over the security of Soviet nuclear weapons, many of which were scattered over territory of the 15 Soviet republics preparing to declare their independence from Moscow.

Hoping to encourage Moscow to consolidate its nuclear delivery systems and warheads, and convinced the nature of U.S. deterrence and extended deterrence strategies could change to reflect a reduced threat environment in Europe and East Asia, in September 1991 President George H. W. Bush announced a significant drawdown of U.S. tactical nuclear weapons deployed abroad and invited the Soviet Union to do the same. With the Soviet Union teetering on the brink of disintegration, he concluded that U.S. allies were no longer directly menaced by the threat of a major Soviet bloc invasion of Western Europe. Indeed, shortly after the Warsaw Pact disbanded, the European members of NATO pressed the United States to remove its ground-launched nuclear forces from their territory.[123]

President Bush's decision to fundamentally reduce the United States' deployments and stockpiles of tactical nuclear weapons were later titled the "Presidential Nuclear Initiatives," (PNIs). The president ordered the removal of the majority of the U.S. nuclear warheads deployed in Europe and all of the nuclear warheads deployed to the Republic of Korea (ROK). The PNIs also removed all nuclear weapons from U.S. surface ships, attack submarines, and land-based naval aircraft, and cancelled several modernization plans for tactical nuclear weapons and delivery systems.[124] Gorbachev responded by agreeing to a set of parallel Soviet PNIs, a pledge reiterated by his successor, Russian President Boris Yeltsin, in early 1992.[125]

President Bush recognized the key role tactical nuclear weapons played in U.S. Cold War extended deterrence and assurance strategies, and sought to directly address potential allied concerns related to his decision to significantly reduce these forces. Prior to announcing the PNIs, he discussed his decision with a number of key U.S. allies, and

took care to note within his speech that he received "valuable counsel from Prime Minister Major (UK), President Mitterrand (France), Chancellor Kohl (Germany), and other allied leaders."[126] President Bush also reassured U.S. allies that drawdowns in tactical nuclear forces did not imply either a weakening of the U.S. commitment to NATO nuclear sharing arrangements or a folding up of the U.S. nuclear umbrella that had long protected its European and Asian allies. He emphasized that the United States would "preserve an effective air-delivered nuclear capability in Europe" stating that these forces remained "essential to NATO's security."[127] In addition, in separate bilateral discussions with the United States' East Asian allies, administration officials confirmed the PNIs would not affect the ability of the United States to deploy the submarine-launched Tomahawk Land Attack Missile-Nuclear (TLAM-N), a weapon viewed by Japan and the ROK as important to U.S. nuclear guarantees in the Pacific.[128]

The NATO allies welcomed the PNIs and the subsequent removal of over 90 percent of the U.S. tactical nuclear warheads deployed to Europe. At the same time, however, uncertainty regarding the future of the Soviet Union (and its successor, the Russian Federation), led the United States and NATO to remain committed to U.S. provision of extended deterrence to the alliance in the form of nuclear and conventional forces. The U.S. strategic nuclear arsenal, for example, continued to buttress the decreasing number of remaining tactical nuclear weapons deployed in Europe. In addition, significant numbers of U.S. conventional forces also remained in Europe.

This strategy was confirmed in NATO's November 1991 "New Strategic Concept," which stated that the Alliance

> agreed to move away, where appropriate, from the concept of forward defence towards a reduced forward presence, and to modify the principle of flexible response to reflect a reduced reliance on nuclear weapons

while also reiterating that "[t]he presence of North American conventional and US nuclear forces in Europe remains vital to the security of Europe, which is inseparably linked to that of North America."[129] The experience of the recently-concluded Gulf War, where Iraqi dictator Saddam Hussein used ballistic missiles to threaten the cohesion of the U.S.-assembled coalition and attack U.S. and allied forces, also led the New Strategic Concept to endorse future efforts to develop missile defenses.[130]

The end of the Cold War thus brought about one significant change to U.S. extended deterrence and assurance strategies: the

significant reduction of tactical nuclear weapons intended to protect allies from massed conventional forces in Central Europe and along the Korean DMZ. It also reaffirmed the enduring importance of the U.S. nuclear forces, (in the form of the strategic triad and a limited number of tactical weapons) and conventional forces deployed abroad, to these strategies. It also brought a subtle shift in allied views on missile defenses that became more important over time. Most U.S. allies had rejected efforts by Washington in the late 1960s and mid-1980s to introduce missile defenses into deliberations on defense strategy, viewing them as a potential threat to deterrence concepts that both shielded them from the Soviet Union and coupled their security with that of the United States. While many allies remained skeptical of national missile defense concepts into the post-Cold War era, Saddam Hussein's use of Scuds in the 1991 Gulf War and the broader challenge of ballistic missile proliferation to other "third world" states led NATO to become interested in the potential role of theater missile defenses (TMD) in combined defense strategies. While allies remained uncertain and divided on the role of missile defenses in the years ahead, they increasingly became part of U.S.-allied discussions related to the development and implementation of extended deterrence and assurance strategies.

Post-Cold War Deterrence, Extended Deterrence, and Allied Assurance

Lead but Hedge: The 1994 NPR. The Soviet Union came to an end in December 1991, and the new Russian Federation declared its intent to pursue peaceful relations with the United States and its allies. President William Clinton and his national security team came into office seeking to change the security dynamic between the two countries and hoping to realize a "peace dividend" by significantly drawing down the U.S. Cold War military. With the Russian Federation inheriting the formidable Soviet nuclear arsenal, however, the Clinton administration would also commit to maintaining a strong U.S. nuclear force and strengthen U.S. extended deterrence guarantees.

These decisions stemmed from the administration's completion in 1993-94 of the United States' first Nuclear Posture Review (NPR), a comprehensive post-Cold War assessment of the nuclear strategies, posture, and forces of the United States. Subsequent administrations would follow this practice of ordering a detailed review of U.S. nuclear posture shortly after assuming office. The dominant theme of the 1994 NPR was "lead but hedge."[131] The United States would "lead" with

regard to seeking negotiations with the Russian Federation on numerical reductions in nuclear forces and spearheading cooperative efforts to secure the weapons, materials, and expertise associated with the Soviet nuclear arsenal.[132] At the same time, however, it would maintain a significant nuclear arsenal to "hedge" against the possibility that Moscow might reverse its current trend of proactive diplomatic engagement. The review's assessment of U.S. requirements for fulfilling deterrence, extended deterrence, and assurance missions found that the United States should continue to maintain a "roughly equivalent [nuclear] force" to the strategic nuclear deterrent fielded by the Russian Federation. Looking beyond Russia to other potential nuclear threats, the 1994 NPR also argued in favor of maintaining a significant nuclear "hedge" due to concerns nuclear proliferation might result in the United States and its allies facing multiple nuclear-armed adversaries in the future:[133]

The findings of the 1994 NPR led the Clinton administration to seek nuclear force reductions with Russia through the mechanism of arms control while also supporting the maintenance of a nuclear arsenal capable of deterring Russia and a range of other potential nuclear-armed adversaries. The administration's 1994 National Security Strategy asserted that strategic nuclear forces remained critical to post-Cold War deterrence.

> We will retain strategic nuclear forces sufficient to deter any future foreign leadership with access to strategic nuclear forces from acting against our vital interests and to convince it that seeking a nuclear advantage would be futile. Therefore we will continue to maintain nuclear forces of sufficient size and capability to hold at risk a broad range of assets valued by such political and military leaders.[134]

The Clinton administration also found the U.S. extended deterrence and assurance strategies continued to require both strategic and tactical nuclear weapons. Clinton administration officials considering the assurance needs of the NATO alliance, for example, strongly supported keeping U.S. tactical nuclear weapons in Europe. Appearing before Congress in September 1994, Deputy Secretary of Defense John M. Deutch stated that tactical nuclear weapons remained important to assuring NATO members and maintaining the credibility of the U.S. nuclear umbrella. While noting "the Russians no longer have the military capability to mount [a major] conventional attack" on Western Europe, Deutch emphasized that U.S. tactical nuclear weapons

remained essential to U.S. assurance strategies for NATO via their central role in alliance nuclear-sharing arrangements:

> The political purpose to maintain within the alliance shared responsibility for nuclear forces [remains important] and make[s] sure the Europeans know that they can rely in a serious way on our nuclear forces.[135]

In order to visibly confirm the continuing U.S. commitment to NATO's security, the Clinton administration supported maintaining U.S. DCA and a limited number of tactical nuclear weapons in Europe.

The Clinton administration also grappled with the question of whether nuclear weapons could still guarantee deterrence in a post-Cold War era. With dictators such as Kim Jong Il and Saddam Hussein demonstrating a willingness to take enormous risks in order to challenge the United States and threaten its allies, President Clinton wondered if in the future "a hostile state with nuclear weapons … might miscalculate, believing it could use nuclear weapons to intimidate us from defending our vital interests, or from coming to the aid of our allies."[136] "Rogue states" such as North Korea and Iraq did not appear to abide by the deterrence calculations of the Cold War. As a result, the president and his national security team concluded that nuclear weapons represented a necessary, but not sufficient, means for deterring nuclear attacks against the United States and its allies. U.S. deterrence and extended deterrence strategies, even when backed by effective nuclear capabilities, might fail to prevent a dictator from launching ballistic missiles – to include missiles armed with WMD – against the United States, its forces deployed overseas, or its allies.

As a result, the Clinton administration supported the continued development of regional missile defenses as a potential supplement to the deterrent value of U.S. nuclear and conventional forces.[137] It recognized the growing importance of these systems to the assurance of allies such as Japan, which was increasingly concerned about the threat posed by North Korean missile programs.[138]

The administration was less certain, however, regarding national missile defense concepts. It remained committed to the ABM Treaty and worried that a U.S. national missile defense (NMD) system would damage relations with Moscow. Allies echoed this concern, counseling the United States against any major "national" or "global" system; for many, these latter systems were not worth the price of upending U.S.-Russian strategic stability.[139] NATO states remained determined to maintain a clear demarcation between "strategic" and "theater" missile defenses.[140] As the Clinton administration considered various missile defense options during its second term, for example, French President

Jacques Chirac and German Chancellor Gerhard Schroeder separately issued public statements warning that any U.S. plans to consider a NMD system could lead to another U.S.-Russia nuclear arms race.[141] Ultimately the president elected to support the research and development, but not deployment, of a limited national missile defense system designed to protect the United States from a the small ballistic missile arsenals of states such as Iran and North Korea.[142]

The 1990s thus continued the gradual evolution of U.S. extended deterrence and assurance strategies. The collapse of the Soviet Union and dissolution of the Warsaw Pact removed an existential threat to the United States and its allies, and in its first term the Clinton administration cut defense spending and sought significant reductions in the numbers of U.S. military personnel stationed in Europe.[143] U.S. strategists in the 1990s concluded that a mix of forces – conventional and nuclear, now joined by short- and medium-range missile defense systems – were required to assure U.S. allies and deter their adversaries.

These views were shared by most U.S. allies. NATO's 1999 Strategic Concept, for example, stated its support for additional arms control agreements leading to further reductions in U.S. and Russian nuclear forces. It also noted, however, that the continued existence of "powerful nuclear weapons outside the alliance" posed an enduring threat requiring NATO to continue its reliance on nuclear deterrence:

> [the] Alliance's conventional forces alone cannot ensure credible deterrence. Nuclear weapons make a unique contribution in rendering the risks of aggression against the Alliance incalculable and unacceptable. Thus, they remain essential to preserve peace.[144]

In addition, the document reiterated the alliance's longstanding view that "the presence of United States conventional and nuclear forces in Europe remains vital to the security in Europe." It also stated that the alliance would continue "work on missile defenses" to address the growing challenge of WMD and missile proliferation.[145]

Conventional, nuclear, and missile defense forces were also important to U.S. extended deterrence and assurance strategies in East Asia, Although differing assessments regarding the utility of the latter precluded development of a region-wide missile defense concept, cooperation on testing system components and developing platforms became important to defense relationships with key allies. The United States and Australia's Project DUNDEE, for example, tested sophisticated boost-phase detection systems in 1997 as part of broader cooperation on research and development of radar and sensor capabilities related to TMD, activities Canberra considered important to "bolstering

the [U.S.-Australia] alliance."[146] In addition, the DPRK's continued development of ballistic missiles and WMD led the United States and Japan in 1999 to agree to add missile defenses – in the form of combined efforts to develop a naval-based TMD – to the 55,000 U.S. military forces posted in country, and offshore U.S. nuclear forces providing a nuclear umbrella, as a key component of U.S. defense guarantees to this key ally.[147]

While the end of the Cold War had significantly improved the prospects for U.S. and allied security, at the close of the 20th century U.S. and allied policymakers and strategists continued to view both U.S. nuclear forces and conventional "boots on the ground" as important to extended deterrence and assurance missions. Moreover, new threats that came to the fore during the 1990s in the form of "rogue states" pursuing WMD and their means of delivery appeared to underline the importance of maintaining both a robust nuclear deterrent and investigating the possible use of missile defenses to provide protection against the limited, but nonetheless potentially lethal, missile arsenals of countries such as North Korea.

Re-thinking Deterrence Requirements: 9/11 and the "New Triad." The administration of President George W. Bush came to office interested in working with the Russian Federation to significantly reduce each side's nuclear arsenals. It was also determined to press forward with the deployment of a national missile defense system, a decision that ultimately led the United States to withdraw from the ABM Treaty in 2002. The Bush administration's national security team believed U.S. views on nuclear forces, missile defenses, and arms control remained saddled with concepts developed during the long confrontation between the United States and Soviet Union. They were determined to re-examine and, if necessary, re-tool U.S. strategies and forces associated with deterrence, extended deterrence, and assurance strategies in order to better address the complex threats faced by the United States and its allies in the 21st century geopolitical environment.

The September 11, 2001 terrorist attacks had a profound impact on the Bush administration's world view and assessment of national security imperatives. In regard to its views on deterrence, however, the attacks confirmed a number of key conclusions within the administration's 2001 NPR which commenced shortly after the administration entered office and was largely complete prior to 9/11. The authors of the review were guided by President Bush's conviction, articulated in a May 1, 2001 speech at the National Defense University, that "[d]eterrence can no longer be based solely on the threat of nuclear

retaliation."[148] Viewing the spectrum of potential nuclear threats faced by the United States, the 2001 NPR questioned the utility of continuing to rely on large numbers of strategic offensive nuclear forces to deter potential WMD attacks. U.S. deterrence concepts, it argued, needed to better integrate missile defenses and advanced conventional systems into strategies and operations addressing these challenges. It also rejected the idea that U.S. deterrence efforts should focus on the nuclear forces of Russia, expressly stating that the concept of mutually assured destruction was no longer applicable to the U.S.-Russia relationship.[149] The 2001 NPR further argued that U.S. strategists needed to fundamentally rethink deterrence in a geopolitical environment where the United States and its allies were menaced by state and non-state actors whose cost-benefit calculations were unlikely to mirror those of the former Soviet Union, concluding "the United States can no longer take comfort in the Cold War belief that opponents will be deterred reliably and in predictable ways."[150]

In response to these challenges, the 2001 NPR suggested the United States needed to exchange its concept of a Cold War triad of strategic offensive nuclear forces (in the form of SLBMs, ICBMs, and bombers) for a "New Triad" of offensive systems (nuclear and conventional), defensive systems (nuclear and conventional, including both active and passive defenses), and a "revitalized defense infrastructure."[151] It also found that most of the nuclear warheads within the U.S. arsenal, originally designed for missions such as attacks on Soviet ICBM silos, were irrelevant to deterring or attacking present security threats The review proposed pursuing new advanced conventional military options to reduce U.S. dependence on offensive nuclear forces, but also suggested the United States might need to "modify, upgrade or replace portions of the extant nuclear force or develop concepts for follow-on nuclear weapons systems better suited to the nation's needs."[152] The latter finding led the administration to consider possibly replacing or re-designing some of the warheads within the U.S. nuclear arsenal.[153]

In addition, the 2001 NPR also argued that a network of active and passive defenses significantly boost the ability of the United States to deter state or non-state adversaries, stating that "by denying or reducing the effectiveness of limited attacks, defenses discourage attacks."[154] The development of an active deterrence by denial capability – in this case, denying an adversary from realizing any benefits from a ballistic missile attack – was considered particularly important because some contemporary adversaries might not fear the threat of deterrence by punishment, whether due to ideological fanaticism, a callous disregard

for the safety of their own populations, or both. The review concluded that bringing together offensive and defensive systems would significantly improve the prospects for deterring a range of adversaries – to include "terrorists or rogue states armed with weapons of mass destruction" – by providing the United States with the means to employ both deterrence by denial and deterrence by punishment strategies.[155]

The 2001 NPR also adopted the perspective that U.S. extended deterrence and assurance concepts needed to shift away from past Cold War frameworks. The "New Triad," it asserted, would provide the United States with offensive and defensive capabilities "credible to enemies [and] reassuring to allies."[156] The 2001 NPR stated that maintaining a "second to none" U.S. nuclear deterrent – quantitatively lower, but perhaps qualitatively improved from the Cold War arsenal – "assures allies"[157] The review also found, however, that U.S. extended deterrence and assurance strategies were far too dependent on nuclear forces. During a briefing to the media on the results of the 2001 NPR, Assistant Secretary of Defense for International Security Policy J.D. Crouch explained that in order to meet the contemporary requirements of allied assurance, "we believe that developing credible non-nuclear and nuclear response options [are] necessary to supporting U.S. commitments."[158]

In regard to defensive systems, for example, the 2001 NPR concluded that continuing to improve and expand U.S. missile defense systems would assure allies by allowing the United States to deploy capabilities overseas capable of shielding their home territories from missile attacks.[159] In addition, missile defense would also enhance U.S. assurance strategies by allowing the United States to better protect forces deployed abroad for the purposes of allied defense.[160] Furthermore, the deployment of effective national and regional missile defenses might convince adversaries to give up continued investments in missiles intended to threaten the United States and its allies.[161] The review was willing to take U.S. missile defense further than the Clinton administration, expressly stating that it would develop systems "more capable than the ABM Treaty permits" in order to develop defenses able to address the increasingly numerous and sophisticated ballistic missiles fielded by U.S. and allied adversaries.[162]

Many U.S. allies, however, did not agree with the conclusions reached by the 2001 NPR on offensive or defensive systems. Criticism was generally muted in the immediate aftermath of the 9/11 attacks, but over time a number of allied governments became increasingly uneasy with U.S. policies and strategies derived from, or supported by, the results of the review.[163] They feared the broad spectrum of new military

capabilities called for by the 2001 NPR could damage relations between the United States and other nuclear powers such as Russia and China, and threaten to blur the distinction between conventional and nuclear war. In addition they and were not the best means for confronting contemporary threats. Underlining these objections was a broader concern that President Bush and his advisors were uninterested in allied views on issues of national security and dismissive of international laws and institutions that many allies considered vital to global stability. These concerns came to a head over serious disagreements between the United States and several key allies regarding the U.S. decision to invade Iraq in 2003. In the aftermath of "Operation Iraqi Freedom" some U.S. allies feared the Bush administration was determined to undertake a range of unilateral actions that would destabilize global affairs and ultimately complicate their own efforts to grapple with the challenges of the post-9/11 security environment.[164]

Plans to develop a NATO missile defense system against possible future ballistic missile threats from countries such as Iran, for example, became a major point of contention within the alliance during the Bush administration's two terms in office. While states such as Poland and the Czech Republic welcomed the opportunity to host components of the system, other members of the alliance feared Russia's strong objections to the plans would prompt Moscow to respond with actions detrimental to their national security. Some NATO members also questioned what they viewed as the Bush administration's over-reliance on missile defenses to counter security threats, arguing that potential adversaries faced with these defenses would simply develop means other than ballistic missiles to attack the alliance.[165] In the interest of reaching consensus, the alliance ultimately agreed in April 2008 to "develop options for a comprehensive missile defense architecture" for protecting the entire alliance, but did not endorse a particular strategy or system.[166]

President Bush's national security team hoped to close the door on the deterrence concepts of the Cold War and replace them with new strategies for defending the United States and its allies. The 2001 NPR argued that U.S. deterrence strategies, and the forces assigned to carry them out, were designed and developed to counter an adversary that no longer existed. However, its suggestions for re-thinking deterrence, extended deterrence, and assurance concepts, and for overhauling and/or expanding the military tools associated with these concepts, failed to gain traction with many U.S. allies. Many allied objections to the ideas of the 2001 NPR stemmed from concerns regarding the Bush administration's general approach to international affairs rather than

specific objections over threat assessments or military strategy. But allies also proved skeptical of the 2001 NPR's conclusions regarding missile defenses and nuclear weapons. For many, the review appeared too confident of the ability of new offensive and defensive military capabilities to negate a broad range of threats from state and non-state actors. Allies also feared the review either overlooked or ignored the likelihood that non-allied major powers might respond negatively to major changes in U.S. deterrence strategies. A number of NATO allies were also dismayed by the Bush administration's express rejection of earlier U.S. approaches to nuclear arms control, viewing the ABM Treaty and other previous U.S.-Russia accords as important to stabilizing a relationship that remained critical to alliance security.

As a result, the 2001 NPR had a limited impact on U.S. extended deterrence and assurance strategies. Its attempt to lift the profile of missile defenses within these strategies reflected their increasing importance in a post-Cold War era marked by the continuing proliferation of nuclear weapons and ballistic missile technology. Efforts to implement these plans, however, met with mixed success. In addition, while the United States reduced its number of operationally deployed nuclear warheads due to the Bush administration's successful negotiation of the 2002 Strategic Offensive Reductions Treaty (SORT) with Russia, the importance of nuclear weapons within U.S. extended deterrence and allied assurance strategies remained largely unchanged. For its part, the Russian Federation rejected U.S. overtures to consider fundamentally changing the nuclear deterrence relationship between the two states, insisting this form of deterrence remained essential to maintaining U.S.-Russia strategic stability.[167] Allies also proved reluctant to jettison deterrence concepts and strategies that had long provided for their security. NATO's 2006 "Comprehensive Political Guidance," for example, noted that even in an era of "asymmetric" threats "[t]here will continue to be a requirement for a mix of conventional and nuclear forces," a mix that remained heavily reliant on the capabilities provided by the U.S. military presence in Europe.[168] The guidance document also noted the need to protect the alliance against ballistic missile threats; significantly, however, it placed missile defenses within the context of "the ability to defend deployed NATO forces against theatre missile threats."[169] In response to Bush administration proposals to consider significant changes to the strategies and tools of extended deterrence and allied assurance, the general response of U.S. allies was to defend the status quo or press for limited adjustments to existing approaches.

Extended Deterrence and Allied Assurance: From the Cold War to the "War on Terror"

The four general challenges discussed above have proven independent of a specific adversary threat. Following the end of the Cold War, for example, the United States and its allies continued to face a range of nuclear and conventional threats. Most of the United States' Cold War allies remained reliant on the United States to guarantee or significantly shore up their defense of their home territories and core national interests. Within this context the U.S. policy imperative to protect allies in Europe, East Asia, and elsewhere has remained in effect. So too has the requirement to use many of the tools within the U.S. military's toolbox to provide for their defense, to include conventional, nuclear, and, in the post-Cold War era, missile defenses. Improved tools, however, granted the ability to change strategies away from an early reliance on deterrence by punishment in the form of massive nuclear strikes to more limited nuclear and conventional strike options. Into the post-Cold War era, deterrence by punishment approaches were also increasingly joined by plans, options, and assets for deterrence by denial strategies seeking to focus the striking power of the U.S. military on key adversary pressure points while limiting the effects of war on the civilian populations of adversary states.

At the close of the George W. Bush administration, U.S. extended deterrence and allied assurance strategies – while significantly evolved from those employed during the early Cold War period, and strained in some cases by disagreements between Washington and allied capitals during and after the Second Gulf War – remained central to the defense policies and planning of the United States and many of its key allies. Sixty years after the Allies' victory over the Axis powers, and nearly twenty years after the collapse of the Soviet bloc, the United States continued to represent the primary security broker for states across the globe, with significant conventional forces deployed abroad, strategic nuclear forces on rotation or patrol in key regions, and tactical nuclear weapons remaining available for the defense of NATO or East Asia against nuclear threats. We will examine current U.S. policies in greater detail in Part 5.

PART 4: CONTINUITY AND CHANGE IN U.S. EXTENDED DETERRENCE AND ASSURANCE POLICIES, STRATEGIES, AND FORCES (1945-2008)

Policies

From the end of the Second World War through the early 21st century, the United States and its allies weathered dramatic changes in geopolitics, threats from a range of adversaries, and the vagaries of intra-alliance policy and strategy debates. Across this period of time, however, the policies of the United States driving the requirements of deterrence, extended deterrence, and assurance strategies remained constant in three important ways.

First, the United States assumed a mantle of geopolitical and geostrategic leadership for states facing threats from ideological totalitarian, anti-democratic regimes. This rogue's gallery of potential adversaries changed over time, but the threat – whether in the form of the Soviet Union and its proxies during the Cold War, or states such as the DPRK and Iran in the post-Cold War era – posed by these regimes to the United States and its friends abroad has led several generations of decision-makers in Washington to firmly back efforts to establish and maintain a common defense perimeter in order to protect its allies and deter their enemies.

Second, the United States committed itself to a defense posture that includes forces permanently or regularly deployed abroad in order to implement its extended deterrence and assurance strategies. For over 60 years the United States has deployed military forces – often accompanied by their dependents – at permanent bases in Europe and East Asia while also maintaining semi-permanent facilities and regular force rotations in other regions. The purpose was to demonstrate America's willingness to risk blood and treasure on behalf of an ally's defense. These U.S. forces provide a direct form of assurance to the host state and regional allies. Their presence can also deter potential adversaries due to their inherent capabilities and the visible proof they offer of the U.S. determination to honor its defense commitments.

Third, the United States has pledged to defend its allies from conventional and WMD threats, up to and including the threat of nuclear war. To meet these challenges, U.S. extended deterrence and assurance guarantees have traditionally relied upon a robust mix of both conventional and nuclear forces, to include conventional and tactical nuclear forces permanently deployed abroad.

These policies have committed the United States to defending allies across the globe and deterring their potential adversaries using a broad range of military capabilities, to include significant numbers of forces stationed at permanent posts abroad. The United States continues to pledge itself to the common defense of states around the world; remaining convinced an attack upon a friend by an ideologue, dictator, or terrorist would essentially represent an attack upon itself. Significantly, neither time nor geopolitical change has fundamentally altered the security guarantees offered by the United States to NATO and other countries such as Japan, the ROK, and others. The United States' enduring commitment to taking a lead role in promoting international stability and rallying like-minded allies against anti-democratic threats has led it to view extended deterrence and allied assurance as missions that are both global in scope and critical to its own national security.

Strategies

Cold War

These policy imperatives continually shaped the development of U.S. extended deterrence and allied assurance strategies from 1945-2008. For much of this time period, the significant challenges associated with defending globally dispersed allies against a nuclear-armed superpower and its proxies led the United States to view nuclear forces as central to these strategies.

The roles and responsibilities of nuclear forces within extended deterrence and allied assurance strategies, however, evolved over time. Early Cold War U.S. deterrence concepts relied upon the ability of the United States to deliver an aerial attack destroying a large number of Soviet cities. This deterrence by punishment approach reflected the relative limitations of 1940s and 1950s U.S. delivery systems and warheads. It was also rooted, however, in a strategic assessment that only the threat of total destruction could hold the massive conventional armies fielded by the Soviet Bloc in check and ensure the protection of the United States and its allies. During the 1948-49 Soviet blockade of Berlin, for example, the United States Air Force developed a nuclear plan ("Fleetwood") featuring a massive bombing strike against 70 Soviet cities using 133 nuclear gravity bombs.[170]

In time improvements to the range, accuracy, survivability, and flexibility of U.S. nuclear forces allowed U.S. strategists to increasingly focus war plans on adversary nuclear forces and other key military targets. Greater fidelity in nuclear strike options allowed consideration of focused attacks on one region or one type of target set. Deterrence by

punishment strategies gradually gave way to a broader range of plans that included options for deterring the Soviet Union by threatening the destruction of its nuclear ICBMs, SLBMs, and bombers, and the forces and industries that supported its military machine. The intent was to disarm the Soviet Union with a relatively limited number of precision weapons rather than destroy it with a massive first strike.

The requirements of defending allies led to the development of extended deterrence strategies that combined these long-range "strategic" forces with "tactical" forces deployed abroad to counter the superior conventional forces of the Soviet Union and its proxies. These latter type of forces were intended to leave Moscow in doubt regarding the level of provocation against countries aligned with the United States that could touch off a nuclear response from a U.S. fighter-bomber, short-range missile, or artillery piece. They were also designed, postured, and exercised in a manner intended to maintain control over an escalating crisis and keep the potential use of nuclear weapons, if deemed absolutely necessary to prevent a catastrophic defeat, limited to the battlefield.

These were strategic approaches predicated on the need to protect the "free world" from Soviet aggression while also preventing any conflict from spiraling out of control and precipitating a massive nuclear exchange leaving both superpower blocs destroyed. The development in the mid- to late Cold War period of flexible, limited nuclear options reduced the United States' reliance on assured destruction as the primary means to deter attacks upon itself and its allies around the globe. A recent analysis by Elbridge Colby summarizes this evolution well:

> During the Cold War the U.S. government, once it perceived that the Soviets would eventually achieve the assured ability to inflict unacceptable damage upon the U.S. homeland, came to believe that the United States needed to be able to employ its nuclear forces in a limited manner. Preparation for controlled use was necessary to be able to retain the benefits of nuclear weapons, whose use in an unrestrained fashion was taken to be of little credibility and therefore of limited utility. While administrations differed about how limited nuclear use would be conducted particularly beginning with the Nixon administration they did not differ on the basic premise that the United Sates did need to be able to employ nuclear weapons selectively. Nor was this effort merely confined to the declaratory level. Beginning with

> SIOP-63 [Single Integrated Operational Plan 63], accelerating with SIOP-5 in 1976, and coming to fruition with the late SIOP-6 series of 1986 and after, U.S. war plans included specific, concrete options for limited nuclear use.[171]

The shift from countervalue to counterforce strategies, and the search for "limited" nuclear options that could deter the Soviet bloc (and prevent the United States from deterring itself), represented significant changes to U.S. deterrence and extended deterrence concepts over the course of the Cold War.

Post-Cold War

However, these changes over time, while important, remained largely confined to offensive nuclear forces and plans involving nuclear strikes. For much of the Cold War, deterrence strategies focused on offensive forces. Cold War theorists devoted considerable attention to the theoretical ability of defenses to influence or perhaps even negate deterrence strategies reliant on nuclear forces. Ultimately, however, a combination of factors led most Cold War U.S. strategists to view offensive forces as better for the purposes of deterrence and, more broadly, as critical to establishing a stable strategic relationship between the superpowers. Effective national passive defenses against large-scale nuclear attacks came with a prohibitive price tag; for this and other reasons, they were politically unpopular, and only limited steps were taken in areas such as civil defense. Active defenses, in the form of ballistic missile defense systems, were expensive, remained quantitatively and qualitatively behind the offensive threat, and for much of the Cold War were viewed by many key U.S. decision-makers (and many U.S. allies) as more likely to increase the scope and intensity of the superpower arms race and further strain relations between Washington and Moscow.

In the post-Cold War era, technological advances and the evolution of adversary threats led the United States to re-examine the potential role of active and passive defenses. In turn, this also led to a renewed interest in deterrence-by-denial strategies derived from boosting one or both types of defenses. The use of missile defenses to deny an adversary any benefits from launching a ballistic missile attack on the United States or an ally became more important in discussions of U.S. and allied defense strategy as states such as Iraq, Iran, and the DPRK continued to build up their ballistic missile arsenals through the 1990s, and as missile defense technologies continued to improve (how much – in terms of battlefield effectiveness – remaining an important question

and subject of fierce debate, particularly in regard to NMD). This led the Clinton administration, for example, to press forward with TMD systems and regional missile defense cooperation despite its objections to NMD. Passive defenses also became more important, particularly in regard to the diverse WMD threats facing U.S. forces deployed abroad in the post-Cold War era. Few strategists had taken seriously the idea that physical defenses – or personal defensive gear – could play a role in protecting military personnel and facilities against a major Soviet nuclear attack. But protection against the CBRN (chemical, biological, radiological, or nuclear) munitions of states such as Saddam Hussein's Iraq was enormously important to U.S. allies and U.S. forces deployed on behalf of their defense in the 1990s and beyond.

These developments led defensive means and deterrence-by-denial strategies to become increasingly important to U.S. extended deterrence and allied assurance efforts in the post-Cold War, representing an important trend observed from surveying U.S. attempts to defend allies across the globe from the late 1940s into the early 21st century.

The end of the Cold War removed a direct, existential threat facing the United States and its allies, and raised the question of whether nuclear deterrence remained critical to U.S. and allied defense strategies. Will nuclear deterrence remain important to these strategies, or did the end of superpower competition and arms racing signal that the United States and its allies could find other ways to guarantee their security? Presidents George H.W. Bush, Clinton, and George W. Bush all carefully considered, and approved, quantitative reductions to the U.S. nuclear arsenal and pursued major nuclear arms control agreements with Russia. All sought to alter the role of nuclear forces in U.S. deterrence strategies, noting the United States and its allies no longer faced a conventional force imbalance necessitating a nuclear counterweight. President George W. Bush even sought (albeit without success) to convince Russia that nuclear deterrence no longer played any role within U.S.-Russia relations.

All three, however, also concluded nuclear deterrence remained vital to the security of the United States and its allies given the continued presence of nuclear weapons in the arsenals of U.S. competitors and potential adversaries. Moreover, the ongoing challenge of nuclear proliferation – with the DPRK becoming a nuclear power, and Iraq, Iran, and other states pursuing nuclear weapon development programs – clearly demonstrated that nuclear threats to the United States and its allies were not simply a byproduct of the Cold War competition between the superpowers. What were the implications of nuclear forces playing a less central, but nonetheless vital, role in deterrence, extended

deterrence, and assurance strategies? The 2001 NPR wrestled with this question, ultimately seeking to bring forward other forces (such as missile defenses) while also sharpening and focusing the nuclear arsenal on contemporary threats. The review's conclusions, however, encountered serious objections at home and abroad, signaling that while the U.S. strategic community – and its allies – believed nuclear forces should be less prominent in deterrence strategies, there was little agreement on how to realize these changes and what other military tools should take their place.

Forces

For decades, U.S. extended deterrence and assurance strategies have relied upon a robust mix of conventional and nuclear forces. While the numbers and capabilities of these forces have changed with time, the decades-long requirement to defend U.S. allies scattered across the globe from a range of conventional and WMD threats has led U.S. policymakers and planners to conclude that both types of forces are required to defend allies abroad. The United States has found it necessary to maintain conventional and nuclear forces at permanent bases hosted by friendly foreign nations, capabilities backed by additional forces engaged in ongoing air or sea patrols, assigned to regular rotations abroad, or stationed in the United States but prepared for rapid deployment overseas. In the post-Cold War era, missile defenses began to join this mix, as missile and WMD proliferation and technical improvements (particularly in short-range and theater systems), gradually overcame some allied objections regarding costs and uncertainty regarding the impact of "national" missile defenses on strategic stability.

Conventional forces

U.S. conventional forces have long played an important role in assuring U.S. allies and deterring their adversaries. The United States, for example, has maintained, with host nation support, military bases in Germany, Japan, the Republic of Korea and other countries for decades. U.S. "boots on the ground" have long demonstrated the willingness of the United States to risk blood and treasure on behalf of its allies. For states with U.S. bases on their territory, these conventional forces represent a vital form of assurance. Throughout the Cold War, despite the considerable conventional force advantages of the Warsaw Pact, political and military leaders in Germany (and other countries with permanent U.S. military bases on their soil) believed the Soviet Union was unlikely to launch an invasion against a country hosting U.S. GIs,

due to the Kremlin's fears that such an attack could trigger a costly superpower conflict.

Nuclear Forces

U.S. nuclear forces have also represented a central feature of U.S. extended deterrence and allied assurance strategies from the late 1940s to the present. From the dawn of the nuclear age, nuclear weapons represented – by several orders of magnitude – the most devastating capability within modern military arsenals. As such, wherever U.S. allies have faced an adversary armed with nuclear weapons, the United States has found it necessary to counter this threat with a promise to protect its friends with U.S. nuclear forces. For allies living under a nuclear shadow, the willingness of the United States to go to nuclear war on its behalf represents a critical litmus test of the alliance relationship. Nuclear forces have also played an important role in assuring the credibility of extended deterrence and assurance strategies in circumstances where deterrence by conventional forces alone is in doubt. Whenever the United States and its allies found themselves outnumbered during the Cold War, for example, U.S. nuclear forces have often plugged the gap. Into the post-Cold War era, nuclear forces remained prominent within extended deterrence and assurance strategies. While their numbers declined as a result of policy decisions, arms control agreements, and retirement of a number of aging systems, both U.S. and key foreign leaders found U.S. strategic and tactical nuclear forces – with the latter's visibility and flexibility important to both NATO and East Asian allies – continued to meet critical policy and strategy requirements in a geopolitical environment where many faced adversaries possessing or pursuing nuclear weapons.

Missile Defenses

In the post-Cold War era, conventional and nuclear forces have remained critical to U.S. extended deterrence and assurance strategies. The inclusion – albeit in fits and starts – of missile defenses in these strategies represents a significant change from earlier concepts that either did not feature missile defenses as a potential option within defense plans or rejected them due to concerns they would ultimately hinder, rather than help, efforts to defend allies and deter their enemies. For decades, conventional and nuclear forces represented the essential building blocks of U.S. plans for defending the long defense perimeter of the "free world." Major missile defense projects aimed at developing the capability to intercept long-range Soviet missiles were seriously considered but ultimately rejected, in the 1960s and 1980s. This was

primarily due to the large costs and uncertain outcomes associated with these systems, but allied objections also played a role in convincing U.S. policymakers and strategists that missile defenses were either destabilizing or represented a defense concept too far ahead of its time. For many U.S. allies, calculating the value of missile defenses had to take place within a broader assessment of geopolitics (to include the possible response of states such as the Soviet Union, which possessed means other than nuclear weapons for influencing the decision-making of states in Europe and elsewhere), resource constraints (given the astronomical costs, why not invest resources on other military capabilities?), arms control (a number of allies defended the ABM Treaty), and adversary strategy (what would prevent a determined adversary from using a means other than ballistic missiles to attack the United States or its allies?).

By the 1990s, however, the threat of ballistic missiles in the hands of state leaders that seemed immune to Cold War calculations of deterrence began to change views in the United States and some, if not all, allied capitals on the role of missile defenses in extended deterrence and assurance strategies. The utility of TMD was recognized well before the 1991 Gulf War, and prompted the development of the Patriot TMD systems that played a prominent role in the conflict. Significantly, the lackluster performance of the early Patriots did not lead to a rejection of missile defenses as an important tool within the U.S. extended deterrence and assurance toolkit. The increasing scale of the ballistic missile threat, and rising interest of allies facing these threats in some form of protective shield against these attacks, prompted the United States to move forward with TMD and, later on, more ambitious missile defense systems in the post-Cold War era.

The competing demands of addressing the geopolitical concerns of some allies on missile defenses, while attempting to counter the ballistic missile threats faced by others, complicated U.S. efforts to develop post-Cold War extended deterrence and assurance strategies. The tension between the two remained unresolved at the end of the George W. Bush administration, indicating that the next president's decisions on missile defenses were likely to receive close scrutiny in foreign capitals (both allied and adversary) abroad. If allies remained divided on missile defenses in 2008, however, there was no denying the systems themselves now played an important role in U.S. deterrence, extended deterrence, and assurance strategies due to their unique abilities to defend against key military assets of potential adversaries of the United States and its allies.

Challenges to U.S. Efforts to Extend Deterrence and Provide Assurance

As discussed in Part 2, the credibility of U.S. extended deterrence and assurance strategies is a function of both the political resolve of U.S. decision-makers and the capabilities of the U.S. military. Challenges to these strategies can thus take the form of foreign parties (whether allies or adversaries) either doubting the willingness of the United States to accept the potential costs of protecting an ally or questioning whether the U.S. military has the right tools to defend an ally from potential adversary attacks. Part 2 also noted the phenomenon that extended deterrence and allied assurance strategies involving the same parties are not identical; i.e. that which assures ally X may not deter its adversary Y, and vice versa. In addition, the historical survey in Part 2 has found another enduring challenge faced by the United States in developing extended deterrence and assurance strategies: U.S. allies tend to resist or oppose any significant changes in associated concepts, plans, or policies.

This has led the United States to encounter four general types of challenges to its extended deterrence and allied assurance strategies that are derived from the combined geopolitical-military character of these defense guarantees:

1) Doubts regarding the political resolve of the United States, with allies or adversaries asking questions about the willingness of U.S. leaders – and the U.S. public – to sacrifice significant amounts of blood and treasure, up to and including potential attacks on CONUS, on behalf of an ally (described as "de Gaulle's Doubts");

2) Questions regarding whether United States either fields sufficient numbers of forces (conventional, nuclear, and missile defense), and/or employs the right mix of forces, in order to deter potential adversary threats to its allies (described here as "A Leaky Umbrella?");

3) Challenges associated with U.S. efforts to simultaneously meet the differing, and at times competing, demands of extended deterrence and assurance strategies (described here as "The Healy Theorem"), and;

4) Challenges associated with allies generally favoring the *status quo ante* in regard to U.S. extended deterrence and assurance strategies.

Doubts about the United States' Political Resolve ("de Gaulle's Doubts")

From the Cold War to the present day, U.S. foreign and defense policies have repeatedly linked the national security of the United States to the safety and security of U.S. allies and partners abroad. However, in order to convince adversaries and allies the United States is willing to fulfill its defense commitments, the U.S. government must convince both friendly and hostile foreign audiences it is willing to expend blood and treasure in order to protect allies and partners overseas.

Foreign leaders are not always willing to accept these commitments at face value and may publicly or privately question whether their U.S. counterparts are willing to take risks on behalf of foreign states. As discussed above, President de Gaulle withdrew France from NATO in part due to his doubts regarding the credibility of U.S. extended deterrence commitments to NATO, arguing that the United States would never risk a Soviet nuclear strike on a major U.S. city in order to defend Europe from a Warsaw Pact armored offensive. Not all U.S. allies have shared the former French president's skepticism of U.S. defense guarantees, but other foreign political and military leaders have shared his question of whether the United States would risk significant military or civilian casualties in order to defend its allies. De Gaulle's question of "New York for Hamburg?" articulates a central, enduring challenge to U.S. extended deterrence and assurance strategies: the challenge of convincing an ally that U.S. leaders view threats to their security as tantamount to threats to U.S. security, and, regardless of the potential costs of the ensuing military conflict, are prepared to immediately mobilize devastating, superior force in their defense.[172]

In developing assurance and extended deterrence strategies, plans, and operations, the United States must diligently address the potential allied fear – and possible adversary assumption – that in a crisis or conflict Washington may conclude the costs of protecting an ally outweigh the benefits, and renege on its security commitments. The United States must recognize that even close allies may question the political resolve of U.S. leaders when faced with an adversary that appears willing to go to the brink of armed conflict over an issue involving a third state. Allies may fear that U.S. leaders will choose self-preservation over their alliance commitments when the potential costs of protecting an ally are viewed as too high. As a result of these concerns, there is an inherent and persistent question of credibility associated with U.S. extended deterrence guarantees that the United States government must repeatedly answer with a mix of both political assurances and military means.

Questions Regarding U.S. Military Capabilities (A 'Leaky' U.S. Umbrella?)

A second fundamental and enduring challenge to U.S. efforts to assure allies and deter their adversaries is convincing foreign parties across the globe the United States always fields the right types and numbers of forces to address any potential threat to its friends abroad.

In regard to the U.S. "nuclear umbrella" over its allies, this challenge stems in part from the delicate balance maintained between two longstanding policy commitments:

1) the Nuclear Non-proliferation Treaty (NPT) Article VI commitment of the United States, and other nuclear weapons states recognized by the NPT, to negotiate nuclear arms control and disarmament accords; and

2) U.S. security guarantees to allies and partners that the United States will protect them from intimidation, coercion, or attack by nuclear-armed adversaries.

While U.S. allies and partners are generally in favor of efforts to reduce global nuclear arsenals, they also closely observe, and seek to inform, U.S. arms control and disarmament initiatives. Allies and partners are well aware that even a limited nuclear conflict would likely prove costly to the attacker, defender, and numerous third parties (to include allies of either belligerent). They often applaud U.S. efforts to negotiate and implement nuclear arms control accords, and many cooperate closely with the United States to halt further nuclear proliferation. As discussed above, most U.S. allies also supported the superpower nuclear arms control talks during the Cold War.

However, allied support for arms control and disarmament initiatives is often dependent upon allies' believing these agreements or projects will not fundamentally alter the U.S. nuclear umbrella covering their country. The superpower Cold War arms control talks were relatively modest in terms of overall reductions to the active U.S. nuclear arsenal; most allies were not concerned the potential results of these negotiations might either leave the United States ill-equipped to deter certain adversaries or lacking the right numbers and types of forces to defend geographically dispersed allies. The United States flatly refused Soviet efforts to include either allied nuclear forces or U.S. theater nuclear weapons (with the exception of the systems covered by the INF Treaty) in nuclear arms control talks. As a result, nuclear forces key to the defense of European and East Asian allies were not included in negotiations and the U.S. strategic triad remained robust in its ability to

address U.S. and allied defense needs. The arms control treaties of the Cold War and early 1990s ultimately had little to no impact on ally's views of the credibility of U.S. extended deterrence and allied assurance guarantees.

Responding to allied concerns regarding the ability of the United States to field *conventional* forces sufficient to their defense is also important for the purposes of the proliferation of nuclear weapons and sophisticated conventional weapons. In the late 1960s, for example, the removal of a division of U.S. ground forces from the ROK – part of the Nixon administration's broader efforts to reduce the U.S. military presence in East Asia – led Seoul to quietly explore the possible development of its own nuclear weapons program. U.S. diplomatic pressure, together with assurances it would maintain a significant military footprint on the Korean Peninsula, ultimately convinced the ROK to drop these efforts. Its actions, however, revealed a connection between the size and strength of in-country or regional U.S. military forces backing extended deterrence guarantees and an ally's interest in pursuing its own independent nuclear deterrent as an insurance policy against potential future adversary attacks. U.S. allies that fear U.S. security guarantees are weak or fading may seek other means to ensure they are protected from their adversaries – to include nuclear weapons, if they feel nuclear deterrence is critical to their security.

A mix of conventional and nuclear U.S. military forces, and deployments of these forces in sufficient strength to counter adversary threats, have provided a protective umbrella over U.S. allies from a range of threats for decades. For many allies, however, their heavy reliance on this umbrella leads them to closely observe U.S. decisions to shift, drawdown, or otherwise change the numbers or posture of U.S. military forces assigned to, or associated with, extended deterrence and assurance missions. They are deeply concerned by any move that may imply the United States is less able to defend them. As demonstrated by the U.S. experience with the ROK during the Cold War, it is important for the United States to rapidly respond to these concerns to prevent an ally from making a decision that will complicate or abrogate U.S. extended deterrence and assurance strategies and/or destabilize regional security.

The "Healy Theorem:" The Perpetual Challenge of Correctly Tailoring Extended Deterrence and Assurance Strategies

At the conceptual level, extended deterrence and assurance represent two sides of the same coin. They are two facets of the same pledge offered by the United States: that it will use all the tools of national power at its disposal, to include military force, to deter

adversaries from coercing, intimidating, or attacking its allies and partners abroad.

The interpretation of this pledge, and the value assigned to it, however, may differ as a result of outside parties observing this guarantee from differing points of view.

The challenge posed by these different perspectives was aptly summarized by Lord Denis Healey, the United Kingdom's Defence Secretary from 1964 to 1970, following his participation in protracted debates between the United States and its European NATO allies regarding the military capabilities required to ensure the latter's defense from the Soviet bloc. With NATO's European members invariably asking the United States to commit more forces to their protection than U.S. officials thought necessary for the purpose of deterring Moscow, Healey concluded "[i]t takes only 5% credibility of American retaliation to deter the Russians, but 95% to reassure the Europeans."[173] While the present geopolitical environment is significantly different from that of the Cold War, the "Healey Theorem" reveals two fundamental challenges to U.S. strategies of extended deterrence and assurance that remain in effect today.

First, the Healey Theorem demonstrates that the requirements of assurance and extended deterrence for a discrete set of allies and their potential adversaries may differ markedly despite the fact the parties involved in both sets of strategies are the same. The United States may find, as it did with NATO allies during the Cold War, that the resources allies request for the purposes of assurance (whether measured in geopolitical capital, military force, or both) are greater – sometimes much greater – than the resources U.S. policymakers and strategists believe are required to deter their potential adversaries. However, for allies convinced they face an immediate, existential threat (such as a non-nuclear state bordering a belligerent nuclear power), the apparent failure of the United States to recognize the magnitude of their situation can raise serious doubts about the credibility of Washington as a security partner. As such, without necessarily adopting the allied position, it is important for the United States to recognize these "gaps" and respond with diplomatic or military means to address allied concerns, putting to rest any significant doubts held by their governments that the United States is not prepared to offer a credible strategy for their defense.

The differing requirements of U.S. extended deterrence and allied assurance strategies represents a permanent challenge for U.S. policymakers, strategists, and planners attempting to design and implement these strategies on a global scale. Balancing competing allied demands with finite resources was often a difficult task during the Cold

War, leading directly to the types of inter-alliance debates observed by Healey in the late 1960s. During the Cold War and afterward, the solution to this challenge generally required the United States to field a mix of military forces and engage in diplomatic offensives designed to convince foreign parties that U.S. extended deterrence and allied assurance strategies, however designed, were backed by a politically resolute military superpower prepared to use immediately available resources *and* bring to bear additional forces located in CONUS on behalf of its allies.

The Healy Theorem also points to a second challenge that stems directly from U.S.-allied consultations on deterrence issues. The United States recognizes it is critically important to work with its allies on extended deterrence matters (and that these discussions are themselves critically important to allied assurance). Giving U.S. allies a "vote" on extended deterrence issues, however, also gives them an ability to exercise a "veto" on associated plans and strategies. This can complicate or even abrogate these strategies, and can cause serious problems within a broader alliance that depends on all members providing political and military support to implementing these strategies.

One key example of a breakdown in an alliance relationship over questions of extended deterrence was New Zealand's decision to become "nuclear free" in 1984. New Zealand had long represented both a staunch ally of the United States and a country that sought inclusion beneath the U.S. nuclear umbrella extended over close allies in the Asia-Pacific. Together with the United States and Australia, New Zealand signed the ANZUS Treaty in 1951, confirming a common defense pact between the three countries. For most of the Cold War, Washington and Auckland cooperated closely on a range of regional defense and national security matters. In 1984, however, New Zealand elected a Labour government whose campaign platform included a pledge to make the country "nuclear free," a policy that would include denying port access to any U.S. naval vessel capable of carrying nuclear weapons barring a guarantee from Washington that the vessel in question free of nuclear warheads. The United States, which for security reasons did not "confirm or deny" the presence of nuclear weapons on any ship capable of carrying them, refused to accede to this request (which it did not receive from Australia or any other ally under its nuclear umbrella). In subsequent bilateral discussions, New Zealand's political leadership stated they hoped to retain defense ties with the United States, but not at the cost of its "no nuclear" policy. The United States insisted that nuclear deterrence, and a willingness to support nuclear forces, was critical to the ANZUS relationship. The impasse led the Reagan

administration to state in 1985 that New Zealand had failed to meet its alliance obligations and U.S. defense and deterrence guarantees no longer applied to the country.[174]

The two countries would later mend fences and even resume some forms of defense cooperation, but it was twenty-six years before the United States officially allowed New Zealand naval vessels to visit U.S. ports.[175] The breaking of the ANZUS compact demonstrates how differences over extended deterrence can cause enough friction that the overall defense and diplomatic relationship between the two countries is damaged. It illustrates that a principle that is central to the Healy Theorem – a certain level of tension will always exist between a nuclear-armed superpower and its allies. While the United States and other members of NATO (France, as noted above, being an important exception) were able to iron over most of their differences, the suspension of the U.S.-New Zealand alliance demonstrates that decades of close cooperation with an ally do not necessarily guarantee that U.S. bilateral or alliance relationships will survive disagreements related to extended deterrence or assurance strategies.[176]

Defending the *Status Quo Ante*: Allied Resistance to Changes in Extended Deterrence or Assurance Strategies

From the end of the Second World War to the present day, many U.S. allies have generally (if sometimes reluctantly) accepted U.S. leadership in regard to alliance policymaking and strategizing. This reflects the fact that the United States represents the strongest member within a defense pact. Furthermore, many U.S. allies believe their defense requirements exceed what they can independently develop or afford; they depend on their alliance with the United States to meet their remaining needs. As a result, many U.S. allies rely on U.S. extended deterrence and assurance strategies to guarantee their national defense. Over time, these U.S. strategies – and the forces associated with them, particularly if deployed on an ally's home territory – often become part of an ally's long-term foreign policy and defense planning.

As a result, once the general strategy for its assurance, and the extension of deterrence to its key adversaries, is established between the United States and a foreign ally, the latter often proves resistant to any significant change to either. Allied objections stem from concerns that any changes imply an alteration in the U.S. political resolve or military capabilities that are critical for their defense against foreign adversaries. Many allies are well aware, for example, that foreign deployments are frequently a target on Capitol Hill; both during the Cold War and afterward, Senators reviewing the U.S. defense budget have perennially

pressed for allies to shoulder a greater share of the burden for their defense. In addition, although conflicts and contingencies have occasionally raised the number of U.S. troops posted overseas, in general over the past 20 years the United States has slowly but perceptibly reduced the numbers of forces permanently stationed abroad.

As a result, any change to U.S. strategies, regardless of how these changes are depicted, may lead allies to question whether their status has somehow changed within the eyes of U.S. leaders. Allies may wonder if their defense concerns are still important to Washington; if they are surprised or unprepared by a shift in U.S. policy or strategy, they may conclude their views on these changes were not considered or deemed important. Changes in the U.S. military capabilities deployed in-country or in-theater may also raise issues for allies, as many are unable to replace these forces using resources available to their own militaries.

In addition, allies resist change because many have an acute sense that U.S. extended deterrence and assurance strategies operate within a complex network of political relationships at the domestic, regional, and international levels – and as a result, any changes to these strategies can cascade throughout the entire system, often with negative impacts for their own country (or political regime, in cases where these strategies touch on sensitive local issues). They prefer maintenance of the status quo over changes that may give rise to some uncertainty – whether in their own country, in the minds of adversaries, or both – regarding whether the United States remains a reliable and predictable security partner.

Most U.S. allies, however, also regard the United States as critical to the deterrence of significant or existential threats to their national security. As discussed in the historical survey above, they will debate but rarely flatly oppose U.S. proposals to change extended deterrence or assurance strategies. Significantly, withdrawals from defense partnerships or alliances featuring the United States are rare – and even when they occur, the states involved often seek to retain some kind of defense relationship with Washington. As a result, allied resistance to alterations in extended deterrence and assurance strategies does not make change impossible, but does underline the importance of close communication and consultation between Washington and allied capitals in advance of altering or amending these strategies. Viewed over the time period discussed in Part 3, their interest in maintaining the status quo represents a phenomenon that was sometimes overlooked within the U.S. strategic community – despite dramatic geopolitical change, to include superpower détente, the end of the Cold War, and

9/11. Many longtime U.S. allies remained continually reliant on their partnership with the United States to shield them from current enemies, prospective threats, regional instability, and shocks to the geopolitical system.

PART 5: CURRENT U.S. EXTENDED DETERRENCE AND ASSURANCE POLICIES, STRATEGIES, AND FORCES

Obama Administration Extended Deterrence and Assurance Policies

The Barack Obama administration arrived in office in 2009 facing a range of pressing security challenges. With the United States battling al Qaeda and its affiliates around the globe, and states such as Iran and the DPRK continuing to threaten the United States and its friends abroad, effective deterrence, extended deterrence, and assurance strategies remained critical to U.S. security, allied security, and regional stability.

The Obama White House's development of these strategies was rooted in the language and understandings of these concepts developed over the course of previous administrations. President Obama and his national security team, however, viewed past efforts to develop, implement, and communicate these strategic concepts as too limited in scope, too narrow in participation, and too focused on nuclear forces. They were also critical of the George W. Bush administration's approach to foreign policy and national security, judging its predecessor as too willing to embark on unilateral courses of action without properly consulting or cooperating with U.S. allies. They sought to adapt and evolve U.S. deterrence, extended deterrence, and assurance strategies to reflect a rapidly changing geopolitical environment where the United States and its allies face a broad range of potential state and non-state adversaries that pose threats across geographic regions and strategic domains. In response to these challenges, the Obama administration has sought to broaden the purpose, scope, actors, means and methods of deterrence, extended deterrence and assurance.

Obama Administration Views on Geopolitics, National Security, and 21st Century Deterrence

The Obama administration's development of deterrence, extended deterrence, and assurance strategies is shaped by its views on 21st century geopolitics, to include its perspective on the role the United States should play in international affairs and the security threats currently faced by the country and its friends abroad. Its perspectives on geopolitics, U.S. national security, and deterrence are informed by the following key ideas.

The United States is the world's sole superpower, but it cannot "go it alone." The Obama administration views the United States as the world's most powerful state and believes it has a responsibility to lead

global efforts to address geopolitical challenges such as the enduring threat posed by the proliferation of WMD. The administration's guidance documents, however, also caution that the United States does not have the diplomatic capital or military resources to defeat these threats on its own.[177] It believes the United States must take a central role in international security affairs, while also seeking the assistance of foreign allies and partners to address common threats. As former Secretary of State Hillary Clinton noted in 2009, "America cannot solve the most pressing problems on our own, and the world cannot solve them without America."[178] Obama administration officials often emphasize the importance of the United States assembling broad coalitions of like-minded actors to jointly develop and implement multilateral solutions to regional and global security challenges.[179]

Although the United States does not have any enemies among current major powers, the United States and its allies face a range of state and non-state adversaries. The Obama administration believes the United States has competitors, but no implacable enemies, within the current population of major geopolitical powers. Recognizing that the interests of great powers do not always align, but convinced conflict between them is neither necessary nor inevitable, it has sought to foster "strategic stability" relationships with Russia and China through diplomatic engagement.

However, while the president and his national security staff are convinced a great power conflict is unlikely in the near-term, they also believe the ongoing war with al Qaeda and enduring threats from "risk taking" states such as Iran, Syria, and North Korea underscore the broad range of state and non-state adversaries that currently pose threats to the United States and its allies. The Obama administration also believes these adversaries pose a significant challenge for U.S. deterrence concepts. Despite the potential risk of Washington responding to armed provocations with overwhelming military force, these adversaries are willing to threaten the United States and its allies, flaunt international law (to include UN Security Council resolutions on WMD), and develop the capability to launch attacks against the United States and its friends abroad. As a result, the Obama administration has questioned the effectiveness of earlier U.S. deterrence and extended deterrence strategies for addressing the challenges posed by these state actors.

The president and his national security staff have also argued that deterrence by punishment does not apply to al Qaeda and its allies, which are committed to violently attacking the United States and its friends abroad regardless of the risks and costs involved. This also

applies to nuclear weapons, which have no deterrence value against an opponent whose religious or ideological views place high value in harming an enemy by any means necessary, to include suicide or high-attrition attack strategies. The 2010 NPR states that the United States must assume that al Qaeda would immediately use any nuclear capability it acquired, despite the U.S. ability to respond with overwhelming force.[180] Other guidance documents, such as the 2010 QDR and 2012 DSG, expressly separate discussions of deterring potential adversaries from those focused on defeating al Qaeda. While deterrence by punishment strategies may be of little use for countering al Qaeda and other non-state actors, the Obama administration believes deterrence by denial approaches can prevent attacks. In some cases, missile defenses may play a role; the 2010 Ballistic Missile Defense Review notes that the United States and its allies may face ballistic missile-armed terrorist organizations in the future and that this would "raise profound new questions about regional security."[181] Without expressly linking missile defenses to deterring this specific threat, the guidance document does repeatedly state that these defense systems play a critical role in protecting regional allies and deterring their adversaries from launching missile attacks.

The U.S. military must "rebalance" its forces and its geostrategic focus. The Obama administration entered office believing the United States needed to realign its national and international security priorities after years of fighting in Iraq and Afghanistan. "Rebalancing the Force," for example, was a major theme of its 2010 Quadrennial Defense Review (QDR).[182] The United States, it argued, was bogged down in Afghanistan, should not have invaded Iraq, relied too often on its own forces (vice developing true war fighting coalitions with allies), and possessed a military force that remained too heavily oriented toward ground and nuclear forces while lacking capabilities devoted to areas such as cyber warfare. Moreover, entering office during a time of international and domestic economic crises, and facing fiscal challenges throughout its first term, the Obama administration also sought to cut military spending while protecting key capabilities.[183] For the purposes of better addressing contemporary threats and conserving scarce resources, the Obama administration pressed for the military to adapt its current forces, and develop future capabilities, with a focus on "mobile" (or "relocatable") and "flexible" forces that could be rapidly moved or re-calibrated to address shifting, evolving threats wherever they emerged.[184] Later within its first term, it would also apply the concept of a "rebalance" to also underline a geographic shift toward developing

strategies and plans for defending allies and preparing for conflicts in the Asia-Pacific. From the outset, the Obama administration sought to make a break from what it viewed as the outdated strategies of the Cold War – which it believed still exerted a pull on U.S. defense thinking (ironically, an argument it shared with its predecessor) – and also what it considered the failed strategies of the "war on terror." As such, "rebalancing" – in terms of realigning strategic defense priorities and shifting attention to the Asia-Pacific – carried with it implications for deterrence, extended deterrence, and assurance strategies.

The Prague Initiative. President Obama's April 2009 speech delivered to a large crowd assembled in Prague's Hradcany Square represented one of his administration's key first term foreign policy addresses and its central statement on the role of nuclear forces in its development of national security policy and military strategy. The administration deliberately selected Prague, a city that remained behind the Iron Curtain during the Cold War but was now the capital of an important U.S. ally and member of NATO, as the location for the speech. The president and his national security staff intended to signal the administration's determination to move beyond Cold War paradigms for addressing nuclear threats to approaches that it believed better suited for combating current nuclear challenges. Four years later the president would reiterate his intent to press for global nuclear reductions in a speech delivered at Berlin's Brandenburg Gate, stating that the United State could further reduce its numbers of deployed nuclear weapons and calling for additional nuclear arms negotiations with the Russian Federation.[185]

In his Prague address, President Obama stated that U.S. nuclear strategy was out of date, failing to reflect broad changes in geopolitics, the improved state of U.S.-Russian relationship, and the current threat environment. A nuclear arsenal originally designed for the Cold War was poorly suited for the security challenges posed by current adversaries threatening the United States and its allies. Nuclear deterrence still remained important to deterring adversaries armed with nuclear weapons, and the president pledged that the United States would continue to maintain a "safe, secure, and effective arsenal to deter any adversary and guarantee that defense of our allies." He was determined, however, to "reduce the role of nuclear weapons in our national security strategy, and urge others to do the same" and planned to begin a new round of nuclear arms control talks with the Russian Federation. Beyond U.S.-Russian nuclear reductions, he also hoped to lead broader, long-

term efforts to "seek the peace and security of a world without nuclear weapons."[186]

This goal reflected his conclusion that nuclear deterrence alone could never fully guarantee the safety and security of the United States. Nuclear deterrence might not apply to dictators or terrorists who might attack the United States or its allies despite the prospective costs of a U.S. military response. As such, U.S. efforts to counter these threats needed to urgently pursue two tracks. First, the United States needed to spearhead a range of multilateral nonproliferation and counterproliferation initiatives to prevent these types of actors from acquiring materials, technology, and delivery systems associated with nuclear weapons and other forms of WMD. Moreover, if the size, posture, or declaratory policy of U.S. nuclear forces represented potential obstacles to securing broad international cooperation on these initiatives, the United States would take steps – via arms control or other means – to allay these concerns. Second, the United States and its allies needed to develop missile defense systems and concepts to address those potential adversaries that fielded, or were attempting to develop, WMD and ballistic missiles capable of delivering these types of weapons. Close cooperation with allies such as the Czech Republic, which had volunteered to host components of a NATO missile defense system intended to shield the alliance against future missile threats from countries such as Iran, were vital to developing this critical deterrence-by-denial capability.[187]

The Obama administration's subsequent strategic guidance documents addressing nuclear forces and their role in deterrence, extended deterrence, and assurance strategies, have reflected – and expanded upon – the key themes articulated within the Prague address. For example,

> 1) The U.S. will maintain a "safe, secure, and effective" nuclear deterrent, but will reduce its role in defense planning and reduce the size of its arsenal;
> 2) The most pressing nuclear threats facing the United States and its allies are best addressed through the mechanisms of nuclear nonproliferation and arms control;
> 3) Countering the threat posed by ballistic missile and nuclear weapons proliferation required the United States and its allies to pursue improved missile defenses.

The 2010 NPR, for example, asserted that the United States could reduce its nuclear arsenal in favor of other types of forces without destabilizing its deterrence relationships with other nuclear powers, negatively

impacting its extension of nuclear assurance guarantees to its allies, or otherwise damaging U.S. national security:

> fundamental changes in the international security environment in recent years – including the growth of unrivaled U.S. conventional military capabilities, major improvements in missile defenses, and the easing of Cold War rivalries – enable us to fulfill those objectives at significantly lower nuclear force levels and with reduced reliance on nuclear weapons.[188]

In the specific case of the Russian Federation – the only current U.S. peer competitor in terms of nuclear forces – President Obama believes the country's current strategic relationship mitigates the need for the United States to maintain "strict numerical parity" with the latter's nuclear arsenal.[189] During his first term, for example, he elected to reduce some of the destructive power of U.S. Minuteman III ICBMs (removing two of the three nuclear warheads carried by these delivery systems), stating this move would encourage greater stability in the U.S.-Russia nuclear deterrence relationship.[190] The Obama administration was also adamant throughout the New START ratification process that the treaty's mandated nuclear reductions would have no impact on the ability of the United States to deter, or extend deterrence against, the Russian Federation or other nuclear powers.[191] It also stated, however, that stability between the two states remains tied to each side remaining confident in their ability to deter the other, stating "large disparities in nuclear capabilities could raise concerns on both sides."[192]

In response to contemporary nuclear threats, the Obama administration has led multilateral efforts to secure global nuclear materials and counter nuclear terrorism, and attempted to press the international community to move forward on negotiating a comprehensive treaty halting the production of fissile materials (to date, with limited success, in part due to opposition from Pakistan). It also continued and sought to expand programs such as the Proliferation Security Initiative (PSI), a multilateral counterproliferation initiative that included combined efforts to track and interdict the illicit transit or transfer of WMD-related items. These efforts reflect its assessment that the U.S. nuclear arsenal – while remaining important for deterring, and extending deterrence against, established nuclear powers – ultimately cannot guarantee protection to the United States or its allies against "risk taking" regional powers or non-state actors attempting to develop or acquire nuclear weapons. It has sought to supplement the deterrence provided by these forces against some (but not all) threats posed by the nuclear weapons of potential adversaries with arms control,

nonproliferation, and other approaches that it believes will reduce or prevent the capacity of these adversaries to wield nuclear threats.

The United States must expand its global network of defense relationships by reinvigorating existing alliances and establishing new security partnerships. After the Second World War – and for the duration of the Cold War – the United States established defense alliances and security partnerships across the globe to bolster U.S. national security, protect U.S. friends abroad, and contribute to broader efforts to secure and stabilize the international geopolitical system.

The Obama administration has repeatedly reaffirmed the importance of these defense relationships in the 21st century. In addition to attempting to increase the depth and breadth of engagement on defense issues with longstanding allies, it also hoped to negotiate new security partnerships in vital strategic regions such as the Asia-Pacific.

While recognizing the importance of these relationships, however, the Obama administration also sought to ease the U.S. share of the burden for protecting allies across the globe. President Obama and his national security team have pressed for U.S.-allied defense relationships to achieve greater balance rather than remain dominated, whether in terms of overall forces or responsibilities, by the U.S. military. Whether through increasing combined training and exercises, approving the sales or transfers of military equipment, or devolving greater roles and responsibilities for combined defense matters to U.S. allies, the Obama administration has sought to increase the role and responsibilities of foreign governments in the development and implementation of defense plans and policies.[193] Moreover, this process includes greater allied participation in matters related to U.S. extended deterrence and assurance strategies, to include matters relevant to the role of U.S. nuclear forces within these strategies.[194]

The United States will extend deterrence and provide assurance across all key strategic domains, to include space and cyber space. In the 21st century, the United States and its allies possess critical assets – and face potential threats from state and non-state actors – across land, sea, air, space, and cyber space domains. In response, the United States must assure allies it can protect them against direct attacks on their sovereignty and national assets across these five strategic domains, and develop credible deterrence strategies against their potential adversaries across these domains. In the 21st century, it may no longer be sufficient to provide forces capable of defending an ally's land borders from external attack; with potential adversaries developing anti-satellite

capabilities, and conducting cyber incursions and attacks against U.S. and allied government, military, and industry cyber assets, the United States must view the development of extended deterrence and assurance strategies as a multi-dimensional problem set requiring the full spectrum of defense tools and operations to defend allies against a broad range of attacks.

The Obama administration's 2010 *National Space Strategy*, for example, states that the U.S. government will take steps to "reassure allies of U.S. commitments to collective self-defense" of their space systems and operations, and its 2011 *National Security Space Strategy* states that the United States and its allies will "explore the development of combined space doctrine … [to] enable the collaborative sharing of space capabilities in crisis and conflict."[195] In addition, the United States is also beginning to develop policies and strategies for assuring U.S. allies they are protected against adversaries' efforts to damage key national assets via cyber-attacks. In 2011, the United States and Australia expanded the 1951 ANZUS to include cyber-attacks, committing each state to come to the defense of the other in the event of a major adversary cyber-attack (such as an effort by an enemy state to use cyber warfare to disable U.S. or Australian national military communication systems).[196]

The United States must protect the "global commons" and deter any effort to restrict the free use of these areas across all five key strategic domains (land, sea, air, space, and cyber space). In the 21st century the "global commons" ("those areas beyond national jurisdiction that constitute the vital connective tissue of the international system") are central to the national security and economic prosperity of the United States and its allies, which rely upon the freedom and safety of international waters, airspace, outer space, and cyber space for the purposes of trade, transit, and communications.[197] The freedom and openness of the global commons, however, leaves it vulnerable to exploitation. As the only geopolitical actor capable of global power projection, and the democracy best-equipped to rally multilateral coalitions to address common security problems, the Obama administration believes the United States has both a vested interest and a responsibility to take the lead in protecting the global commons. This requires the United States to develop strategies for deterring anti-access/area denial (A2/AD) initiatives by state or non-state actors attempting to seize control and/or deny the free use of these strategically vital domains.[198]

The United States must "tailor" its deterrence, extended deterrence, and assurance strategies. The Obama administration believes a broad range of actors threaten U.S. allies across the globe. These adversaries differ broadly in terms of their worldviews, geopolitical goals, defense strategies, and offensive and defensive capabilities. With deterrence representing a phenomenon that operates within the mind of a potential adversary and affects their calculations on the costs and benefits of potential actions, this diversity of adversaries – state and non-state, major powers and regional powers – suggests that the exercise of deterrence across this rogue's gallery will differ from actor to actor. Similarly, the Obama administration also recognizes that the United States has alliances with a diverse population of states, each with its own opinion regarding their national security requirements. In addition, the defense capabilities of these allies vary widely. This has led the Obama administration to conclude the United States must develop a variety of assurance and extended deterrence strategies to simultaneously assure its friends and deter their enemies.

This conclusion has led it to strongly support the idea developed by experts at USSTRATCOM and the DoD that the United States must develop "tailored deterrence" strategies to address 21st century threats. The 2006 DoD Deterrence Operations Joint Operating Concept (DO JOC), for example, emphasized the importance of developing deterrence strategies "tailored" to address situation-dependent variables and the unique requirements of each individual adversary:

> Because the perceptions and resulting decision calculus of specific adversaries in specific circumstances are fundamentally different, our deterrence efforts must also be tailored in character and emphasis to address those differences directly.[199]

Current administration guidance carries this logic a step further: in addition to tailored deterrence strategies, the United States must also pursue tailored extended deterrence and tailored assurance strategies. The 2010 QDR, for example, links the credibility of U.S. security guarantees to the U.S. government's ability to develop strategies expressly designed to deter the unique threat posed by each potential adversary of a U.S. ally:

> Credibly underwriting U.S. defense commitments will demand tailored approaches to deterrence. Such tailoring requires an in-depth understanding of the capabilities, values, intent, and decision making of potential adversaries, whether they are individuals, networks, or states.[200]

Administration officials also emphasized the importance of tailoring U.S. assurance strategies featuring capabilities such as missile defenses to the specific needs and requirements of each individual ally:

> Regional approaches must be tailored to the unique deterrence and defense requirements of each region, which vary considerably in their geography, in the history and character of the threat, and in the military-to-military relationships on which to build cooperative missile defenses.[201]

Although the 2006 DO JOC predates the administration, its views on "tailoring" deterrence strategies resonated with an administration looking to both "rebalance" U.S. military forces to better match contemporary threats and also improve U.S. engagement with allies and partners abroad. The term "tailoring" appeared to reflect the administration's interest in tightly focusing defense planning to efficiently use available resources. It also offered a possible means for improved engagement with U.S. allies on defense and deterrence issues. The administration viewed the practice of tailoring deterrence strategies as a process that could lend itself to substantive U.S.-ally dialogues convened to develop relevant plans and policies. These combined efforts would reassure U.S. allies the United States' desired their full participation in building effective strategies for their defense while also improving the focus and fidelity of extended deterrence strategies integrating the unique information and intelligence available to allied actors.

Obama Administration Extended Deterrence and Assurance Strategies

Extended Deterrence Strategies

The Obama administration, as with other post-Cold War presidencies, has found itself within a constantly evolving geopolitical environment where complex regional dynamics, the ongoing process of globalization, and the rapid pace of technological change result in the United States and its allies facing potential adversaries whose character and capabilities can rapidly evolve in a short period of time. Based on its assessment of 21st century security threats, the Obama administration has sought to expand the scope of U.S. deterrence and extended deterrence strategies while also simultaneously improving the fidelity of these

strategies with regard to the specific, near-term threats posed by "risk taker" states.

Scope. The Obama administration has sought to expand the scope of U.S. extended deterrence strategies into new strategic domains, asserting the United States must address the fact that the national security of its allies is increasingly dependent on strategic domains beyond land, sea, and air. The United States has long extended deterrence to protect the sovereign territory of its allies from their potential adversaries. Similar to the United States, however, allied governments, militaries, economies, and national life are increasingly reliant on satellites, computer networks, and a wide variety of technologies dependent on both. In addition to defending allies against attacks by land, sea, and air, the Obama administration believes the United States must also extend deterrence to protect its friends from attacks in space and cyber space.[202] Beyond attacks aimed at U.S. allies, it has also stated that the United States must seek to extend deterrence over the "global commons," protecting the free access of the United States and its allies to international waterways and other areas that are outside of national sovereign control and, by international law, open to use by all law-abiding state actors.

Focusing on the Threat of "Risk Taker" States. The Obama administration has also sought to focus its extended deterrence strategies on the specific actors and actions that represent the most critical threats to U.S. friends abroad. While citing the need to remain flexible in addressing a range of potential threats to U.S. allies and partners, they have also argued that the United States must be more responsive in reacting to its friends' immediate security concerns. At present U.S. extended deterrence strategies are focused on "risk-taking" regional powers, particularly those armed with WMD and the means to deliver them. These actors are viewed as posing an immediate threat to U.S. allies and regional stability.

Current guidance documents discussing deterrence issues and strategies, for example, focus on Iran and North Korea, states with nuclear weapons programs, growing ballistic missile arsenals, and leaders who have demonstrated a willingness to take significant risks in order to intimidate, coerce, or attack U.S. allies and partners within their region.[203] The administration's 2010 BMDR states that deterrence by punishment strategies may be of limited utility for these type of actors; their leaders may believe their missile arsenals allow them to effectively deter the U.S. government by threatening attacks against the United

States, U.S. allies, and/or U.S. forces deployed abroad, despite the ability of the U.S. military to respond with devastating force. As the BMDR stated,

> Risk-taking leaders [in Iran or North Korea] may conclude that they can engage the United States in a confrontation if they can raise the stakes high enough by demonstrating the potential to do further harm with their missiles.[204]

In response, the United States should adapt its extended deterrence strategies to develop more deterrence by denial options (such as missile defenses) to address the challenge posed by risk taker states.

In the past, major powers such as Russia and China were also singled out as potential adversaries of U.S. allies and were often the focus of U.S. extended deterrence strategies. The Obama administration's 2010 NPR, however, discusses both actors within the context of "maintaining strategic deterrence and stability at reduced force levels" rather than as potential adversaries of the United States or U.S. allies.[205] The term "extended deterrence" is not expressly used to describe either country within the review. Instead, the emphasis within this guidance document, the 2013 Report on Nuclear Employment Strategy (2013 RENS), and other administration statements on U.S.-Russia and U.S.-China strategic issues, is on the importance of establishing a "strategic stability" relationship with each country.[206] In 2012, for example, the Obama administration initiated a series of "strategic stability" dialogues with Moscow, to include discussions on nuclear forces and missile defenses. While this shift in emphasis does not imply a weakening of commitment to extend deterrence against any actor that threatens a U.S. ally, it does reflect an assessment that the present focus of U.S. extended deterrence policies and strategies should be on risk-taking actors posing complex, near-term threats to the United States and its friends abroad.[207]

The Obama administration has also emphasized the importance of the United States operating across all five strategic domains and, in doing so, maintaining the freedom of the global commons. As such, the U.S. military must extend deterrence against any party – state or non-state – attempting to carry out A2/AD actions or strategies. Recent guidance has cited Iran and China as actors that will "pursue asymmetric means" in order to restrict U.S. access to various areas in an effort "to counter [U.S.] power projection capabilities."[208]

Extended Deterrence: Military Force Requirements

The Obama administration views extended deterrence strategies as utilizing three types of military forces – conventional, missile defense, and nuclear – supported by space and cyber enablers:

> The United States remains committed to our Allies' continuing security through our policy of extended deterrence. We seek to reiterate this message as often as possible, including through efforts to bolster regional deterrence architectures around the world. We are building regional cooperative missile defenses, forward-deploying U.S. forces, and maintaining what is commonly referred to as the "nuclear umbrella."[209]

As noted above, however, in regard to the relative balance between these three types of forces, it is also committed to reducing the U.S. "reliance" on its nuclear arsenal in favor of conventional and missile defense forces.[210] This is reflected in both numbers and role in defense strategy.

Conventional Forces. The presence of U.S. conventional forces on allied territory, either on fixed bases or as part of a regular rotation, extends deterrence against their potential adversaries. In addition to the combat power these forces can bring to bear against any enemy attempting to harass a U.S. ally, the prospect of additional U.S. military assets rapidly bolstering any American troops that come under fire abroad can serve as an effective deterrent of many actors that might otherwise initiate action against a government friendly with Washington. The Obama administration has also highlighted three other characteristics of U.S. conventional forces that are particularly important for deterring the potential adversaries of U.S. friends abroad:

Flexible options. Some potential adversaries may seek to use force asymmetrically, or in a manner below what they consider the likely threshold for a U.S. response, in order to coerce, intimidate, or attack U.S. allies and partners. By deploying a range of scalable response options across different strategic domains, the U.S. military will clearly signal to potential adversaries that any provocation against an ally or partner will result in an effective, proportionate strike quickly negating any perceived gains.[211]

Stand-off and long-range strike capabilities. The ability of U.S. conventional forces to launch precision strikes from platforms out of the reach of actors such as risk taking regional powers serves as an important

means for preventing attacks on allies and partners and represents a powerful deterrence-by-punishment capability.

Training Allied Forces and Boosting Interoperability. The U.S. military's ability to strengthen the conventional capabilities of allies and partners through training and other measures can deter adversaries by forcing them to devote greater resources to address the improved effectiveness of allied militaries. In addition, combined operations (or even the possibility that U.S. and allied forces can combine quickly and easily) can deter potential adversaries of U.S. allies, presenting them with a fully integrated military force capable of causing unacceptable damage to their own conventional forces.[212]

Robust Levels of Pre-Positioned Munitions and Supplies. Logistic and supply networks can also play a role in deterring adversaries. If U.S. conventional forces deployed abroad have ready access to a range of munitions and supplies stored in theater (or easy to quickly acquire from elsewhere) an adversary may elect not to initiate a military action that could meet with a rapid, decisive response from the United States.[213]

Nuclear Forces. The Obama administration is committed to reducing the overall role and number of U.S. nuclear forces. This reduction, however, must be balanced against the critical importance of maintaining the ability to extend nuclear deterrence against potential nuclear-armed adversaries. The 2010 NPR thus balances a call for reducing the U.S. nuclear arsenals with a pledge that the United States will maintain nuclear forces capable of imposing "unacceptable costs" against any nuclear-armed adversary contemplating use of these weapons against either the United States or U.S. allies and partners.[214]

Within the U.S. nuclear force, certain systems and weapons are more closely associated with the extended deterrence mission than others. Regional states such as the DPRK and Iran act in a destabilizing and provocative manner despite the massive conventional and nuclear force imbalances between them and the United States, calculating they can take a range of actions to undermine U.S. allies and partners without necessarily provoking a U.S. response. Against this type of geopolitical actor, extending deterrence requires a visible demonstration of nuclear capabilities in theater to signal that the United States is committed to deterrence strategies that will directly and openly confront – and if necessary defeat – any actor attempting to use nuclear forces for the purposes of regional coercion or aggression.[215]

This underlines the importance of mobile, visible, forward-deployable nuclear forces for the purpose of extending deterrence. At present, this combination of key characteristics is only found in U.S. nuclear-capable aircraft: B-52 bombers, B-2 bombers, and dual-capable aircraft – F-15Es, F-16s, and eventually F-35s.[216] These nuclear delivery systems can either carry the B83-1 nuclear gravity bomb (bombers), B61 nuclear gravity bomb (bombers and DCA), or the AGM-129A cruise missile (B-52H only).[217] Unlike SLBMs (usually invisible) and ICBMs (fixed in place), the United States can visibly deploy nuclear-capable aircraft to a region during a period of crisis. As a result, bombers represent the only leg of the U.S. strategic nuclear triad capable of clearly and directly signaling the U.S. intent to exercise nuclear deterrence against an actor attempting to use nuclear weapons to coerce or intimidate a U.S. ally or partner.[218] In addition, following the retirement of the TLAM-N, DCA represent the *only* "non-strategic" nuclear delivery system within the U.S. arsenal that has these qualities of mobility, visibility, and flexibility.[219]

Missile Defenses. The Obama administration views missile defense systems as playing an increasingly vital role in U.S. extended deterrence strategies. Ballistic missiles represent the primary means for actors such as Iran and the DPRK to threaten U.S. allies and partners and attempt to deny U.S. freedom of action within areas they view as potential national spheres of influence. Both countries have invested heavily in the development, testing, and fielding of ballistic missiles arsenals, reflecting the high value they place in these systems.

Missile defenses provide an active defense, deterrence-by-denial option against this adversary capability. They can track, intercept, and destroy ballistic missiles before they strike the territory of U.S. allies or U.S. forces deployed abroad. The Obama administration views missile defenses as particularly important for extending deterrence because it is uncertain whether U.S. offensive strike options are viewed as a credible deterrent by Iranian or DPRK leaders.[220] The deployment of missile defenses can shield U.S. friends abroad from these or other "risk taking" states prepared to launch a ballistic missile attack against U.S. allies despite the potential consequences of a U.S. military response. Indeed, the Obama administration hopes that by continuing to improve missile defenses, the United States and its allies and partners may even deter potential adversaries well before contemplating a potential missile launch. A state actor facing highly effective U.S. regional missile defenses may simply elect not to devote significant resources to developing a capability that will fail to achieve any results in battle.[221]

The Obama administration and Joint Chiefs of Staff have expressly directed that the development of missile defenses – and associated strategies – be tailored to deter specific threats to U.S. regional allies and partners.[222] The U.S. government's current "phased adaptive approach" to regional missile defenses "is tailored to the threats unique to that region, including their scale, the scope and pace of their development, and the capabilities available and most suited for deployment."[223] The Obama administration believes this approach will allow the United States to effectively extend deterrence by directly matching U.S. missile defense capabilities – which are improving, but remain limited in numbers of key components such as interceptors – against specific, pressing threats faced by allies.

Allied Assurance Strategies

The Obama administration recognizes the critical importance of developing effective extended deterrence and allied assurance strategies. In order to assure allies they are protected against 21st century security threats, it has consciously sought to develop "regional security architectures" and increase allied involvement within processes developing deterrence and defense strategies.

Building Regional Security Architectures. A key aspect of the current U.S. approach to allied assurance is focused on building, bolstering, and sustaining regional security architectures that allow for the seamless development of combined defense plans and operations with its allies. This will improve the latter's capacity for self-defense and ease the ability of the United States to flow conventional, nuclear, and missile defense forces to a region in response to sudden crises or conflicts.

With allies and partners spread across the globe, the United States has often adapted extended deterrence and assurance policies and plans to reflect region- or country-specific requirements. From the close of World War II to the present day, the development of regional security arrangements through a network of agreements, overseas bases, and defense cooperation has represented a central component of U.S. efforts to extend deterrence against adversaries and assure allies and partners. The United States has long recognized that the country must build and maintain these relationships for the purposes of U.S. national security, regional stability, and international peace.[224]

The Obama administration's views on extended deterrence and assurance are rooted within this tradition, but it has also sought to reinvigorate existing regional security arrangements, increase the depth

and breadth of cooperation with allies (with an eye toward increasing the latter's involvement), and also build new partnership networks encouraging greater involvement between foreign states as a means to improve their defenses and reduce their reliance on the United States. It hoped to encourage greater cooperation, for example, between allies and partners in East Asia and the Persian Gulf. In both regions past history, intra-regional rivalries, capability gaps, domestic politics, and other factors had often forced the United States to play a central coordinating role without the benefit of any alliance or partnership structure to manage regional defense roles, responsibilities, plans, or strategies.

The administration also believed that building, improving, or expanding upon regional defense architectures would greatly aid the flexibility of U.S. forces, putting into place the political, strategic, and physical mechanisms allowing the United States to quickly flow or surge assets between theaters. This would help the United States make the most efficient and effective use of critical, but scarce, defense resources (such as missile defenses).

For the Obama administration, improving regional security architectures boosts the ability of the United States to assure its allies by improving the means and methods for close allied engagement with Washington on security challenges while also creating mechanisms encouraging greater cooperation and involvement on defense matters across the non-U.S. participants within a particular architecture. As such, in theory these updated and expanded architectures would demonstrate the United States' enduring political and military commitment to defending regional allies without necessarily requiring significant numbers of permanently stationed military forces in theater.

Boosting Allied Involvement in Developing Defense and Deterrence Strategies and Plans. A key recommendation of the 2010 NPR was that the United States should "expand and deepen consultations with allies" on the role of U.S. nuclear forces within extended deterrence concepts and plans relevant to their defense.[225] The Obama administration, for example, pledged that U.S. officials will hold discussions with their counterparts in allied and partner states before shifting or removing any nuclear forces associated with extended deterrence: "[n]o changes in U.S. extended deterrence capabilities will be made without close consultations with our allies and partners."[226] Furthermore, it has also stated the United States will consult with allies prior to making any further changes in declaratory policy: "the United States will consult with allies and partners regarding the conditions under

which it would be prudent to shift to a policy under which deterring nuclear attack is the sole purpose of U.S. nuclear weapons."[227]

In seeking broader and deeper allied engagement on policies and strategies centrally important to the national security of friendly regimes facing nuclear threats, the Obama administration seeks to make U.S.-allied defense strategies a truly collaborative, cooperative enterprise. In the case of NATO, where clear mechanisms for joint development of these strategies exist, it has sought to reinvigorate allied participation in discussions on nuclear extended deterrence across the alliance. In East Asia, where the United States has long maintained a nuclear umbrella, but, lacking any body analogous to NATO's Nuclear Planning Group, IT did not necessarily hold detailed discussions on deterrence issues with its regional allies. It has established an Extended Deterrence Policy Committee (EDPC) with the ROK and an Extended Deterrence Dialogue (EDD) with Japan. With the region including three non-U.S. nuclear powers, these bodies serve as mechanisms for ongoing dialogues on extended deterrence and assurance matters with these non-nuclear regional allies.

By increasing engagement with allies on nuclear deterrence matters, and by encouraging them to take a more active role in developing broader strategies and plans for deterring their adversaries (to include forces such as missile defenses), the Obama administration believes it can achieve a number of objectives that bolster U.S. assurance strategies. First, it believes improved communication with allied leaders on these topics (via new mechanisms such as the EDPC and EDD, for example) allows the United States to better address allied security concerns and explain deterrence concepts, operations, and forces. This can be particularly important as these leaders change over time; newly elected allied governments may wish to confirm that deterrence guarantees remain in place, or ask how they have adapted to meet recent threats, while newly promoted military commanders may have little familiarity with U.S. nuclear deterrence strategies (particularly if their own armed forces lack nuclear weapons). Second, the Obama administration also believes many allies possess unique information and insights on potential adversaries that they can share with the United States during these consults, significantly improving its ability to tailor its deterrence strategies. Allies in turn will derive assurance from the United States taking its views into account in developing plans and deploying forces well-suited to address adversary threats. Third, by better integrating allies with the plans, operations, and forces implementing extended deterrence strategies, both countries can make the most efficient use of their available defense resources. This will help

address allied concerns regarding the U.S. military's "re-balancing" (which may include reductions to the U.S. forces within their region or country) and increase confidence in their own ability to deter regional adversaries.

Allied Assurance: Military Force Requirements

Similar to extended deterrence strategies, U.S. assurance strategies also rely on a mix of conventional, nuclear, and missile defense forces, enabled by space and cyber assets.

Conventional Forces. Documents such as the 2010 QDR state that the visible presence of U.S. conventional forces – whether provided by permanent basing, regular rotations, or forward deployment – remains critically important to assuring U.S. allies.[228] For many U.S. friends abroad, U.S. "boots on the ground" retain the assurance value held throughout the Cold War, representing a tangible symbol of the United States' guarantee it is willing to risk American lives for the sake of an ally's protection against adversary aggression.

The United States also assures allies through combined training and exercises, programs and activities that increase operability, and sales or transfers of military equipment. These steps ensure that U.S. allies believe both parties can act cohesively and decisively in the event of conflict or crisis, rapidly countering adversary threats to their security.

Nuclear Forces. The Obama administration seeks to simultaneously reduce the numbers and role of its nuclear forces while also assuring allies that it retains robust nuclear capabilities for their defense. In particular, it believes that allied assurance requires the United States to retain nuclear-capable delivery systems that are both mobile and visible. Mobile forces allow the United States to quickly move nuclear assets to any area facing a nuclear crisis, quickly allaying any allied concern the United States might be slow to respond to a nuclear threat. Visible forces – whether forward deployed or on regular rotation or patrol – can provide a clear demonstration to an ally is covered by the U.S. nuclear umbrella. In addition, many U.S. allies believe that potential adversaries track or notice the presence of U.S. nuclear-capable delivery systems in theater or on the territory of a friendly state, and will refrain from acts that could lead to a nuclear confrontation with a superpower. As such, the 2013 RENS expressly links allied assurance with U.S. nuclear-capable aircraft (bombers and DCA).[229]

The Obama administration also links the U.S. ability to assure its allies they are covered by a nuclear umbrella with broader goals of

encouraging regional stability and preventing nuclear proliferation. It asserts that non-nuclear allied states highly confident in the level of protection afforded them by the U.S. nuclear guarantees will not seek to develop their own independent nuclear arsenals. Moreover, it also states that potential adversaries of U.S. allies contemplating development of nuclear weapons may observe the United States' firm commitment to extended nuclear deterrence, assess that a nuclear weapons program will not improve (and may ultimately detract from) their ability to influence regional affairs, and elect not to pursue this capability.[230]

Within the context of NATO, the alliance's nuclear-sharing arrangements remain a key component of assuring member states of the U.S. commitment to their defense. These arrangements continue to bring together U.S. and NATO forces for joint exercises, training, and planning for nuclear operations. This close cooperation on nuclear matters remains important to NATO's commitment, reiterated in the alliance's 2012 Deterrence and Defense Posture Review, that "[a]s long as nuclear weapons exist, NATO will remain a nuclear alliance."[231]

Missile Defenses. The Obama administration believes missile defenses are critical to U.S. assurance strategies, as evidenced by increasing requests by allies and partners for coverage by these systems.[232] Missile defenses are particularly important for assuring allies and partners living in the shadow of regional adversaries armed with ballistic missiles that are known or suspected of carrying WMD.[233] By providing a shield against ballistic missile strikes, they assure allies that their population centers and key assets are not defenseless against these types of attacks. Furthermore, missile defenses can also address allied concerns regarding the potential vulnerability of U.S. forces deployed on behalf of their defense, providing a capability that can counter an offensive system that represents the key offensive strike capability of a number of potential adversaries. As such, missile defenses can ensure the United States remains an ally's primary "security guarantor," strengthening the two states' defense relationship and ensuring the latter does not pursue capabilities such as nuclear weapons.[234]

Current Issues and Challenges for U.S. Extended Deterrence and Assurance Strategies

As discussed in Part 4, geopolitical change, a constantly shifting threat environment, and the critical role played by the United States in allied regional and national defense strategies are all factors contributing to the need to continually address questions from allies, regarding U.S. extended deterrence and assurance strategies. Our survey of these

strategies from 1945-2008 found that many of these questions and challenges fell into four general categories: 1) doubts about the strength of U.S. political resolve; 2) questions about the sufficiency of U.S. military capabilities; 3) the challenge of meeting the differing requirements of extended deterrence and assurance within a region or for a particular set of adversaries and allies, and; 4) the general opposition of allies to changing existing strategies, plans, and assigned forces.

During its first term, the Obama administration re-affirmed many of the central tenets guiding U.S. extended deterrence and assurance policies and strategies. The administration sought to continue the traditional U.S. role of "security guarantor" for allied states across the globe, reiterated the U.S. commitment to longstanding alliances and defense relationships, and stated its strong support for maintaining the U.S. nuclear umbrella over its friends abroad. In doing so, the Obama administration, similar to its predecessors, has sought to address fundamental questions from foreign actors – both allied and adversary – about U.S. extended deterrence and assurance strategies (such as "will the United States risk suffering a nuclear attack on its homeland in order to defend an ally from foreign aggression?") that have endured over time.

However, the administration also sought to break with the national security policies of its predecessor and overhaul U.S. strategies it judged as out of date and unable to address contemporary security challenges. In addition, it believed the United States faced an urgent need to revitalize and re-tool its defense relationships with allies and partners abroad. In response, it attempted to expand communication and cooperation with friendly states in order to better address their defense and deterrence requirements and make more efficient use of U.S. resources. As with preceding administrations that have advocated or implemented changes to earlier U.S. strategies, this has raised questions and concerns in some foreign capitals.

In addition, the Obama administration, as with other post-Cold War presidencies, has also faced a shifting threat environment that presents new or evolving challenges to U.S. extended deterrence and assurance strategies.

All of the above factors – enduring challenges intrinsic to the extension of deterrence and the provision of assurance, foreign actors' questions about adapted U.S. strategies, and the emergence of new and evolved threats – raise important issues and questions for U.S. extended deterrence and assurance strategies. The next section will address general issues and questions; Part 6 will addresses issues and questions specific to different geographical regions (East Asia, NATO/Europe, and the Middle East).

The Broad Requirement of 21st Century Deterrence

The Obama administration's assessment of 21st century threats to the security of the United States and its allies identifies a broad range of actors and actions that the U.S. government and military must deter.

This broad concept of deterrence reflects the geopolitics of the post-9/11 era, where the United States and its allies are confronted with security challenges posed by a number of direct and potential adversaries, to include strategic competitors, risk-taking regional powers, and transnational terror networks. It is also a response to scientific and technological developments that have extended the reach of the tools of state power, lowered the threshold for non-state actors to develop capabilities that can significantly harm the United States or its allies, and opened domains such as space and cyber space to new forms of competition and conflict.

This has led the Obama administration to describe the requirements of deterrence and extended deterrence as encompassing strategies, forces, and operations developed to forestall attacks against the United States and its allies across all five strategic domains – land, sea, air, space, and cyber space. In addition, the Obama administration also believes the United States must develop strategies for deterring efforts to restrict the freedom of movement within, use of, or access to those areas or aspects of these domains that are part of the "global commons" (for example, international waters or international airspace).

The United States has long sought to develop strategies to deter foreign actors from undertaking actions that harm its homeland, national interests, or its allies. The Obama administration's depiction of the depth and breadth of deterrence and extended deterrence requirements, however, expands upon its predecessors in ways that raise a number of potential issues.

Will the United States have enough resources and capabilities to address the broad requirements of 21st century deterrence? The requirements articulated above – protecting the United States and multiple allies (NATO alone includes 27 other states) with deterrence strategies across five domains and against a range of potential adversaries – suggest the U.S. military must simultaneously conduct multi-dimensional deterrence operations utilizing all of the tools of modern military force while also accounting for the unique demands of each individual adversary. On the other side of the deterrence-assurance equation, this also requires the development of assurance strategies addressing allied security needs in all five strategic domains.

Implementing these strategies requires significant military capabilities allowing the United States to rapidly and decisively project power in land, sea, air, space, and cyber space environments. The "rebalancing" of the U.S. military and the requirements of an austere budget environment, however, have led the United States to prioritize some military capabilities over others, geographically shift its strategic attention, and make cuts across all the armed services.

This may raise questions for adversaries and allies regarding whether the United States can implement strategies and plans meeting the demanding requirements of 21st century deterrence, extended deterrence, and assurance. With the U.S. defense budget either likely to remain flat or face additional cuts in the near term, some U.S. military capabilities used within current extended deterrence and assurance strategies may be unavailable or downgraded in the future.[235] Moreover, some capabilities currently under development for future roles in defense and deterrence strategies may not progress beyond the research and design phase due to funding issues. The 2012 DSG's discussion of a "rebalance" toward the Asia-Pacific also led some U.S. allies outside this region to question whether the United States could focus policy attention, and sufficient military capabilities, on maintaining seamless deterrence strategies against their potential adversaries.

The United States will also have to exercise caution as it applies this framework of extending deterrence across multiple domains to specific defense agreements. U.S. allies closely watch Washington's interactions with other allies, and may be sensitive to indications that they are not afforded the same type of protection as another state. The inclusion of cyber space and cyber activities into U.S. defense guarantees for Australia, for example, and U.S. support for the development of a Cyber Defence Centre for NATO, may lead to future requests from other U.S. allies for the same "cyber umbrella" extended to these states.[236]

Few strategists are likely to deny that the United States needs to exercise deterrence across all five strategic domains. If resource constraints continue into the future, however, the United States may find it difficult to maintain a high level of deterrence across all five, ultimately forcing it to prioritize certain domains (and associated deterrence strategies) over others. This may represent an enduring challenge for U.S. leaders if threats continue to proliferate while defense resources remain static or decline. In addition, a mismatch - or the perception that one may exist – between the United States' description of deterrence requirements and the resources it makes available to its military forces will seriously complicate future U.S. assurance strategies. With many U.S. allies remaining heavily dependent on the U.S. defense

umbrella over their countries for their security, any indication this umbrella may spring a leak will raise serious concerns in allied capitals.

Will foreign parties speculate the United States is a vulnerable superpower? The United States may face challenges meeting the broad requirements of 21st century deterrence and extended deterrence if its adversaries – or allies – calculate the United States is unable or unwilling to meet them all. In order to continue to convince potential U.S. and allied adversaries that it is both willing and able to impose unacceptable costs on them in response to a potential attack on the United States or its friends abroad, it may need to address a number of issues regarding current and future potential resource constraints and vulnerabilities.

First, the defense guidance documents of the Obama administration emphasize the importance of developing "flexible" and "mobile" military forces that allow the United States to nimbly and efficiently flow military assets – particularly advanced, expensive capabilities such as missile defenses – to areas where they are needed.[237] These types of capabilities permit the United States to quickly and effectively shift forces and implement strategies in reaction to particular crises.

In an era of rebalancing and austerity, however, this concept of flexibility may conflict with the concept of closely tailoring extended deterrence and assurance strategies. Each tailored strategy, for example, may call for the employment of a particular force profile; as such, it may not be possible to simultaneously employ several at the same time if they require relatively scarce resources such as missile defense batteries or tactical nuclear-capable delivery systems. In short, even highly-flexible forces may be stretched to the breaking point within an environment where multiple demands – whether across domains, across geographic regions, or both – must be met.

Second, the U.S. strategic policy community has openly discussed the significant challenges currently faced by the United States in outer space and cyber space, to include frank public assessments of the U.S. government and military's growing but limited ability to deter and combat cyber espionage and cyber-attacks. As General Keith B. Alexander, Commander of U.S. Cyber Command, stated in March 2013 testimony to Congress,

> We have some confidence in our ability to deter major state-on-state attacks in cyber space but we are not deterring the seemingly low-level harassment of private and public sites, property, and data …. Dynamic defenses have brought about noticeable improvements in

> the overall security of DoD information environment. We know for a fact that our adversaries have to work harder to find ways into our sensitive but unclassified networks. Unfortunately, adversaries are willing to expend that effort, and DoD's architecture in its present state is not defensible over the long run.[238]

As such, adversaries or allies may conclude that, at present, the United States cannot fully protect core assets, or extend deterrence, across two critical strategic domains.

Third, despite ongoing U.S. government efforts to combat the proliferation of WMD and their potential delivery systems, and a number of notable successes in the post-Cold War era, countries such as the DPRK, Iran, and Syria have developed, acquired, or continue to pursue both. These potential adversaries, as well as major powers such as Russia and China, can hold – or believe they can hold, which is also significant for the purposes of deterrence – U.S. troops and allies abroad at risk with WMD capabilities. In addition, with the DPRK continuing to invest in long-range missiles, Pyongyang either believes it can hold the U.S. homeland at risk with a nascent ICBM or hopes to convince others this is the case (publicizing photographs, for example, showing missile flight paths for potential strikes on CONUS targets).[239]

In short, while the United States possesses offensive and defensive capabilities to address these challenges, it is possible that adversaries or allies would conclude there are significant gaps within the U.S. armor. Regardless of whether these perceptions are empirically true, they represent a challenge to the U.S. ability to deter and extend deterrence. With deterrence in the eye of the beholder, it is important for the United States to project an image of strength to both adversaries and allies, particularly in areas or operations that U.S. leaders have identified as important to U.S. and allied security. If the United States continues to struggle to address new space and cyber threats, and if potential adversaries continue to develop new, more sophisticated, and more diverse WMD and long-range strike capabilities, the United States may face increasingly persistent questions from foreign actors regarding whether it can continue to meet global defense obligations and carry out round-the-clock, cross-domain strategic operations.

Can the United States effectively coordinate its military capabilities in order to develop and implement effective deterrence strategies and operations across the globe and across all five domains? The broad requirements of contemporary deterrence and extended deterrence suggest the need to develop extremely close coordination

between U.S. military geographic and functional combatant commands in order to develop strategies and conduct operations against contemporary adversaries. In addition, the effective development, communication, and implementation of these strategies often requires a "whole of government" approach including diplomats, intelligence analysts, and other government officials. As identified by the 2012 Joint Operational Access Concept (JOAC) this places new demands upon the U.S. military:

> Attaining cross-domain synergy to overcome future access challenges will require a greater degree of integration than ever before. Additionally this integration will have to occur at lower echelons….[240]

Each additional actor involved and each additional domain factored into strategy and planning increases the degree of difficulty in executing operations. Moreover, while the U.S. military has long worked to minimize friction in joint operations, some U.S. national security experts have registered concerns the United States government lacks a clear framework for cross-domain deterrence, and as such may struggle to communicate or execute deterrence strategies against potential adversaries (particularly in areas such as space and cyber space).[241] The 2012 JOAC, however, concludes that realizing cross-domain synergy across the U.S. military is an ongoing process that will take time and resources, and may be difficult to maintain in times of crisis or combat.[242] The same conclusion also applies to coordinating deterrence strategies and operations across the U.S. government or in cooperation with allies.

In short, the concepts, strategies, and procedures for deterring adversaries across all five strategic domains remain works in progress. Similar to the early years of the atomic age, when thinkers and strategists sought to either adapt ideas about defense and deterrence to the new strategic era or invent new ones, current efforts to address present deterrence challenges are likely to evolve over time. Both policymakers and planners will need to be flexible and innovative in order to facilitate coordination that are either new, re-engineered to add additional domains, or overhauled to respond to geopolitical change.

What is the threshold for deterring adversary actions within the global commons? The Obama administration has identified a requirement for the United States to deter adversaries from interfering with, or otherwise destabilizing, the global commons ("domains or areas that no one state controls but on which all rely").[243] Other guidance documents have identified a specific requirement to deter adversary

A2/AD actions in areas or aspects of the global commons across all five strategic domains.[244]

Establishing and communicating clear thresholds for U.S. deterrence strategies regarding the broad range of actions that disrupt or degrade the global commons, however, presents difficult questions. The United States, for example, has taken direct steps in the past to deter A2/AD actions with regard to key international waterways. To date, however, it has largely restricted itself to diplomatic protests in response to actions degrading the space environment – such as "dazzling" attacks on U.S. satellites or anti-satellite weapons tests creating debris endangering the systems of all space-faring states. As U.S. and allied reliance on the global commons increases into the future, the United States will likely need to continually re-assess the level and types of adversary actions that it seeks to deter, while also carefully considering what resources are available to enforce the "red lines" it chooses to establish.

Tailoring Assurance and Extended Deterrence

The current U.S. view of extended deterrence and allied assurance emphasizes the importance of specifically tailoring these strategies to reflect the unique dynamics and capabilities of allies, partners, and their potential adversaries. It also views tailoring extended deterrence and assurance strategies as important for addressing specific regional challenges and for ensuring the best use of finite defense resources. In addition, it envisions tailoring as a truly collaborative process, with the United States and allies and partners working together to integrate their specific military capabilities and make use of their access to information and intelligence that U.S. forces may not possess.

What happens if/when the United States' turns down specific allied requests? The Obama administration has worked to develop better mechanisms and/or processes for communication with U.S. allies on deterrence issues. U.S. allies, for example, were appreciative of the Obama administration's decision to involve them in a range of discussions on nuclear issues prior to the publication of the 2010 NPR; previous U.S. reviews did not include close consultations with other states. In many cases, improved dialogue will likely improve the ability of the United States to assure its allies, providing a forum for U.S. leaders and officials to address allied questions and concerns regarding deterrence matters. Mechanisms such as the U.S.-ROK EDPC can also facilitate allied communication of information and insights on topics

(adversary decision-making process, for example) improving the design and implementation of deterrence strategies.

As demonstrated by the "Healy Theorem," however, the requirements of extended deterrence and allied assurance often differ, as do U.S. and allied assessments of the relative capabilities required to deter the latter's adversaries. The development of channels expressly devoted to extended deterrence and assurance discussions may place the United States in the uncomfortable position of having to tell an ally that its assumptions on U.S. deterrence strategies or capabilities are wrong, or that the United States cannot accommodate a specific request regarding its defense. For example, an ally facing an adversary suspected of illicitly developing nuclear weapons may ask the United States to deploy nuclear-capable forces to its territory in order to demonstrate that it is directly under the U.S. nuclear umbrella; a number of diplomatic or military reasons (a lack of adequate facilities for nuclear-capable delivery systems and/or nuclear warheads, for example), however, may lead the United States to turn down this request, causing a serious rift between the two states.[245] Such a rift may occur regardless of whether a deterrence dialogue mechanism exists between the United States and an ally; where these mechanisms exist or are created, however, U.S. leaders will need to take extra care in managing allied expectations regarding the scope of the protection afforded to them.

Can the United States successfully tailor strategies for opaque adversaries? The concept of tailoring deterrence and extended deterrence strategies relies on the collection and analysis of a broad range of data – to include accurately assessing an adversary's belief system and the impact of core ideals on its decision-making processes – to design effective deterrence strategies and operations. Accurate information and intelligence, however, may be difficult to attain. Hard data on the deliberations and strategic calculations of DPRK leadership councils, for example, remains difficult to acquire.[246] Moreover, different U.S. government analyses on the programs and policies of potential adversaries may reach differing conclusions based on the information at hand. These factors complicate efforts to closely tailor deterrence strategies for opaque or mercurial opponents.

Increasing Allied Involvement in Deterrence and Defense Strategies

The Obama administration has also sought to increase allied involvement in the development and implementation of deterrence and defense strategies, hoping to ease the defense burden on the United

States and asserting that closer deliberations and cooperation with friendly states directly contributes to their assurance.

Can allies contribute more? In June 2011, Secretary of Defense Gates warned members of NATO that the alliance faced "irrelevance" if member states did not contribute more resources to defense capabilities.[247] Gates' comments reflected both an assessment of "NATO's serious capability gaps and other institutional shortcomings laid bare by the Libya operation" – which, despite Libya's proximity to the European members of the alliance, heavily relied on U.S. combat forces, logistical support, and other assets – and an ongoing trend, exacerbated by the global economic downturn, of NATO states repeatedly cutting their defense budgets.

The military forces of a number of major U.S. allies in Europe, however, have faced additional cuts since Gates' demarche. The UK Ministry of Defence, for example, had its budget slashed by 249 million GBP in 2013-14; the cuts forced the British Army to reduce its ranks by 20,000 soldiers and disband several battalions.[248] Germany also plans to cut 7.8 million Euros from its 2013 budget and has stated that it will seek additional reductions in future years.[249] These significant cuts, and the low prospect of NATO states raising their defense spending in the near future, demonstrate that a number of key U.S. allies may lack the capabilities to take a greater role in deterrence strategies and operations.

Will the United States lose its ability to influence and advise allies when it has fewer forces and a lesser role in defense partnerships? The United States has traditionally represented the strongest member within alliances or defense partnerships, both in terms of decision-making authority and military force (particularly in regard to nuclear forces). However, as the United States reduces its military footprint abroad, encourages allies to develop or purchase their own advanced military capabilities, and asks allies to take a greater role in deterrence and defense planning, it may find itself in circumstances where an ally has the military forces and political resolve to take action without coordinating with U.S. military forces or their political leadership in Washington.

Close cooperation with allies remains vital to the success of U.S. extended deterrence and assurance strategies, and it is in the best interests of the United States to encourage its allies to develop strong militaries (particularly in light of the budget challenges faced by many allies). There is a tension, however, between building up allies and retaining the political capital and military capabilities necessary to

persuade them not to undertake unilateral actions that the United States does not support. As the United States advocates for allies to take a larger role in regional deterrence and defense matters, it may need to devote close attention to managing alliance relations in order to ensure friendly regimes do not make decisions that may complicate the United States' ability to protect them in a crisis or conflict, or that may lead to broader regional instability, possibly placing the security of other U.S. allies at risk.

Focusing Extended Deterrence Strategies on Risk Taking States

The Obama administration has focused its discussions of extended deterrence strategies on "risk taking" regimes such as Iran and the DPRK, and asserts that the deterrence by denial capability provided by missile defenses will play a critical role against actors that may not always be deterred by the threat of punishment.

Does this change the focus, strategies, or capabilities applicable to deterring other actors? The United States' present focus on states such as Iran and the DPRK may lead U.S. allies facing other potential threats to question whether the United States has changed its views or strategies on extending deterrence against other potential adversaries.

Some U.S. allies, for example, view Russia and/or China as potential security threats. The Obama administration's efforts to establish "strategic stability" with these states reflects the significant benefits to the United States and its allies of stable relations between major non-allied powers. Administration officials, however, have also suggested the United States and Russia could exchange the nuclear deterrence concept of "mutually assured destruction" for a broader diplomatic-military construct of "mutually assured stability."[250] The administration's unclassified guidance documents, such as the 2010 NPR and 2013 RNES, state that given the size of Russia's nuclear forces, and the ongoing modernization of Russian and Chinese nuclear arsenals, nuclear forces remain important to the stability of these bilateral security relationships. The latter also notes that a significant disparity between U.S. and Russian nuclear forces could raise concerns amongst allies (although unspecified, this statement appears to refer to strategic nuclear forces, as a significant disparity already exists between U.S. and Russian non-strategic nuclear forces).[251] These and other discussions of strategic stability, however, give few details regarding U.S. extended deterrence and assurance strategies either for these specific states or, more generally, for how these strategies will address any state with a significant nuclear arsenal. While U.S. allies, in general, support improved relationships between Washington, Moscow, and Beijing, they

may also require reassurance that the United States remains fully resolved, and militarily prepared, to extend deterrence against these major conventional and nuclear powers.

In addition, the Obama administration's appeals to Russia and China to join the United States in de-emphasizing nuclear forces and nuclear deterrence within their geostrategic relationships have met with skepticism and opposition in both countries. Russia has remained adamant that nuclear forces are central to its defense strategy and necessary to offset the advanced conventional, space, and missile defense forces of other states.[252] It has also rejected the idea that nuclear deterrence in the form of mutually assured destruction may no longer apply to the U.S.-Russia strategic relationship, and its military doctrine continues to identify NATO (and efforts to boost its capabilities or expand the alliance) as the primary "external threat" to its national security.[253] In early 2013 China re-affirmed the critical deterrence role played by its nuclear forces vis-à-vis other nuclear states and suggested it might consider altering its stated "no first use" policy for nuclear weapons due to concerns about U.S. missile defense and "conventional strategic strike" capabilities.[254] Russia and China remain convinced nuclear deterrence plays a central role in the geostrategic dynamics of 21st century international affairs; moreover, both view nuclear weapons as an important counterweight to U.S. advantages in other types of military forces.

These factors may complicate U.S. efforts to focus extended deterrence strategies on risk-taking states and reduce the role of nuclear forces, and nuclear deterrence, in its strategic relations with Moscow and Beijing. U.S. allies may also become nervous if they feel the world's three foremost nuclear powers do not see eye-to-eye on questions of nuclear deterrence. The United States will need to balance diplomacy and deterrence imperatives within its multifaceted relationship with major powers while also maintaining ironclad deterrence strategies against risk taker states. This challenge will likely endure for the foreseeable future, particularly as long as nuclear forces remain important to the national security of multiple states.

How to Deter Risk Taking States? The Obama administration discusses missile defenses as an important deterrence by denial capability against risk taking states, based on an assessment that, in the absence of these defenses, these states might believe their possession of ballistic missiles could deter the United States from taking action against them, despite the U.S. military's possession of superior strike capabilities.

This is an assessment that presents deterrence as viewed through the lens of a potential adversary attempting to deter the United States. It suggests that deterrence by punishment strategies may not apply to risk taking actors equipped with ballistic missiles. While advancing missile defenses as a potential deterrence by denial response to this challenge, this assessment also raises questions regarding deterrence and these actors.

First, this assessment places much of the weight of responsibility for deterring these adversaries on missile defenses; deterring missile strikes will either succeed or fail depending on the adversary's views of whether these systems are credible. What criteria will risk taker states employ to determine this form of credibility? One credibility challenge the United States and its allies must address is directly stated within the 2010 BMDR: an order of magnitude (thousands of missiles versus hundreds of interceptors) separates the numbers potential attacking forces of adversaries from the numbers of defensive forces available the United States and its allies.[255] The United States, for example, has developed the Theater High Altitude Air Defense system as a "globally transportable, rapidly deployable" asset critical to defending U.S. troops and allies abroad from ballistic missile strikes; as of late 2012, however, it had only activated three batteries (each battery includes a small number of launchers, with each launcher capable of carrying eight interceptors).[256]

Second, if deterrence by punishment strategies are of uncertain value with regard to these states, and deterrence by denial strategies (in the form of missile defenses) must be employed against their ballistic missile capabilities, are other forms of deterrence by denial besides missile defenses necessary to address the other capabilities at their disposal? The DPRK and Iran have demonstrated a willingness to employ various forms of asymmetric warfare against the United States and its allies. The DPRK, for example, has increasingly employed cyber-attacks against South Korean civilian targets such as banks and news organizations, and Iran continues to threaten to use A2/AD attacks to slow or halt shipping in the Persian Gulf.[257]

U.S. and allied missile defenses, if considered credible by risk taker adversaries, may lead those states to elect against using ballistic missiles to coerce or attack the United States and its friends abroad. This suggests the United States will need to develop other deterrence by denial capabilities and strategies to deter (and extend deterrence) against risk taking states.

The 2010 BMDR's brief discussion of missile defenses and deterrence raises the above issues and alludes to other challenges

stemming from the broader question of how to calibrate deterrence by punishment and deterrence by denial strategies (and the resources necessary for their implementation) to counter actors willing to accept significant risk in order to threaten (and/or attack) the United States and its allies. The approach of tailored deterrence suggests the answer is likely nuanced and may require frequent review and reappraisal. Adversaries willing to take big gambles pose serious challenges to the development of extended deterrence and assurance strategies; advanced capabilities such as missile defenses are likely necessary, but not sufficient, for addressing this challenge in the 21st century.

Can Missile Defenses Deter Missile Development and Acquisition? The Obama administration's 2010 BMDR suggests missile defenses represent a key deterrence by denial capability both on the battlefield and within regional geopolitical rivalries. It asserts that when these defenses are effective and deployed in strength, they can deter an adversary from launching missiles in conflicts or crises. Moreover, over the long term, they argue an airtight missile defense shield can dissuade adversaries from using resources to develop or acquire ballistic missiles.[258]

In the near-term, however, available evidence indicates that contemporary U.S. and allied missile defenses do not appear to have affected the calculus of these potential adversaries in regards to developing, testing, or fielding ballistic missiles. Despite ongoing U.S. government efforts to improve U.S. and allied missile defenses in Europe, the Middle East, and East Asia, in the years after the publication of the 2010 BMDR Iran and the DPRK continued to devote extensive resources to expanding their current missile fleets and developing longer-range missile platforms (including space launch vehicles).

The U.S. intelligence community, for example, reported in April 2013 that it assessed the DPRK as having taken "initial steps" toward fielding a new road-mobile ICBM.[259] The assessment followed shortly after the DPRK publicly stated the "reckless nuclear threat [of the United States] will be smashed by the … cutting-edge smaller, lighter and diversified nuclear strike means of the DPRK." Although it was not clear if this statement was referring to DPRK nuclear-capable delivery systems and/or nuclear warheads (or it may have simply represented bellicose propaganda attempting to inflate the country's capabilities), the statement and U.S. intelligence assessment both reflect Pyongyang's determination to pursue additional missile capabilities despite international economic sanctions and U.S. efforts to develop cooperative,

theater, and national missile defenses geared to address the DPRK missile threat.[260]

Reducing Reliance on Nuclear Forces and Increasing the Role of Missile Defenses

Current guidance from the Obama administration states that nuclear forces, while critical to extended deterrence and assurance strategies, will play a decreased role in relation to the conventional and missile defense forces that are also assigned to these missions. In addition, the number and variety of U.S. nuclear forces continued to slowly decline during President Obama's tenure as a result of policy decisions, the ratification and initial implementation of the U.S-Russian Federation New START Treaty, and the retirement or dismantlement of a number of delivery systems and warheads.

How "Reduced" is the Role of Nuclear Forces in U.S. Defense Strategy, and What are the Implications for the U.S. Nuclear Umbrella? The reduced role for, and reliance upon, U.S. nuclear forces in deterrence strategies will place responsibilities on conventional and missile defense forces. The Obama administration has clearly signaled that it believes Cold War deterrence by (nuclear) punishment models are poorly suited for deterring contemporary adversaries such as risk-taking states. On conceptual and operational levels, however, a shift in responsibilities between these three types of forces appears to remain a work in progress. Nuclear, conventional, and missile defense forces each bring broadly differing capabilities to any military strategy or operation, and one type often cannot directly substitute for the effects provided by another. Furthermore, adversaries are likely to view each type as posing a different type of challenge to their own policies, plans, and operations. As such, how, when, where, and why nuclear, conventional, and/or missile defenses affect the deterrence calculations of potential adversaries will likely differ. The implications these factors carry for U.S. extended deterrence strategies de-emphasizing nuclear forces remain unclear. If missile defenses address the threat posed by ballistic missile strikes (a role played in the past by nuclear forces, albeit using a different form of deterrence to prevent an adversary from launching this type of strike) what offensive conventional forces will take a more prominent role in holding key adversary assets at risk?

The implications of the relative reduction of the role of nuclear forces in relation to conventional and missile defense forces also remain uncertain to many U.S. allies and partners. While welcoming U.S. efforts to promote nuclear nonproliferation objectives by signaling a

willingness to decrease the overall role of nuclear forces in defense planning, they question whether other types of forces can adequately fill whatever roles are vacated by nuclear weapons and delivery systems.

Many U.S. allies are convinced, for example, that nuclear weapons remain essential to deterring nuclear-armed adversaries. For allies facing direct nuclear threats, the United States may need to directly address concerns that the U.S. force mix for countering nuclear and WMD-armed adversaries has de-emphasized nuclear forces to a degree that Washington can no longer provide for their defense. Indeed, some experts and politicians in allied states are publicly stating that further U.S. nuclear reductions will place the future credibility of U.S. nuclear guarantees in doubt. For example, Cheon Seongwhun, a Senior Research Fellow at the Korea Institute for National Unification (a think tank funded by the ROK government) has argued the Obama administration's "decisions to reduce the role of nuclear weapons…will inevitably have the effect of shrinking the nuclear umbrella the United States provides to its allies." In response, he has called for the United States to improve its ability to assure Seoul by developing a "Korean Peninsula Tailored Deterrence Architecture" that includes the deployment of U.S. tactical nuclear weapons to U.S. bases in the ROK, arguing that:

> considering the uniqueness of security threat faced by South Korea…there is no other place in the world except South Korea that deserves first-hand access to the U.S. extended nuclear deterrence.[261]

Some Japanese policy experts have also registered concerns regarding whether U.S. nuclear reductions – in particular, the retirement of the TLAM-N - signaled a slackening of the U.S. commitment to nuclear extended deterrence in the Asia-Pacific region. As noted by Ken Jimbo, a Japanese scholar and frequent commentator on nuclear issues, Japan would never request the deployment of U.S. nuclear weapons on its territory, but strongly supports U.S. extended deterrence strategies that visibly deploy nuclear-capable aircraft in the Asia Pacific.

> [T]here was a certain amount of concern in the Japanese policy community that the retirement [of the TLAM-N] symbolizes the reducing visibility of U.S. nuclear commitments in Asia …. I think that ensuring the visibility of the U.S. nuclear commitment in Asia by flexibly forward deploying the air-component will become highly important in post-NPR extended deterrence in Asia.[262]

Some conservative political figures in the ROK and Japan have also called for the United States to either bolster its nuclear security guarantees to their country or for the development of national nuclear weapons programs. Former ROK legislator and presidential candidate M.J. Chung stated in an address to the 2013 Carnegie Endowment Nuclear Policy Conference that the "failure" of international nonproliferation efforts, and the renewed importance of strengthening nuclear deterrence strategies in response to the DPRK's development of nuclear weapons and delivery systems, led him to call for the United States to either deploy nuclear forces on the peninsula or the ROK to pursue its own independent nuclear deterrent.[263] In Japan, former finance minister Shoichi Nakagawa, former defense minister Shigeru Ishiba, and former Prime Minister Shinzo Abe have all voiced support for Japan considering whether to develop its own nuclear weapons program. In addition, the country's largest newspaper noted in an op-ed defending the country's use of civilian nuclear power in the wake of the Fukushima crisis that the country's civilian plutonium stores "works diplomatically as a nuclear deterrent."[264] These direct discussions of the potential value of a future Japanese nuclear weapons program signal a significant shift in the country's political discourse, which long focused entirely on public support for comprehensive nuclear disarmament.

In addition to calls from some policy experts and politicians in allied countries to reevaluate the U.S. nuclear umbrella and weigh the merits of national nuclear weapons programs, publics in the allied states such as ROK and Turkey are also voicing support for the potential future development of an independent nuclear deterrent. A public opinion poll conducted by the Asan Institute, a privately-funded think tank in Seoul, in early 2013 (shortly after North Korea's third nuclear test) found 66 percent of respondents – with little significant deviation based on political affiliation – supported starting an ROK nuclear weapons program.[265] A March 2012 poll conducted by Centre for Economics and Foreign Policy Studies, an independent think tank in Istanbul, found that 54 percent of respondents supported Turkish development of a nuclear weapon in response to a potential future Iranian nuclear capability.[266]

The above policy, political, and public opinion developments do not necessarily indicate that these countries will begin independent nuclear weapons programs in the near future. They are significant, however, in revealing that a number of developments during the post-Cold War era have led U.S. allies to openly debate the value of fielding national nuclear weapons assets in order to guarantee their security against WMD-armed adversaries. Public figures and average citizens in these countries – all close U.S. allies – no longer consider it taboo to

discuss a course of action that would directly violate the Nuclear Non-Proliferation Treaty, strain or break ties with the United States and other allies, and possibly lead to economic sanctions or isolation from other states in the international community. The experts, commentators, and publics discussed above, when considering the threat posed by current or future potential nuclear-armed adversaries, conclude that a nuclear deterrent – whether provided by the United States, or, if necessary, by their own militaries – is essential to their national security. Moreover, whether openly stated or implied, these parties may doubt the long-term effectiveness of the U.S. nuclear umbrella as a guarantor of their security within a multi-nuclear state geopolitical environment.[267] Whether concerned U.S. forces may be insufficient to address future threats, or worried U.S. policymakers lack the political resolve to counter their regional adversaries, allied commentators and publics appear increasingly open to considering developing or maintaining some form of nuclear hedge (even if only in the form of fissile material stocks) against future uncertainty.

In summary, a number of U.S. allies remain deeply skeptical of the concept that the value of nuclear weapons decreased relative to other types of military force in terms of their geopolitical importance or the deterrence value they provide. Indeed, some parties within the United States' non-nuclear allies may believe nuclear weapons are becoming *more* salient to their national security. As a result, while some U.S. allies remain strongly supportive of additional arms control treaties and nuclear force reductions, other friendly states are concerned the U.S. nuclear arsenal may be nearing a "tipping point" whereby further reductions will impede Washington's ability to extend deterrence to its allies. The United States will need to diligently address these types of concerns in order to address any future doubts about the capabilities or political resolve associated with the U.S. nuclear umbrella. A strong response to these concerns – which, whether they directly state it or not, question the credibility of U.S. extended deterrence and assurance strategies and echo the doubts about U.S. resolve articulated by President de Gaulle during the Cold War – is important to both ensure these relationships remain strong and prevent friendly regimes from considering whether to embark down the expensive, dangerous, and destabilizing path of nuclear proliferation.

Can U.S. nuclear-capable aircraft carry the full weight of visible extended deterrence and assurance strategies and operations? The retirement of the Navy's TLAM-N leaves the U.S. nuclear arsenal with one type of visible strategic nuclear delivery system (B-2 and B-52 long-

range bombers) and one type of visible, forward-deployable tactical nuclear delivery system (F-15E and F-16 DCA).

These aircraft, however, face a number of issues that may impact the credibility of these systems and, in turn, affect the credibility of U.S. extended deterrence and assurance guarantees. First, the aircraft are aging. The Air Force's initial operating capabilities dates for its nuclear-capable aircraft are as follows: 1952 (B-52), 1979 (F-16), 1989 (F-15E), and 1997 (B-2).

Second, there are a number of issues with the aircraft intended to take their place within the nuclear arsenal. Current U.S. DCA are slated for replacement by a nuclear-capable variant of the F-35, but problems with this type of aircraft have delayed its integration into the force and may complicate handoff of the extended deterrence/assurance mission. The F-35s problems may also raise issues for the future of NATO nuclear-sharing arrangements. Some U.S. allies intending to buy the F-35 are becoming increasingly concerned about the aircraft's development problems and rising price tag; others, such as Germany, have already decided to retire their DCA without replacement.[268] In addition, the U.S. Air Force's future long-range strike bomber (LRS-B) is, at present, a paper concept. Defense contractor proposals for the airframe are currently under consideration, but it will take years of research, design, development, and testing before the selected airframe selected is deployed, likely within the 2020s.[269]

Third, the B-2, F-15, and F-16 all rely on the B61 gravity bomb for the purposes of nuclear extended deterrence operations. The B61 is undergoing a life extension program (LEP); however, the program has encountered a number of problems and delays, leading the Government Accounting Office to raise questions about the U.S. ability to seamlessly maintain operational capabilities for NATO nuclear-sharing missions.[270] In addition, significant increases to projected costs of the LEP have led some members of Congress to criticize the National Nuclear Security Administration's management of the process and question its ability to successfully overhaul the B61 or other nuclear weapons.[271]

With these aircraft and the B61 critical to U.S. extended deterrence and assurance strategies, the United States will need to resolve these issues in order to maintain the future credibility of its nuclear umbrella.

PART 6: REGIONAL ISSUES

Regional Security Architectures

A key aspect of the current U.S. approach to extended deterrence and assurance is focused on building, bolstering, and sustaining regional security architectures that will allow for the seamless development of joint defense plans and operations with allies and partners. This will improve the latter's ability to defend themselves, and ease the ability of the United States to flow conventional, nuclear, and missile defense forces to a region in response to sudden crises or conflicts.

This section provides an overview of current unclassified U.S. government guidance on extended deterrence and assurance policies and strategies for three regions where the United States has vital strategic interests and longstanding defense relationships: East Asia, the Middle East, and Europe. For each region, this presentation of current guidance is followed by a discussion of key issues for consideration during the development of future tailored extended deterrence and assurance strategies.

Efforts to create a more permanent, cohesive, and interoperable regional security architecture in East Asia and the Middle East as robust as the arrangements in Europe, however, face a number of significant obstacles.

East Asia

Extended Deterrence

In the Asia-Pacific theater, the DPRK is the primary focus of current U.S. extended deterrence policies and strategies. In the past, the United States has also extended deterrence against China and Russia. However, the United States now seeks to establish a relationship of "strategic stability" with these countries, a status that appears to incorporate elements of extended deterrence, diplomatic dialogue, and security cooperation.[272]

The United States' 2012 "rebalance" (or "pivot") to the Asia-Pacific will likely have significant long-term implications for U.S. extended deterrence and assurance strategies across the region. At a minimum, it will refocus attention on how these strategies can help the United States shape regional dynamics to ensure its allies, partners, and interests are protected and the Asia-Pacific remains stable, peaceful, and open to international trade and transit. Rebalancing, however, may have deeper implications for extended deterrence and assurance in regard to

the critical – but limited – assets that play a vital role in these strategies. A nuclear arsenal declining in numbers and a missile defense architecture short of interceptors in the face of current and future threats may impose hard choices on planners whose task of rebalancing will necessarily reduce – perhaps significantly so – the resources available to other theaters and commands.

North Korea. From the negotiation of the armistice of the Korean War to the present day, the United States has maintained significant forces on the Korean Peninsula to deter an invasion of the ROK. The 2010 QDR states that the U.S. military "will develop a more adaptive and flexible U.S. and combined force posture on the Korean Peninsula to strengthen the alliance's deterrent and defense capabilities."[273] Although the full implications of a more "flexible" U.S. military presence on the peninsula remain under development, the United States may seek in the long-term to switch out of some of the ground forces currently stationed in Korea with more mobile assets, as well as specialized forces such as missile defense units. This reflects a long-term trend of shifting the U.S. presence in Korea toward capabilities that can deter Pyongyang's increased emphasis on ballistic missiles and away from forces deployed and postured to address an increasingly unlikely heavy ground assault across the Korean demilitarized zone.

The DPRK's aggressive development of nuclear weapons and a broad range of ballistic missiles, together with its leadership's willingness to engage in risky, provocative acts (such as sinking the *Cheonan* in 2010 and testing of its third nuclear device in February 2013) have led the United States to conclude that deterrence-by-punishment strategies may be insufficient for preventing Pyongyang from continuing to harass the ROK.[274] The United States views the deployment of robust missile defenses (both regional and national) as critical to extending deterrence against the DPRK, demonstrating to its leaders that it cannot prevent the United States from acting against it by threatening to use ballistic missiles against U.S. or allied targets.[275]

As part of the 1991 Presidential Nuclear Initiatives, the United States withdrew all non-strategic nuclear weapons deployed on the Korean Peninsula. The United States currently extends nuclear deterrence against the DPRK with a range of strategic nuclear forces and has the "capacity to redeploy" non-strategic nuclear systems to East Asia in a crisis, if needed.[276] The most visible of these forces are the strategic long-range bombers rotating through the Asia-Pacific as part of the U.S. strategy of maintaining a "continuous presence" of nuclear-capable aircraft within the region.

China. The United States is currently engaged in a balancing act with China. The 2010 NPR, for example, states Washington's interest in establishing a relationship of strategic stability with Beijing, while the 2012 DSG's pivot toward the Asia-Pacific is widely viewed in the region as focused on countering China's increasingly capable and assertive military.[277]

In one key respect, the United States has signaled that it does not intend to alter its deterrent relationship with China. The 2010 BMDR unequivocally states that U.S. national missile defenses are not designed for, nor intended to negate, China's strategic nuclear forces.[278] While not discussed in policy documents, this effort to separate missile defenses from the U.S.-China nuclear deterrence relationship may have important implications for U.S. regional extended deterrence. As noted above, however, China remains deeply skeptical of U.S. national missile defense plans, and has also objected to U.S. efforts to develop a regional missile defense architecture.[279]

The Obama administration, however, has also sought to reassert the United States as a Pacific power capable of balancing against any state seeking regional hegemony or otherwise taking actions to destabilize the Asia-Pacific. The United States has moved to establish defense ties with states such as Vietnam while also strengthening its defense cooperation with traditional allies such as Thailand, Australia, the Philippines, ROK, and Japan.[280] The United States has also increased its regional force presence by recently concluding agreements to regularly rotate littoral combat ships through Singapore and U.S. Marines through Australia.[281] While the U.S. government is taking care not to single out China as the reason for this increased force presence in the region, these moves boost the ability of the United States to extend deterrence against Beijing or any other regional actor that attempts to intimidate, coerce, or attack U.S. allies and partners in the Asia-Pacific.

The United States has also clearly communicated its determination to extend deterrence over vital international waterways and airspace in the Asia-Pacific on behalf of the principle of freedom of navigation throughout the region.[282] Speaking at the Shangri-La conference, an annual Asia-Pacific security summit, Secretary of Defense Leon Panetta stated in June 2012 that:

> Our approach to achieving the long-term goal in the Asia-Pacific is to stay firmly committed to a basic set of shared principles …. These rules include the principle of open and free commerce … [and] open access by all to their shared domains of sea, air, space, and cyber

space….[283]

The Panetta speech and other policies announced by U.S. senior officials have clearly communicated to all regional parties that the United States is mounting a determined defense of the right of all ships and aircraft – U.S., allied, and commercial, of all flags – to freedom of navigation through international waters and airspace.[284] While unstated in official U.S. policy, within the Asia-Pacific this is widely interpreted as a U.S. response to recent Chinese efforts to claim sovereignty over important stretches of ocean and disputed minor islands, and recent related incidents where Chinese government ships in contested areas have threatened or harassed ships from other Asia-Pacific states.[285]

Russia. U.S. discussions of nuclear extended deterrence and Russia have typically focused on Europe. Russia, however, is also a major nuclear power in the Pacific and is seeking to upgrade its conventional force presence both within the region and across the Arctic. The Russian port of Vladivostok is home to the country's Pacific fleet which includes several nuclear submarines equipped with SLBMs. In recent years Russia has significantly increased its air patrols in the Arctic and on several occasions has flown nuclear-capable Tu-95 Bear bombers into Alaskan air-exclusion zones.[286] While Western press reports and policy discussions featuring Pacific maritime disputes often focus on China, Russia and Japan also have a long-running and increasingly tense dispute over islands called the "Southern Kurils" by Moscow and "Northern Territories" by Japan.[287] The inability of the two states to resolve their competing claims of sovereignty has prevented them from signing a peace agreement officially ending the Second World War.

The 2010 NPR stated that the United States government will seek to establish a relationship of "strategic stability" with Russia. The importance of this policy was emphasized by the appointment of former Undersecretary of State for Arms Control and International Security Affairs Ellen Tauscher as Special Envoy for Strategic Stability and Missile Defense in February 2012. Tauscher followed this appointment with several high-level meetings during 2012 on a range of topics related to strategic stability with Russian interlocutors. Although little progress was realized in resolving disagreements on issues such as missile defenses, the Obama administration remains committed to pursuing this form of stability with Moscow. From discussions of the U.S.-Russia security relationship within guidance documents such as the 2010 NPR and 2013 RNES, "strategic stability" appears to share a number of the characteristics of traditional understandings of nuclear deterrence.[288] It is unclear, however, what implications the achievement of this state of

relations between Washington and Moscow might have for U.S. allies and partners in Europe or in the Pacific.

Assurance

The United States has what is often described as a "hub and spoke" model of assurance in the Asia-Pacific, reflecting the existence of multiple, long-standing, official bilateral alliances (with ROK, Japan, Australia, the Philippines, and Thailand) but also the lack of a region-wide alliance structure akin to NATO in Europe. The long shadow of the Second World War complicates the relationship between Japan and a number of U.S. allies and partners in the region; in addition, a combination of differing cultures, divergent regional interests, and the tyranny of geography prevent the creation of a pan-Pacific U.S.-led defense coalition.

Nevertheless, working with the United States to address common threats represents an important common denominator across the national security strategies of these disparate states. The 2012 DSG emphasizes the importance of the United States working closely with Asian-Pacific allies and partners to maintain peace and freedom of access across the region in order to ensure its "future stability and growth." A joint approach is also presented as critical to "deter and defend" against the major threat to regional peace and stability posed by the DPRK and its nuclear weapons program.[289]

As a result, the United States has many friends in a region viewed as vital to U.S. and international security and prosperity. However, it also faces many complex diplomatic and defense challenges in its efforts to assure Asian-Pacific allies and partners with disparate – and sometimes divergent – perspectives on national security requirements and the best approach for ensuing regional stability.

Japan. The United States is a close ally with Japan, with a defense relationship codified by the 1960 Treaty of Mutual Cooperation and Security between Japan and the United States of America. The treaty's Article V states:

> Each Party recognizes that an armed attack against either Party in the territories under the administration of Japan would be dangerous to its own peace and safety and declares that it would act to meet the common danger in accordance with its constitutional provisions and processes.[290]

Japan faces a number of regional security challenges and turns to the United States for assurance as its most important ally. The country is

the target of repeated threats from the DPRK, which has conducted recent ballistic missile tests through Japanese airspace and over its territory. Tokyo views DPRK as a significant, persistent threat to its security.

Japan is also wary of China's increasing regional influence and military strength. As with a number of other states, the legacy of the Second World War remains a stumbling block to cordial relations between the two states. The two countries also have a longstanding dispute over an island chain – called the Senkakus by Japan and Diaoyus by China – that escalated in late 2012, with Japan announcing plans to officially nationalize the territory and China responding with significant increases in patrols by government ships directly offshore from the disputed islands.[291]

The United States assures Japan by stationing a significant conventional force presence within the country, including the U.S. Fifth Air Force at Yakota Air Base, the *USS George Washington* carrier group at Yokosuka, and both a significant U.S. Marine presence and Kadena Air Base in Okinawa. Official Japanese documents and statements often emphasize the importance of these U.S. forces to protecting their country from regional threats.[292] With Japan facing increasing threats from growing regional ballistic missile arsenals, the United States also provides assurance to Tokyo through the two country's close cooperation on missile defense programs. This cooperation includes joint research, testing, and exercises. Japan also hosts major system components for regional missile defenses, such as U.S. AN-TPY-2 radars.[293] In addition, Japan relies on the United States for nuclear deterrence against regional nuclear threats. The U.S. government, whose recent retirement of the TLAM-N removed a non-strategic nuclear system that previously played a key role in Asia-Pacific regional deterrence, has pledged to Japan and other regional allies that they remain protected by a range of U.S. strategic and non-strategic nuclear delivery systems.[294] The two governments also agreed in 2011 to establish the Extended Deterrence Dialogue as a bilateral extended deterrence consultative mechanism to address a range of matters, to include the U.S. "nuclear umbrella" over Japan.[295]

South Korea (ROK). The United States has maintained close defense ties with the ROK since the Korean War. The 1953 ROK-U.S. Mutual Defense Treaty pledges that any attack on either party will be met by a joint response to "meet the common danger."[296] The DPRK remains the focus of ROK defense planning, with the Korean Peninsula DMZ remaining heavily fortified by both sides and a potential flashpoint

for future conflict. The DPRK repeatedly denounces the ROK government as a "puppet" regime and is committed to reunifying the country under Pyongyang's rule.[297] DPRK artillery and ballistic missiles continually hold a range of civilian and military targets at risk throughout the ROK. Despite the general deterioration of the country's conventional military forces in recent years, DPRK artillery and missile batteries remain capable of heavily damaging Seoul and attacking a range of ROK and U.S. military targets within the initial phase of a potential armed conflict. The DPRK's sinking of the ROKS *Cheonan* and shelling of the ROK's Yeongpyeong Island in 2010 represented the most recent serious provocations by Pyongyang; the actions threatened the fragile peace between the two countries and led Seoul to re-evaluate the role of deterrence on the peninsula.[298] While some ROK commentators have noted the rise of China with concern, the DPRK continues to dominate the country's national security agenda.[299]

The United States provides assurance to the ROK through a variety of means. It maintains significant conventional forces within the country, which hosts approximately 28,500 U.S. troops, to include the Eighth Army in Seoul and the Seventh Air Force in Osan. The United States and the ROK are currently engaged in discussions regarding increasing their cooperation on missile defenses, with some media sources predicting that the Korean Ministry of Defense's recently announced plans to upgrade its theater missile defenses will feature U.S.-built PAC-3 Patriot missiles.[300] With the ROK now also facing a direct nuclear threat from the DPRK, it relies on the United States and its nuclear deterrent for protection.[301] During the Cold War, the ROK hosted a large number of U.S. non-strategic nuclear weapons and delivery systems. These nuclear forces were removed as part of the 1991 Presidential Nuclear Initiatives. The visible extension of the U.S. nuclear umbrella over the ROK is today provided by the "continuous presence" of U.S. bombers rotating through Guam, as well as SLBMs aboard nuclear submarines patrolling the Pacific. In 2011, the U.S. and the ROK established an Extended Deterrence Policy Committee as a formal mechanism for discussing alliance extended deterrence matters.

The ROK-US defense relationship is currently undergoing a period of transition, with Seoul preparing to develop long-range strike assets that may make it less dependent on U.S. forces and also assuming increasing responsibility for peninsular defense. The United States recently agreed to change "guidelines" between the two countries restricting the capabilities of ROK missiles and unmanned aerial vehicles. Seoul can now develop missiles with a range of up to 800 km, allowing it to rapidly strike targets across most of the DPRK, a capability

it believes will significantly strengthen its ability to directly deter Pyongyang.[302] In addition, the United States and the ROK have developed a "Strategic Alliance 2015 Roadmap" whereby "wartime operational control" of Korean troops – currently a joint U.S.-ROK responsibility – will shift entirely to ROK military commanders in 2015.[303]

Australia. The United States and Australia are longtime allies, the two countries signed a legally binding "Security Treaty between Australia, New Zealand and the United States of America" in 1951 (New Zealand is a defense partner of both states, but as discussed earlier is no longer an active member of the ANZUS Treaty). By Article IV of the treaty, both countries pledge "that an armed attack in the Pacific Area on any of the Parties would be dangerous to its own peace and safety and declares that it would act to meet the common danger."[304] In late 2011, the two countries agreed to amend the treaty to add the cyber domain as an additional area of common defense in the event of an attack on either party.[305] Australia views its alliance with the United States – and the latter's continued close engagement with the Asia-Pacific – as vital to both its national security and regional stability.[306] It is also cautious, however, to balance this alliance with concerted diplomatic efforts to maintain good relations with China, which is critical to the Australian economy.

The United States provides assurance to Australia through regular joint exercises – the annually held *Talisman Saber* exercise, for example, features over 20,000 U.S. and Australian troops – and rotations of military forces. The two countries recently concluded a major defense agreement placing a significant number of U.S. Marines on regular rotations in Northern Australia.[307] The United States also assures Australia by including the country under its nuclear umbrella. The Australian government views U.S. extended nuclear deterrence as critical to its national security and a guarantee that has allowed the country to enjoy protection from nuclear attack without having to consider developing its own independent deterrent capability. As a recent Australian defense white paper explains:

> Australian defence policy under successive governments has acknowledged the value to Australia of the protection afforded by extended nuclear deterrence under the US alliance. That protection provides a stable and reliable sense of assurance and has over the years removed the need for Australia to consider more significant and expensive defence options.[308]

Key Issues for Asian-Pacific Extended Deterrence and Assurance Strategies

The effectiveness and viability of U.S. extended deterrence and assurance strategies in the Asia-Pacific will face a number of near- and long-term tests within this dynamic and volatile region.

The United States currently provides a visible nuclear extended deterrent capability in the form of B-52 and B-2 bombers rotating through Guam and patrolling the skies over the Western Pacific.[309] This strategy of maintaining a "continuous presence" of visible U.S. aircraft in the Asia-Pacific ensures that potential adversaries are always aware the United States has nuclear-capable forces in theater. The strategy, however, faces challenges from both allies and adversaries. Some politicians and commentators in Japan and ROK, for example, have either argued for their own countries to develop an independent nuclear deterrent or called for the United States to permanently station nuclear forces on their territory. These calls represent an implicit challenge to the assurance value of the "continuous presence" strategy and its reliance on nuclear capable forces that are visible within the region, but geographically distant from the countries they are intended to protect. Second, if the nuclear and ballistic missile arsenals of potential adversaries within the region continue to grow, and if these actors continue to improve their A2/AD capabilities, allies and adversaries may begin to question the deterrent value of U.S. strategic bombers rotating through Guam, as these aircraft are limited in number and may be viewed as vulnerable on this central landing and transit point for their operations within the Asia-Pacific theater.

In addition, the extended deterrence mechanisms established with Japan and the ROK have addressed both allies' increasing interest in close engagement with the United States on nuclear deterrence issues. In the near-term, their establishment and early sessions have assured both parties of the U.S. commitment to maintaining a nuclear umbrella over their respective states. In the future, however, the United States will have to prepare for increasingly sophisticated questions from allies on nuclear strategies and plans, as well as increasingly detailed requests regarding what Tokyo and Seoul view as necessary for their defense. While these mechanisms are likely to increase the closeness of the defense relationship with both countries, the United States will also need to prepare for the likelihood that it may have to deny some of these requests. In short, an unquestioning acceptance of the U.S. nuclear extended deterrent – a long-standing *status quo* that suited the interests of Washington, Tokyo, and Seoul – no longer exists. This may not necessarily raise doubts within allied capitals about the nuclear umbrella,

but on this and other fronts, the United States and these allies are entering a new and untested phase of their defense relationship.

More broadly, the credibility of U.S. extended deterrence and assurance strategies across the Asia-Pacific will hinge on two factors: 1) clear development and communication of the strategy and force structure implications of the "rebalance" to the region, and; 2) the U.S.-China relationship and the degree to which it is characterized by strategic stability.

Both allies and adversaries remain uncertain of the full implications of the January 2012 "rebalance." In general, Asian-Pacific capitals have viewed this development – and recent decisions to increase U.S. force rotations in Australia, Singapore, and elsewhere – through the lens of their existing relationship with the United States. Significantly, key allies such as Australia have quietly expressed support for these moves while simultaneously preaching caution in regard to their potential impact on China. Allies and partners hope for a stable balance between the U.S. and China in the Asian-Pacific, but believe this will likely represent a delicate relationship for some time to come.

For the United States, the challenge may ultimately prove to be one of available resources, even with an increased emphasis on the region. Regional adversaries are clearly attentive to, and concerned by, the U.S. conventional, nuclear, and missile defense presence in the Asia-Pacific. The deterrent value of these forces, however, may diminish if they are dispersed across the region. At the same time, their assurance value will not be high if the United States cannot convince its numerous but scattered allies and partners that it has sufficient resources for their defense. For the foreseeable future, this will prove a continual challenge for U.S. military officials, defense planners, and diplomats responding to both security challenges and allied requests in this strategically vital region.

Middle East

Extended Deterrence

Within the Middle East, the United States extends deterrence against Iran and Syria. Due to Iran's nuclear weapons program, recent U.S. policy statements and defense activities relevant to extended deterrence have focused on that country.

Iran. Iran views itself as a regional hegemon and is prepared to intimidate, coerce, or attack any Middle Eastern state that challenges its authority or aligns with a major power opposed to this vision. Since the

1979 Islamic Revolution which ousted a pro-U.S. government, Iran has represented an implacable adversary of the United States and of U.S. friends throughout the region, including Israel and Saudi Arabia. Its ongoing efforts to develop nuclear weapons, expand its ballistic missile arsenal, and provide critical financial and military backing to terrorist and insurgent groups pose direct threats to regional stability and U.S. security partners across the Middle East.

Official statements and policy guidance from the Obama administration have repeatedly stressed the enduring importance of deterring Iran from attacking U.S. friends in the region, while also providing additional detail to past expressions of U.S. extended deterrence commitments across the Middle East. The 2012 DSG, for example, in addition to stressing the importance of preventing Iran from acquiring nuclear weapons, also called attention to Tehran's "efforts to pursue asymmetric means to counter our power projection capabilities."[310]

The United States extends deterrence against Iran by maintaining a significant military presence within the region. A number of Middle Eastern states in the region quietly (and unofficially) host either forward-deployed forces or advance stores of U.S. military equipment on their territory.[311] While the United States has no arrangements in the Middle East akin to the agreements with allies in Europe or East Asia permitting permanent U.S. bases on their territory, the U.S. Navy's Fifth Fleet continually operates within the strategically vital Persian Gulf out of port facilities made available by Bahrain. The significant number of naval vessels, including aircraft carriers carrying fighter-bombers capable of striking a broad range of strategically important Iranian facilities, grants the United States the ability to extend deterrence against Iran without maintaining a significant regional footprint in terms of Army or Air Force offensive strike assets.

The Obama administration has also sought to extend deterrence against Iran by bolstering U.S. regional missile defense capabilities, asserting that these systems play a critical assurance and extended deterrence role within the region. The 2010 BMDR states that Tehran's propensity for taking risks cannot be completely offset through the threat of attacks by U.S. offensive forces. It argues that pairing these forces with defensive systems capable of negating Iran's weapon of choice will significantly improve the ability of the United States to deter Tehran from threatening or attacking U.S. regional security partners.[312]

In addition to extending deterrence against Iranian efforts to harm U.S. friends in the Middle East, the United States also extends deterrence against Iran's repeated threats to constrain and deny access to

the Persian Gulf by U.S. naval forces and international shipping. The United States is determined to deter Iran and any other state that attempts to restrict freedom of navigation in international waters. The robust U.S. naval presence in the Middle East – supplemented by exercises and operations reacting to Iranian threats to close the Straits of Hormuz or attack vessels in the Persian Gulf – are intended to send clear signals to Tehran that it will pay a price for attacking U.S. naval forces, commercial shipping, or any other vessels using this strategically vital waterway.

Syria. The United States also extends deterrence against Syria, in part because Tehran and Damascus partner together to form an anti-U.S., anti-Israel, pro-Hezbollah coalition. Even prior to the Syrian civil war, Obama administration statements generally underlined longstanding U.S. efforts to deter Syria from interfering in internal affairs in Lebanon and attacking Israel.[313] The 2010 BMDR also noted the regional threat posed by Syria's ballistic missile arsenals (it did not, however, give Damascus the same "risk taking" label it attached to Tehran).[314] The situation within Syria remains fluid at the time of this writing. The United States has recently bolstered its military support to both Turkey and Jordan as they attempt to assist Syrian refugees and address the broader regional security implications of the ongoing civil war.[315]

No Regional Nuclear Umbrella. The United States does not officially extend a "nuclear umbrella" to assure any of its friends in the Middle East and does not publicly employ any nuclear strategies for the purposes of regional extended deterrence. It does not station nuclear forces in the region (as it does in Europe) nor does it maintain a continuous presence of nuclear forces in the Middle East (as it does in the Pacific). However, as Secretary of State Hillary Clinton stated in 2009,

> We want Iran to calculate what I think is a fair assessment, that if the U.S. extends a defense umbrella over the region, if we do even more to support the military capacity of those in the Gulf, it's unlikely that Iran will be any stronger or safer, because they won't be able to intimidate and dominate, as they apparently believe they can, once they have a nuclear weapon.[316]

This has led to speculation the United States – in addition to putting all options on the table for halting Iran's nuclear program – may be developing, and considering the implications of openly stating, extended nuclear deterrence plans expressly tailored for the Middle

East.[317] While experts have noted significant obstacles to implementing either the NATO or Asia-Pacific models of extended deterrence to the Middle East, one approach suggested for the region is the future designation of an ICBM squadron or some number of SLBMs for addressing a potential nuclear threat from Iran.[318]

Assurance

The 2012 DSG, while stating that the United States will "rebalance" to the Asia-Pacific, also stressed that Washington will not neglect its defense commitments to the Middle East, asserting "[the] United States will continue to place a premium on U.S. and allied military presence in – and support of — partner nations in and around this region."[319] The Obama administration has stated that the United States will "renew focus on a strategic architecture" in the Middle East to extend deterrence and provide assurance "while [also] balancing that requirement against the regional sensitivity to a large, long-term U.S. force presence."[320]

The United States does not have a formal alliance with any state or coalition in the Middle East, with the exception of Turkey (a member of NATO since 1952). Its provision of assurance to states within the region is primarily realized through longstanding, often informal, defense arrangements that are sometimes based on personal diplomacy with national leaders. Military sales, joint exercises, and other forms of defense cooperation are also critical to many of these relationships. This reflects the myriad number of national rivalries that preclude close cooperation between many Middle Eastern governments, even in the face of the common threat posed by Iran. The necessarily patchwork nature of U.S. assurance policies and strategies in the Middle East reflects the geopolitical reality of a starkly divided region where the U.S. military represents the primary provider of security to many states, but the formation of a regional treaty-based alliance is politically and diplomatically unlikely.

Israel. Israel faces a broad range of regional security threats, to include Iran's nuclear weapons program and ballistic missile arsenal, rocket attacks launched by Hezbollah from its bases within Lebanon, and rocket and terrorist attacks from Palestinian organizations such as Hamas. In addition, the Israeli-Palestinian peace process has made no recent progress, with the Israeli government and Palestinian Authority remaining at an impasse over territorial boundaries and other issues. The country is also the target of bellicose rhetoric from Iran, Syria, and other

Middle Eastern states, and its relations with Turkey have recently soured; at present, it only has peace treaties with Egypt and Jordan.

The United States has sought to assure Israel through a variety of means. President Obama has repeatedly stated that "Israel's security is sacrosanct [and] non-negotiable" and the 2012 DSG asserts the United States is firmly committed to "standing up for Israel's security."[321] The Obama administration has maintained, and sought to enhance, a close relationship between the two countries' militaries, with the two countries carrying out their largest-ever joint military exercise in October 2012.[322] In addition, the United States has long represented the lead provider of military aid and assistance to Israel and the two countries closely cooperate on intelligence matters. In order to better address the specific threat posed to Israel by ballistic missiles and rockets, Tel Aviv and Washington agreed to co-produce the Arrow missile defense system, and the Obama administration has also provided significant financial support for Israel's Iron Dome defense system against rocket attacks.[323]

Gulf Cooperation Council. The United States has a variety of security partnership arrangements with the six members of the Gulf Cooperation Council (GCC): Saudi Arabia, Oman, Qatar, United Arab Emirates (UAE), Bahrain, and Kuwait. Bahrain also hosts the U.S. Navy's Fifth Fleet. The United States is committed to partnering with the GCC to counter Iran (with a specific emphasis on Tehran's nuclear program), combat extremist organizations such as al Qaeda, and address the threat posed by regional missile proliferation.[324] The United States also provides assurance to the GCC through sales of military hardware. U.S. military sales of advanced systems such as F-15 fighter aircraft to GCC members are expressly intended to help equip these U.S. friends to better address potential regional security threats.[325]

With GCC states increasingly concerned about Iran's growing ballistic missile arsenal, the United States maintains a "continuous missile defense presence" in the region.[326] It is also working with GCC members to explore expanding current air defense cooperation between the U.S. and individual members into a council-wide, networked approach to missile defenses.[327]

Egypt, Lebanon, and Jordan. The United States is also a security partner of Egypt, Lebanon, and Jordan "to counter extremism and other regional threats," although its defense relationship with Cairo is in a state of flux as a result of the Arab Spring and ongoing uncertainty about Egypt's future.[328] The United States is the lead provider of military aid to Egypt and, in recent years, has provided critical funding to assist the

development of Lebanon's armed forces and improve the ability of the Lebanese government to police its own borders.[329] As noted above, the United States has recently taken steps to assure Jordan in light of the dangerous and unstable situation within Syria.

Key Issues for Middle East Extended Deterrence and Assurance Strategies

Four successive U.S. presidents have declared that Iran will not be allowed to develop a nuclear weapons capability. An Iranian nuclear capability would pose a clear and direct threat to U.S. allies and partners in the Middle East, Near East, and Europe. The United States has also cited the Iranian regime as a state sponsor of terrorism and a state likely to take risks in the future, particularly given its growing ability to threaten regional states with ballistic missiles. Iran has also become deeply involved in the ongoing Syrian civil war, providing substantial assistance to the Assad regime.

Should Iran develop a nuclear arsenal, the United States will need to develop a robust extended deterrence strategy for the Middle East that takes into account uncertainty regarding the nuclear deterrence calculations of Iran's leadership and Tehran's dedicated efforts to harden many key nuclear production and military facilities. It is unclear what concept the United States might employ for extending deterrence in the region, the Middle East's deep divisions rule out the formation of a formal alliance encompassing the United States' regional security partners. The United States lacks the relevant agreements, facilities, and close defense cooperation with allies required for a region-wide model similar to NATO's nuclear sharing arrangements. In addition, the "continuous presence" model employed in the Asia Pacific cannot be readily applied due to the lack of a location analogous to Guam (in terms of its strategic location, its political relationship to the United States, and as a host of extensive permanent U.S. military facilities). Moreover, the United States encounters significant diplomatic and security challenges in even deploying conventional forces in theater. It is difficult to imagine a situation where a Middle Eastern state – outside of NATO member Turkey – might request or allow the U.S. military to base nuclear-capable forces on its territory (and where the United State would feel comfortable doing so). In addition, for as long as Iran remains on the brink of a nuclear capability, the continuing question of what threshold of Tehran's progress towards a weapon triggers a U.S. or Israeli military response will remain open and the subject of intense debate in capitals across the region.

Tehran's ballistic missile arsenal also poses a challenge to U.S. deterrence-by-denial strategies. The United States and its regional partners are unlikely in the near future to field sufficient interceptors to address the number of missiles deployed by Iran.[330] The United States will need to consider how to develop allied and regional deterrence strategies that include but do not rely on missile defenses.

The U.S. drawdowns from Iraq and Afghanistan, and the "rebalance" toward the Asia-Pacific, are raising a number of assurance questions from U.S. partners across the Middle East.[331] With the United States' security relationships in the region largely dependent on informal arrangements, Washington will likely need to consider what political and military signals, actions, and capabilities can assuage concerns that the United States is turning its attention elsewhere. This is a particularly important consideration at a time when Iran is close to a nuclear weapon, Syria is engaged in a bloody civil war, the Israeli-Palestinian peace process remains stalled, Turkey's strength and regional influence is on the rise, and the repercussions of the Arab Spring are still reverberating across the region. Addressing the anxieties of regional partners, while also deterring a belligerent Iran and a wounded-but-dangerous Syria, will require carefully tailored strategies leveraging a broad range of U.S. diplomatic and military capabilities.

NATO/Europe

NATO remains critical to U.S. security. U.S. guidance documents highlight this continuing reality, despite recent emphasis on the security challenges of the Middle East and the so-called pivot toward the Asia-Pacific. U.S. extended deterrence and assurance arrangements for NATO are well-established but, as discussed earlier, have evolved over from the Cold War to the present day, and a brief overview is provided here before addressing current issues.

Extended Deterrence

NATO Extended Deterrence Strategies and Forces During the Cold War. The first formalized extended deterrence arrangement of the modern era was created by the 1949 Washington Treaty. This established the North Atlantic Treaty Organization, a collective defense entity that included the United States, Canada, and multiple European states. The United States was the only nuclear member at the time NATO was created; today, the United Kingdom and France are also nuclear weapons states.

The grand bargain between NATO's member states was that the United States would guarantee the security of the other members as long

as all contributed to the general defense – a process called risk- and burden-sharing. This guarantee included the full weight of America's military forces, up to and including nuclear weapons. In addition, by the mid-1960s the alliance had created a process for nuclear sharing between all member states, including the Nuclear Planning Group (NPG) which meets regularly in Brussels to discuss nuclear weapons and strategy in a collaborative environment (France is not a participant in the NPG).

The military forces of the United States a forward deployed in Europe. This provided a trip wire warning of any Soviet advances into NATO territory. Military forces, plus their families and dependents, meant that there were several million U.S. personnel stationed in Europe at the height of the Cold War, a situation that assured the allies the security of the United States was "coupled" to that of Europe.

The military forces of NATO were designed to create a seamless web of deterrence, and plans were in place to respond to a provocation at any point on the so-called ladder of escalation, from the lowest level of conventional conflict through large-scale conventional war, to battlefield use of nuclear weapons, to theater use, and up to a strategic nuclear exchange, if necessary. In order to meet the overwhelming advantage of the Warsaw Pact in terms of conventional force numbers, the alliance had a policy of deliberate escalation of a conflict. The theory was that by threatening to make the war more costly, it would deter the adversary from taking the first step. Of course, this also meant that the alliance required the capabilities necessary to ensure escalation dominance at the next higher level of violence; otherwise the theory would not work.

In addition to the 300,000 American troops in Europe in the 1960s and 1970s, with their associated hardware, including thousands of tanks, fighter aircraft, field artillery, anti-aircraft missile batteries, helicopters, armored personnel carriers, and other military equipment, the United States also deployed tactical nuclear weapons in the theater. Building from initial nuclear deployments to Europe in 1953, the U.S. military eventually had some 7,300 nuclear warheads in hundreds of storage locations across Central Europe and the Mediterranean available for use by 11 separate delivery systems, from 155mm howitzer shells to gravity bombs for aircraft to atomic demolition munitions to warheads on Jupiter IRBMs. Through an arrangement called the dual-key approach, host nations not only allowed weapons to be stored on their territory, but also shared responsibility for weapons delivery. A national delivery system (typically an aircraft or artillery unit) would be mated with a U.S. warhead in wartime. In addition, a certain number of sea-based nuclear weapons of the United States and United Kingdom were dedicated to the alliance, and the UK's entire triad was also committed to NATO plans.

At one time or another, ten NATO members have had a nuclear delivery mission, underscoring the scope of the military threat to the alliance posed by the Soviet bloc and the vital role nuclear weapons played for decades within NATO's deterrence and defense strategies. The arsenal size fell precipitously after the end of the Cold War, leaving a relatively limited number of non-strategic nuclear forces in Europe backed by U.S. and UK strategic forces.

NATO Extended Deterrence Strategies and Forces Today. NATO is now an alliance of 28 members, to include several states that were formerly members of the Warsaw Pact. The United States remains the alliance's strongest member and is heavily involved in every level of alliance policymaking and strategizing. The 2010 QDR noted that European security has remained central to American national interests for much of the past century, and pledged to "work to ensure a strong NATO that provides a credible Article 5 security commitment [and] deters threats to Alliance security," to include threats such as ballistic missile proliferation and cyber-attacks.[332] In addition, the 2012 DSG asserts that Europe remains important to U.S. national security, stating "Europe is our principal partner in seeking global and economic security, and will remain so for the foreseeable future."[333] While acknowledging that the U.S. defense posture in Europe has changed significantly from the end of the Cold War, the 2010 QDR noted the regional and global importance of keeping significant U.S. military forces in theater:

> Maintaining a robust U.S. military presence in Europe serves to deter the political intimidation of allies and partners; promote stability in the Aegean, Balkans, Caucasus, and Black Sea regions; demonstrate U.S. commitment to NATO allies; builds trust and goodwill among host nations; and facilitates multilateral operations in support of mutual security interests both inside and outside the continent.[334]

Furthermore, out of theater, troops from a number of NATO states continue to serve and fight side-by-side with U.S. forces in Afghanistan. The International Security Assistance Force in Afghanistan is, in fact, a NATO operation.

However, although the transatlantic link provided by NATO between the United States and the alliance's European members remains in place, a number of American and European analysts question whether the concept of coupling remains strong in the post-Cold War period. The U.S. military footprint in Europe has been reduced dramatically to reflect the changed international security environment since the end of the Cold

War.[335] In addition, the recent declaration by the Obama administration that the United States would rebalance its national security strategy, placing more emphasis on the Asia-Pacific region, has led to the open question – voiced by strategic communities on both sides of the Atlantic – whether this shift will necessarily require the United States to pivot away from Europe.

In addition to questions about the future U.S. role within Europe, the alliance also continues to face the broader question of how to adapt to a geopolitical environment where its members no longer face the direct threat of a potential land invasion by massed conventional forces, but must adapt to counter a variety of indirect threats and future challenges, to include the proliferation of WMD and cyber warfare. The alliance has officially agreed to field conventional, nuclear, and missile defense forces (to include a future system capable of defending the whole alliance),[336] and develop cyber capabilities, in order to address a broad range of threats and contingencies.[337] Neither the United States nor the alliance, however, currently extend deterrence against any specific state actor in order to deter them from attacking members of NATO. The alliance, for example, officially seeks peaceful engagement with Moscow, with guidance documents such as NATO's 2010 Strategic Concept stating "NATO-Russia cooperation is of strategic importance as it contributes to creating a common space of peace, stability and security. NATO poses no threat to Russia."[338]

Assurance

Although NATO does not at present face a direct military threat, the alliance believes the current "security environment … contains a broad and evolving set of opportunities and challenges" for its members, to include potential threats posed by WMD and ballistic missile proliferation, non-state actors, and failed states.[339] While U.S. forces stationed in Europe continue to decline in terms of overall numbers, the United States is firmly committed to providing assurance to its NATO allies by retaining nuclear and conventional forces in theater. Moreover, the United States and NATO are developing concepts and forces to provide the alliance with a future missile defense shield capable of protecting Europe against the ballistic missile arsenals of states such as Iran.

The risk of nuclear attack against NATO members is at an historic low. Yet nuclear weapons still serve a political purpose that assures U.S. allies and can provide a deterrent against unspecified future existential threats. As the 2010 NPR put it,

> the presence of U.S. nuclear weapons – combined with NATO's unique nuclear sharing arrangements under which non-nuclear members participate in nuclear planning and possess specially configured aircraft capable of delivering nuclear weapons – contribute to Alliance cohesion and provide reassurance to allies and partners who feel exposed to regional threats.[340]

Furthermore, the United States affirmed that it would not make unilateral decisions as to the future of those weapons or their basing in Europe. "Any changes in NATO's nuclear posture should only be taken after a thorough review within and decision by – the Alliance."[341] The United States stated that it would work with its NATO allies to continue to reduce the role of nuclear weapons in international relations, but it also pointedly stated that as long as those weapons exist anywhere in the world, NATO would remain a nuclear alliance. In the near term, the United States agreed that it would retain the necessary weapons and delivery systems to continue to provide a dual-key nuclear sharing arrangement with its allies in Europe. At present, the U.S. force contribution to these sharing-arrangements are U.S. dual-capable aircraft stationed in Europe and B-61 gravity bombs.[342] With strong U.S. support, NATO recently reconfirmed its intent to "remain a nuclear alliance for as long as nuclear weapons exist."[343]

In addition, missile defenses have played an increasingly important role in U.S. assurance to NATO. The 2010 BMDR highlighted the United States' close cooperation with NATO allies on the development of a European Phased Adaptive Approach (EPAA) to establish a future missile defense capability to protect against the ballistic missile arsenals of states of concern outside of Europe. According to the guidance document, "The United States is committed to making the PAA its national contribution to a NATO missile defense effort."[344] The 2010 BMDR also pointed out that, in addition to these NATO-wide consultations, the alliance members Czech Republic and Poland had concluded bilateral agreements with the United States to host key missile defense components.[345] Romania and Turkey have also agreed to host PAA components.

Key Issues for NATO Extended Deterrence and Assurance Strategies

A key question for the United States in the context of extended deterrence in Europe is quite simple: Who is being deterred? The alliance has expressly stated that Russia is not an enemy; in fact, it is a strategic partner of NATO. Still, the real threats facing NATO today are

the possibility of a resurgent Russia, the rise of a nuclear-armed Iran, and the general uncertainty as to what surprises the international environment might bring in the future.

There are quite differing views within NATO on nuclear deterrence and on the military utility of non-strategic nuclear weapons for the alliance. The debate over the future of these weapons in Europe has spilled out into public forums over recent years, with Germany and the Low Countries in favor of changes to current nuclear-sharing arrangements and France, Britain, and the East European member states in favor of keeping DCA and U.S. warheads on the continent. Much of this debate was papered over by the DDPR's May 2012 announcement that, by consensus agreement, the alliance had determined that the status quo of current nuclear, risk- and burden-sharing arrangements are sufficient and necessary conditions for NATO deterrence. Those who favor the existing arrangements and are generally pro-nuclear have called this a major victory for the alliance – the first time in many years that members were able to reach a consensus in support of maintaining current NATO nuclear policy. Other NATO states are less sanguine, seeing this as but a pause on the general path toward the end of U.S. nuclear weapons stationed in Europe – although not necessarily the end of nuclear policy within the alliance.

NATO has three nuclear weapons states among its members. The United Kingdom has reduced its nuclear arsenal to 180 warheads dedicated to its small fleet of Trident submarines. France retains some 300 nuclear warheads for national use, but it remains apart from alliance military planning.[346] That status is unlikely to change even if all remaining U.S. weapons were someday to be withdrawn from European territory. NATO's future nuclear sharing arrangements, however, may be at risk. At present, nuclear forces remain an important part of alliance defense strategies. Today, according to open sources, there are still five European member states that have dual-key arrangements with the United States or store U.S. nuclear warheads on their territory (in addition to the alliance's three nuclear member states).[347] There are officially "several hundred" U.S. warheads stored in Europe. How many U.S. nuclear weapons will need to remain stationed in Europe to maintain assurance of NATO allies into the future, however, is uncertain. It may require the "several hundred" still forward deployed, or it may only take one or two weapons to ensure the continued coupling of U.S. and European security. Or perhaps the answer is none – the United States could make the same political commitment to Europe that it has made for the past two decades to its East Asian allies, with no requirement for nuclear weapons permanently stationed in theater. If

U.S. weapons remain, the United States and members of the alliance must also address the status and role of their respective delivery systems. As discussed above, current U.S. and allied nuclear-capable aircraft are aging, and their intended replacement, the F-35, has encountered a number of problems in its development phase.

Another potential issue is whether America's European allies – especially Eastern European members of NATO – will remain assured as the United States continues to draw down its conventional forces in Europe. In particular, how do the alliance and the United States, bilaterally, assure Turkey, given that country's apparent shift from a European to a Middle Eastern perspective? A number of studies find that Turkey no longer feels as much a part of Europe – or NATO – as it once did. In part, this is due to pessimism over whether its European partners in NATO would come to its defense, given memories of alliance reticence to do so in 1991 and 2003, and the varying responses of the United States and European capitals toward the Syrian civil conflict. It also reflects growing Turkish confidence in its ability to act as an independent regional power that can play an important role in both European and Near Eastern affairs, and develop unique policies and strategies for addressing actors such as Iran. In addition, the Turkish public appears open to a future debate on independently developing a nuclear weapons program if Iran becomes a nuclear state. Ankara is unlikely to embark on this path in the near- or medium-term, but the poll numbers are significant in reflecting a general lack of faith in NATO nuclear-sharing arrangements and the U.S. nuclear umbrella.[348]

With regard to nuclear delivery systems, a major future stumbling block to retaining nuclear sharing arrangements will arise as allied DCA in some countries reach their retirement age and require replacement in the 2020s. The replacement programs, if there are to be any, have yet to be budgeted, and there is no guarantee that the nuclear sharing arrangements will still be in place in NATO ten years hence.

Furthermore, the EPAA faces two significant challenges. First, program delays and funding issues led the Obama administration to decide in early 2013 not to develop the SM-3 IIB interceptor critical to plans for the system's Phase IV.[349] Phase III will have capabilities to defend against short, medium, and intermediate-range missiles. Phase IV was initially intended to provide a system with boosted capabilities for addressing intermediate-range delivery systems.[350] The decision to drop a significant phase of system development underlines the long-term budgetary, technical, and program management challenges faced by the EPAA. Second, Russia has repeatedly stated that it is deeply concerned the EPAA will threaten strategic stability with Washington and with

NATO more generally, raising objections to the location of system components in Eastern Europe and to the system's future capabilities. These objections have remained in place despite the U.S. announcement it was dropping Phase IV, which was the focus of earlier Russian arguments about the completed EPAA undermining its strategic nuclear deterrent.

These challenges raise a number of questions for NATO. Is EPAA worth the expense it will take to develop, particularly given the ongoing defense cuts across the alliance? In addition, if NATO missile defenses appear to threaten strategic stability with Russia before a clear missile threat to Europe arises (such as that from Iran), does missile defense continue to have value for extended deterrence and assurance strategies – or does it undermine one or both? For the moment, the alliance has decided the EPAA is worth pursuing, and they are going through with plans to deploy a robust, layered, missile defense architecture in Europe within the coming decades. If Russia were to attempt to ratchet up the pressure on NATO, however, such as through the selective embargo of oil to certain states or the alliance as a whole, it is difficult to assess how different European governments would react and whether these actions would stiffen or weaken their commitment to missile defenses.

Questions about missile defense funding are related to perhaps the biggest long-term issue for alliance deterrence strategies: will NATO allies maintain the capabilities necessary to meet deterrence challenges, particularly if the United States continues to press these states, and other allies, to take on a greater share of defense and deterrence responsibilities? NATO members face a dual challenge in addressing future threats; first, many members and their respective public's view NATO as a "relic of the Cold War" and, second, despite Secretary of Defense Robert Gates' blunt challenge to the allies to improve their military capabilities, it still "lacks a sustainable burden-sharing model which could reduce the risk of a further disintegration of the alliance."[351] These will represent considerable obstacles to U.S. efforts to develop deterrence and assurance and strategies for NATO that can align U.S. policy imperatives, mesh with allied defense capabilities, and address threats that, while serious, are far more amorphous and difficult to directly confront than a direct military adversary of the alliance.

PART 7: CONCLUSION

This paper differentiated the concepts of deterrence, extended deterrence, and assurance (Part 2); provided an historical overview of U.S. deterrence, extended deterrence, and assurance strategies (Part 3); and assessed continuity and change with regard to these strategies over time (Part 4); discussed current U.S. extended deterrence and assurance strategies (Part 5); and presented an overview of issues regarding extended deterrence and assurance in three regions of key importance to the United States: the Asia-Pacific, the Middle East, and Europe (Part 6). Across these sections, it has sought to communicate the enduring importance of U.S. allied assurance and extended deterrence strategies to allied security, regional stability, and, in turn, to U.S. peace and prosperity. Despite significant geopolitical changes from the Cold War to the present day, these strategies remain critical to U.S. allies across the globe. Many of those allies face potential adversaries fielding superior conventional capabilities, WMD, or both. Global in scope, extended deterrence and allied assurance strategies require the United States to remain vigilant in protecting allies from a range of threats and flexible in fielding a variety of forces capable of conducting numerous (and often simultaneous) deterrence operations against a multiple potential adversaries.

This paper finds that U.S. extended deterrence and allied assurance strategies face a number of significant near- and medium-term challenges that, if unaddressed, may result in foreign actors – both allied and adversary – raising serious questions about the credibility of U.S. security guarantees. Some of these challenges represent oft-repeated questions from allies and adversaries. Many of those questions represent variations on issues fundamental to the phenomena of extended deterrence and assurance: why would a state risk blood and treasure on behalf of a third party, and how much risk on their behalf is it willing to accept? Other questions address more recent issues brought about by geopolitical change, the actions of potential adversaries, and/or U.S. policy and strategy decisions.

This paper concludes by highlighting three challenges for U.S. extended deterrence and allied assurance strategies that serve as exemplars of the broader problem set that U.S. policymakers, strategists, and planners must address in the present complex geopolitical environment.

One enduring challenge, first discussed in Part 4 as the "Healy theorem," is the differing requirements of extended deterrence and allied assurance. The Healy theorem initially referred to U.S. debates with NATO allies who pressed for assurance strategies backed by greater

capabilities than the United States felt necessary to deter the Soviet Union. It broadly applies, however, to a perpetual challenge for U.S. policymakers and strategists: U.S. strategies and plans that assure ally X may differ from what is necessary to deter potential adversary Y. Given the large number of globally-dispersed allies the United States must assure – and in turn, their potential adversaries the United States must deter – the Healey theorem underlines the significant scope of the challenge facing the United States in developing extended deterrence and allied assurance plans and strategies. With both strategic concepts existing in the eye of the beholder, the United States must simultaneously tailor differing strategies addressing the assurance needs of each ally while also communicating and demonstrating the ability to impose unacceptable costs on each of their potential adversaries. The Healy theorem accurately describes the challenge of developing and managing regional assurance and extended deterrence strategies as a complex multivariable equation. It also helps delineate allied assurance and extended deterrence as related, but separate, strategic concepts, an important distinction sometimes absent from analyses of deterrence strategies and policies focused on foreign parties. Moreover, as impressed upon the authors by subject matter experts during interviews conducted for this paper, in a number of key cases the contemporary requirements of allied assurance remain more demanding than those of extended deterrence.

A second enduring challenge faced by the United States is convincing its numerous allies that it maintains more than enough military forces to protect them from their prospective enemies, to include in circumstances where the United States is forced to simultaneously address more than one crisis or conflict (the "leaky umbrella" problem). The global responsibilities of the United States have always presented U.S. policymakers and strategists with difficult questions regarding when, where, and how to deploy finite defense resources. During the Cold War, for example, the massive destructive power of nuclear forces was frequently used by the United States to address significant gaps in conventional capability vis-à-vis the forces of the Soviet bloc. This challenge continues today. As the 2010 BMDR notes, for example, the United States and its allies fall far short of fielding sufficient missile defense interceptors to meet the number of ballistic missiles fielded by potential adversaries.

This ongoing challenge may assume a higher-profile in the near-term, due to the U.S. commitment to defend the U.S. homeland, its friends abroad, and the "global commons" from a range of adversary threats, to include threats across air, land, sea, space, and cyber domains.

While correctly acknowledging the broad scope of U.S. and allied critical assets and vital interests in the 21st century, this view of deterrence – particularly as it becomes codified in agreements with allies, such as the decision to add cyber-attacks to the ANZUS common defense pact with Australia – may raise questions regarding whether the United States possesses enough military capabilities to meet all of these commitments. It may appear to foreign actors – both allied and adversary – that the United States has expanded the scope of requirements for deterrence, extended deterrence, and allied assurance while also reducing resources it has available for implementing these strategies.

A third enduring challenge is calibrating the right role for nuclear forces in extended deterrence and assurance strategies. Over time, U.S. deterrence concepts have gradually shifted from an emphasis on deterrence by punishment strategies reliant upon nuclear weapons to strategies that include deterrence by punishment and deterrence by denial options using a mix of forces. At present, U.S. deterrence strategies continue to feature nuclear weapons but place increasing emphasis on the deterrence capabilities of missile defenses and advanced conventional weapons, with the former viewed as ceding some of its previous roles and responsibilities to the latter two types of forces. This raises two critical challenges for U.S. strategists in regard to extended deterrence and assurance. The first is that, for those U.S. non-nuclear allies facing nuclear-armed adversaries, U.S. nuclear forces remain vital to their defense against an existential threat. Plans or policies implementing a reduced role for nuclear forces in U.S. deterrence strategies must carefully clarify how non-nuclear forces can replace some of the strategic effects of the latter, while also reassuring allies that the U.S. nuclear umbrella continues to provide an effective deterrent against nuclear threats, coercion, or attacks. The second is to develop strategic concepts for explaining and implementing how mixed forces integrating the unique capabilities of conventional, nuclear, and missile defense components can effectively extend deterrence against a range of potential adversaries. Allies are likely to ask whether missile defenses, for example, can fulfill some or all of the responsibilities assigned in the past to nuclear forces, and to ask how the two can operate together to improve the ability of the United States to deter contemporary adversaries.

The above challenges represent a few of the issues the United States will need to address as it reduces its post-9/11 military force, shifts its strategic attention to the Asia-Pacific, and seeks to reduce the role and numbers of its nuclear forces within its future defense strategies. These challenges stem directly from the ongoing U.S. role as primary security guarantor for allied states around the globe, who not only rely on the

United States but often shape their national security policies and military strategies in response to the decisions of their superpower ally. As a result, the credibility of U.S. extended deterrence and assurance strategies is a central feature of regional stability and also plays a key role in contemporary geopolitics. This paper finds that this places considerable responsibility upon U.S. policymakers, strategists, and planners tasked with developing and implementing these strategies to respond to multiple threats to the United States and its allies – and that this problem set has evolved, but become no less complex, over time.

APPENDIX: EXTENDED DETERRENCE LITERATURE REVIEW

Polly M. Holdorf

The following is a brief review of extended deterrence- and assurance- related literature from the past several years. Some of the main themes which occur throughout these articles include the continuing importance of extended nuclear deterrence, the challenges of extended deterrence and assurance in regional contexts, the dynamics of the current threat environment, and challenges facing policy makers.

Acton, James, "Extended Deterrence and Communicating Resolve," *Strategic Insights,* Volume VIII, Issue 5, December 2009.

In this paper James Acton explores the question of how the United States can convince allies of its resolve to uphold its extended deterrence commitments. He states that the United States has "deliberately tried to conflate resolve and capabilities in allies' minds in an attempt to demonstrate U.S. resolve through the provision of particular capabilities."[352] Acton asserts that the designation of specific nuclear capabilities will only assure allies effectively if those capabilities actually enhance deterrence. In the case of Japan, he argues that TLAM/N does not enhance deterrence because the capability itself does nothing to address Japan's concern regarding the United States' resolve to use nuclear forces in Japan's defense. Further, Acton states that because the concepts of resolve and capabilities have come to be viewed by allies as interconnected, current U.S. nuclear doctrine calls for retaining more nuclear weapons than are required for deterrence.

Acton claims that the key to extended nuclear deterrence is the effective communication of U.S. resolve. He calls for the development of a new communication strategy that does not rely on the provision of specific capabilities. Since the United States has a diverse range of allies, varying approaches will likely be required to convince different allies of the solidity of U.S. resolve. Acton highlights five points that should be considered while this new strategy is being developed. 1) Effective deterrence relies as much on culture as capabilities. 2) Allies should be consulted before decisions affecting them are taken. 3) Allies should be educated in nuclear strategy in order to disentangle the concepts of capabilities and resolve. 4) U.S. domestic dialogue can undermine allies' perceptions of U.S. resolve. 5) It is important to be

realistic about the highly limited set of circumstances in which nuclear weapons are useful.

Bunn, Elaine, "The Future of US Extended Deterrence," in Bruno Tertrais, ed, *Perspectives on Extended Deterrence*, (Paris: Fondation pour la Recherché Strategique, Recherches et documents no.3), March 2010.

In the third chapter of *Perspectives on Extended Deterrence* Elaine Bunn discusses the state of extended deterrence today, the prospects for extended deterrence in space and cyber space, the possibility of extending U.S. deterrence to the Middle East, and potential challenges to extended deterrence along the path to nuclear zero. Bunn counsels that threats from proliferating states and non-state actors could become even more serious in the future and asserts that the successful maintenance of extended deterrence will require a strategic force structure that will both deter and assure across a wide range of actors, contingencies, and domains.

While it is not yet clear how vulnerabilities in space and cyber space will affect the way deterrence is exercised, Bunn suggests that the United States and its allies will need to develop a better understanding of the unique characteristics of space and cyber space in order to deter potential adversaries from targeting those domains. Further, she offers that space capabilities developed in coalition with other states could enhance resilience, redundancy and operational continuity during military contingencies involving counter-space attacks.

Extended deterrence to friends and allies in the Middle East could prove difficult, particularly due to the possibility that widespread public disapproval of U.S. forces and/or influence in the region could destabilize the very states the United States seeks to assure. Bunn raises the possibility that instead of deploying further U.S. military capabilities to the Middle East, the United States could provide conventional systems such as missile and air defense capabilities to its regional allies.
The drawdown of nuclear weapons in pursuit of nuclear abolition will certainly have an effect on the United States' ability to extend deterrence to friends and allies abroad. Bunn suggests that more effort needs to be put into studying the impact that the "three digit phase," meaning hundreds of nuclear weapons, would have on the viability of extended deterrence and assurance.[353] She speculates that during this phase *numbers* of warheads may become less important than *postures* of nuclear forces. Undoubtedly, when lower numbers are achieved, extended deterrence will become more complicated than it is today, and

it will likely become more difficult for the United States to credibly assure and deter.

Murdock, Clark, *Exploring the Nuclear Posture Implications of Extended Deterrence and Assurance* (Washington DC: Center for Strategic and International Studies, November 2009).

This CSIS report examines the credibility of U.S. extended nuclear deterrence from the perspectives of both the potential adversary (deteree), and the state protected by U.S. nuclear forces (assuree). The authors take a "credibility-centric approach" to assessing deterrence, maintaining that the credibility of both deterrence and extended deterrence depend on a range of factors which affect adversary perceptions of U.S. capabilities and intentions.[354] The authors maintain that assurance will not work if the U.S. deterrent is not credible. However, a credible deterrent does not necessarily guarantee successful assurance. Three principle factors explain why the requirements for assurance and deterrence can differ. First, the degree to which assurance is affected by the elements of extended deterrence is dependent on how the ally perceives and interprets U.S. communications and actions regarding the deteree. Second, assurance, being a mutually beneficial relationship, requires participation and/or burden sharing in order to actively involve the ally. Third, the ally must have confidence in the long-term reliability of the U.S. nuclear deterrent. The authors state that the credibility of U.S. extended deterrence lies in the eyes of three beholders: allies and security partners, potential aggressors, and the American public. Assurance depends not just on what U.S. policy makers or experts determine is required for extended deterrence, but on what *allies* believe is required. The authors emphasize that comprehensive consultations with each security partner is essential for successful assurance.

Payne, Keith. "How Much is Enough? A Goal-Driven Approach to Defining Key Principles," National Institute for Public Policy (2009).

This article Keith Payne grapples with the question "how much is enough" in regard to U.S. nuclear capabilities. According to Payne, most contemporary claims that extended nuclear deterrence can be maintained with a fixed number of warheads are derived from an outdated Cold War-era formula for deterrence which assumed a known, predictable relationship between specific numbers and a desired deterrence effect. Payne offers that the contemporary threat environment is far more dynamic than that of the Cold War and, consequently, more factors must be taken into account when determining the appropriate

levels of strategic forces necessary for the United States to maintain an extended nuclear deterrent capable of both assuring allies and deterring adversaries. The lone threat of the Soviet Union during the Cold War has been replaced by a wide range of potential threats and diverse opponents. Since each threat is different and the strategic environment is continually subject to change, Payne maintains that there can be no reliable formula for determining what specific number of warheads, or what mix of capabilities, will be necessary to credibly maintain deterrence and extended deterrence in the future. Payne advises that U.S. deterrence plans and strategies should be flexible and able to adapt to an unpredictable and ever changing threat environment. "The diversity of opponents, circumstances and threats suggests that a contemporary deterrence priority is for a spectrum of U.S. forces options and flexibility of planning along with the traditional requirements for sufficient force quantity, lethality and survivability to threaten the array of targets deemed important for deterrence."[355]

Payne, Keith, "On Nuclear Deterrence and Assurance," *Strategic Studies Quarterly* (Spring 2009).

In this *Strategic Studies Quarterly* article Keith Payne discusses the value of nuclear weapons for deterrence and assurance, the credibility of U.S. nuclear threats, and the resulting implications for the U.S. nuclear arsenal. Payne counters the arguments of contemporary commentators who assert that nuclear weapons have little or no value for deterrence given the technological advancement of nonnuclear capabilities. The current security environment dictates that U.S. leaders must work to deter a broad range of potential adversaries in varying situations. Given such complexity, wide-ranging U.S. strategic capabilities may be necessary. Payne points out that while nuclear weapons could be seen to have little value for combat missions, they remain essential for the deterrence of war and the assurance of allies. An adversary's perception of the credibility of U.S. nuclear threats is vital to deterrence and U.S. observers cannot presume to understand the decision calculus of all potential adversaries. "To assert confidently that U.S. nuclear weapons no longer are valuable for deterrence purposes … is to claim knowledge about how varied contemporary and future leaders in diverse and often unpredictable circumstances will interpret and respond to the distinction between nuclear and nonnuclear threats."[356] Similarly, assurance relies on each allies' perception of U.S. credibility and dependability; allies themselves will determine if they are adequately assured. Payne argues that the credibility of U.S. nuclear threats is of paramount importance and suggests that accurate, low-yield nuclear weapons could create a

more "believable" deterrent threat. Further, Payne suggests that the size and character of the U.S. nuclear arsenal should be based on the following factors: the strategic threat environment, the relationship of the arsenal to other national goals (such as nonproliferation), the goals the arsenal is intended to serve (assurance and deterrence), potential contributions to these goals by other nonnuclear and nonmilitary means, and budget and technical realities.

Pifer, Steven, Richard C. Bush, Vanda Felbab-Brown, Martin S. Indyk, Michael O'Hanlon and Kenneth M. Pollack. "U.S. Nuclear and Extended Deterrence: Considerations and Challenges," *Brookings*, Arms Control Series Paper 3, May 2010.

This Brookings paper examines various considerations that policymakers in Washington must think about when considering how to maintain an effective nuclear deterrent. The main themes discussed include: deterrence in the nuclear age; the 2010 NPR's conclusions, deterring a nuclear attack on the United States, U.S. declaratory policy, extended deterrence to regional allies; deterring chemical and biological weapons use, and deterring non-state actors. The following is a brief overview of the authors' findings on extended deterrence.

Extended Deterrence and NATO Europe. Several challenges would be involved with any potential change to the United States' extended deterrence policy to NATO. First, a change in the current policy could prompt individual nations to consider proliferation. Second, there is an active public debate in Europe regarding the presence of U.S. nuclear weapons in Europe, with several prominent statesmen calling for their removal. Third, there are differing views within Europe regarding the extent of the Russian threat. Some Western European allies discount the necessity of U.S. tactical nuclear weapons for deterring Russia, while various Eastern European allies have substantial concerns regarding potential Russian aggression and strongly prefer that U.S. nuclear weapons remain in the region.

Extended Deterrence and East Asia. U.S. extended deterrence policy to East Asia is marked by a series of bilateral relationships and is dependent solely on U.S. strategic nuclear forces. Japan and South Korea are particularly concerned about the continued credibility of U.S. extended deterrence to the region. Japan, as well as Australia and Taiwan, are apprehensive of growing Chinese military power and influence in the region. South Korea is predominantly concerned about the North Korean nuclear program and how the United States is handling that situation. U.S. allies in East Asia will evaluate any alterations to U.S. extended deterrence policy in light of these circumstances.

Extended Deterrence and the Middle East. An Iranian acquisition of a nuclear weapons capability would greatly complicate the security situation in the Middle East and would amplify the importance of U.S. extended deterrence in the region. While the United States and the international community are working to dissuade Iran from developing nuclear weapons, it is uncertain if these efforts will succeed. As Iran approaches the nuclear weapons threshold, a main priority for the United States will be to discourage regional allies from taking unilateral measures to protect themselves, whether by preemptive military action or by further nuclear proliferation.

Pilat, Joseph, "Nonproliferation, Arms Control and Disarmament, and Extended Deterrence in the New Security Environment," *Strategic Insights,* September 2009.

In this *Strategic Insights* article Joseph Pilat makes the case that in the current security environment nuclear weapons remain important to the United States, although for a limited set of roles and missions. Pilat concedes that while the idea of a world free of nuclear weapons is enticing, the reality is that the danger and uncertainty which exist in global affairs make it unlikely that either current nuclear states or potential proliferators would be willing to completely forego nuclear weapons. Furthermore, a world without nuclear weapons would not necessarily be more secure or stable. Nonproliferation, arms control and disarmament goals should be pursued, but with the understanding that there is a continuing need for both deterrence and extended deterrence.

Pilat identifies four policy issues that could negatively affect extended deterrence in the near to medium term: non-strategic nuclear forces and the presence of U.S. nuclear weapons in Europe, ballistic missile defense, conventional capabilities, and reducing the role of nuclear weapons. If handled properly, none of these issues needs to have a negative impact on extended deterrence. However, Pilat maintains that "at some point along the path to a nuclear-weapon-free world … the potential for the direct impact of reduced forces and capabilities on extended deterrence would be raised."[357] As the United States and others progress toward the goal of a nuclear-free-world, maintaining nuclear deterrence will be vital. The United States will need to work closely with its allies and proceed in a way that does not undermine deterrence. Pilat maintains that "deterrence offers order, stability and nonproliferation benefits along the path and it may even make the pursuit of the goal of a nuclear-weapon-free world more realistic."[358]

Russell, James, "Extended Deterrence, Security Guarantees, and Nuclear Weapons," in Bruno Tertrais, ed, *Perspectives on Extended Deterrence,* (Paris: Fondation pour la Recherché Strategique, Recherches et documents no.3), March 2010.

In the sixth chapter of *Perspectives on Extended Deterrence* James Russell addresses security guarantees, the role of nuclear weapons, and challenges facing policy makers regarding America's security strategy in the Middle East. Russell notes that, historically, nuclear weapons have both implicitly and explicitly helped to support U.S. global commitments in the Middle East and elsewhere. The United States has shown its willingness to deploy conventional forces in response to instability in the Middle East many times since the British withdrew from the region in the early 1970s. After the conclusion of Operation Desert Storm, the United States further demonstrated its commitment to the region by concluding bilateral defense cooperation agreements with nearly all of the states in the Middle East. The United States has made no explicit nuclear guarantees to any states in the region, however, nuclear weapons are explicitly committed to the defense of American forces anywhere in the world whenever the president of the United States considerers it necessary. Russell states that "in the Gulf, the dual tools of extended deterrence and security assurances have proven a cornerstone of a system of regional security efficiently administered by America's military organizations. Nuclear weapons undeniably form a part of this system – explicitly protecting US forces and implicitly protecting the regimes hosting those forces."[359]

Russell also addresses policy challenges and inconsistencies which he hoped would be addressed in the 2010 Nuclear Posture Review. He asserts that nuclear disarmament and extended deterrence commitments are incompatible. "Actively promoting nuclear disarmament on the one hand while also drawing upon nuclear weapons on the other to prevent a regional arms race in the Gulf is a contradiction that must be addressed by the NPR drafters."[360] Russell also warns that the United States' strategic nuclear arsenal could become a "wasting asset" as the weapons themselves age and the human and material infrastructure become more difficult to maintain. He claims that the United States is slowly disarming itself and, if current trends continue, sooner or later there will come a time when the United States will be unable to credibly back its extended deterrence commitments.

Schneider, Mark, "The Future of the US Nuclear Deterrent," *Comparative Strategy*, Vol. 27, Issue 4, 2008.

In this *Comparative Strategy* article Mark Schneider points out that the United States is the only nuclear-weapons state that is not modernizing its nuclear deterrent and is, in fact, debating whether it should retain its nuclear deterrent at all. Every other nuclear-weapons state is committed to maintaining and modernizing its nuclear deterrent. Schneider identifies a number of states that he claims represent "actual existing threats to the survival of the United States,"[361] including: Russia, China, North Korea, Iran and Syria. He maintains that a reliable nuclear deterrent is necessary to address imminent threats to the continued existence of the United States. While Schneider acknowledges that missile defenses and conventional strike capabilities are critical elements of deterrence and national power, he is adamant that they cannot substitute for nuclear weapons. He further avows that U.S. nuclear forces must be modernized and adapted to enhance deterrence.

Schoff, James, "Does the Nonproliferation Tail Wag the Deterrence Dog?" PacNet 9, CSIS, 5 February 2009.

James Schoff emphasizes the importance of keeping the broad picture in mind when formulating U.S. nuclear policy in the 21st century. Prior to the release of the 2010 NPR numerous studies were published which focused on the role of U.S. nuclear forces. Many of these studies underscored the vital role that U.S. nuclear forces play in bolstering extended deterrence and reassuring allies, but some studies called for nonproliferation measures which, in Schoff's opinion, could potentially weaken extended deterrence. Focusing on the viewpoints of Japan and South Korea, Schoff stresses that it is essential to be mindful of how U.S. nuclear policy decisions are perceived by allied nations. Care must be taken to balance discussions of arms control and reducing the role of U.S. nuclear forces with credible assurances of the United States' dedication to maintaining its extended deterrence commitments to nations like Japan and South Korea. Schoff asserts that "policy makers must recognize the interwoven nature of the nuclear umbrella, extended deterrence, and the broader alliance relationships."[362] One aspect of nuclear policy cannot be altered without affecting the others.

Tertrais, Bruno "Security Guarantees and Extended Deterrence in the Gulf Region: A European Perspective," *Strategic Insights,* Vol. VIII, Issue 5, December 2009.

In this *Strategic Insights* article Bruno Tertrais discusses the prospects for extended deterrence in the Gulf region. While the United States currently provides security to the region, it does so in a manner distinctly different from the extended deterrence models associated with

Europe and East Asia. There are no explicit treaty-based guarantees in the Gulf region; instead a number of unilateral and bilateral security agreements have been established between the United States and individual Gulf states. Tertrais states that debate surrounding U.S. extended deterrence to the Gulf has been renewed in recent years due to two factors: the so-called "Shi'a revival" and the growing controversy regarding Iranian nuclear intentions.[363] There is concern that if allies in the region are not adequately assured that their security is guaranteed, some may seek alternative means to safeguard their security. For example, there is speculation that Saudi Arabia could seek either a national nuclear option or a nuclear guarantee from Pakistan in the event that an Iranian nuclear weapon was developed.

Tertrais identifies specific challenges to extending deterrence to the Gulf. One challenge is that neither the United States nor its regional allies wish to appear as if they've accepted the eventuality of an Iranian nuclear capability. Another is that leaders of many Gulf states do not want to explicitly advertise their security arrangements with the United States, but prefer to keep such arrangements ambiguous. Tertrais demonstrates the complexity of the situation by stating that "in the Gulf region, extended deterrence is a particularly acute challenge, where it will be particularly difficult to simultaneously satisfy the requirements of 'deterrence' (vis-à-vis potential adversaries), 'reassurance' (vis-à-vis friendly governments), and 'acceptability' (vis-à-vis their public opinions)."[364]

Certain European countries, particularly France and the United Kingdom, have concluded their own security agreements with states in the Gulf region. Interestingly, regional perceptions of French and UK security engagements do not involve the kinds of negative connotations that are associated with those involving the United States. Tertrais maintains that French and UK extended deterrence postures to the region complement that of the United States and suggests that trilateral consultation could be valuable in order to better coordinate the roles of each nation would play in the event of a regional conflict or crisis.

Tertrais, Bruno, "The Future of Extended Deterrence: A Brainstorming Paper," in *Perspectives on Extended Deterrence,* (Paris: Fondation pour la Recherché Strategique, Recherches et documents no.3), March 2010.

In the first chapter of *Perspectives on Extended Deterrence* Bruno Tertrais provides an overview of the concept of extended deterrence, examines the role of security guarantees in nuclear non-proliferation, and identifies some problems and dilemmas associated

with reinforcing security guarantees. Extended deterrence commitments can take a number of forms ranging from unilateral statements promising protection to physical placement of nuclear weapons on a protected country's territory. Effective extended deterrence involves both deterring potential aggressors and assuring allies; the requirements for "deterrence" and "assurance" are not identical and finding the right balance between the two can be challenging. A benefit of providing allies with strong security guarantees is that the non-proliferation regime is strengthened as a result. The discussion on how to best implement extended deterrence is evolving and some topics which complicate the debate include developments in missile defense and conventional precision strike technologies, efforts to reduce the role of nuclear weapons in defense postures, consideration of "no-first-use" doctrines, the nuclear abolition movement, and the credibility of deterrence against unconventional threats such as terrorism and cyber warfare.

Providing security guarantees to allies can also produce a number of problems. One risk is that the protected state may choose to reduce their conventional defense capabilities making them more dependent on foreign protection and putting the protector state at risk of entanglement. Another risk is that states covered by security guarantees could become "emboldened to embark in dangerous adventures."[365] Further, friends or partners who are *not* covered by security guarantees could be tempted to seek their own nuclear capabilities. Often, effective deterrence hinges on the principle of ambiguity; strong, explicit security guarantees run counter to this principle. In some regions, such as the Middle East, explicit security guarantees can create political issues for the governments of the protected state as well as for the United States. Another possible risk of strong security guarantees is that they could provide adversarial states with a motive to proliferate. Finally, providing security guarantees to multiple allies may increase the risk that eventually one of those guarantees might be seriously tested during a crisis or conflict.

Trachtenberg, David, "U.S. Extended Deterrence: How Much Strategic Force is Too Little?" *Strategic Studies Quarterly*, Summer 2012.

In this *Strategic Studies Quarterly* article David Trachtenberg discusses the history of extended deterrence, the relationship between extended deterrence and nonproliferation, the role of strategic and nonstrategic nuclear forces in extended deterrence, extended deterrence by other means (including third party nuclear capabilities, nonnuclear capabilities, and missile defense), allied views of assurance, the

robustness of the U.S. nuclear enterprise, the impact of the Obama administration's nuclear policies, and the significance of force structure as numbers of nuclear weapons decrease.

Trachtenberg alleges that the United States is on the cusp of what he describes as the "third atomic age," an era in which the role of nuclear weapons in U.S. national security strategy is diminishing and the nuclear forces supporting that strategy are being reduced to historically low levels.[366] The requirements for assurance and extended deterrence are not one and the same; the appropriate numbers and force postures depend on the perceptions of both allies and adversaries. The continued viability of the U.S. nuclear weapons complex is crucial for the future credibility of extended nuclear deterrence; in fact, it may be even more relevant to some European allies than the levels or composition of U.S. nuclear forces. While conventional weapons and missile defenses may enhance extended deterrence, Trachtenberg contends that they will not be sufficient to replace nuclear weapons altogether. Trachtenberg also states that American views of how others *should* perceive the credibility of U.S. nuclear threats are less relevant than how those threats are *actually* perceived. Ultimately, the success of extended deterrence will be determined by the extent to which both allies and adversaries perceive U.S. commitments to be credible. Consequently, future decisions regarding U.S. nuclear forces should be preceded by comprehensive consultations with the friends and allies who stake their security on the reliability of U.S. extended nuclear deterrence.

Wheeler, Michael*, The Changing Requirements of Assurance and Extended Deterrence,* Institute for Defense Analyses, July 2010.

This Institute for Defense Analyses paper is based on discussions which took place during a series of workshops conducted to examine U.S. assurance and extended deterrence strategies and their requirements. These workshops brought deterrence experts and regional specialists together to discuss what requirements, if any, are changing for security assurances and extended deterrence in three regions: Europe, the Middle East, and the Asia Pacific.

While each region requires different assurance strategies, analysis of the workshops resulted in four general conclusions. First, although the underlying principles of extending nuclear deterrence have not changed significantly, the United States should pay greater attention to adjusting its engagement strategies with security partners to ensure that assurances remain strong and positive. Second, the United States' ability to extend deterrence is greater than just the nuclear component; it also includes conventional forces and missile defense. Third, the

prospect for success of U.S. assurances often depends as much on its ability to conduct successful campaigns of coercive diplomacy as it does on traditional deterrence practices. Fourth, the prospect for success of U.S. security assurances cannot be separated from wider perceptions of the United States' relative power in the world.

Some of the enduring requirements identified in the analysis include the importance of managing expectations regarding the nature of assurance relationships, understanding the enduring features of deterrence, and adapting to evolving security environments. New and changing requirements include the increasing importance of missile defenses for dealing with states such as North Korea and Iran, reinvigorating NATO nuclear defense consultations to address the current security environment, finding new approaches for deeper defense consultations with partners such as Japan and South Korea, and the development of a new framework for stability analysis which would account for the complex interplay between the strategies of coercive diplomacy and deterrence.

Yost, David, "Assurance and US Extended Deterrence in NATO," *International Affairs,* Vol. 85, Issue 4, July 2009.

In this *International Affairs* article David Yost discusses the historical and current assurance roles of U.S. nuclear forces in Europe, paying particular attention to the elements of assurance related to U.S. extended nuclear deterrence in NATO. The specific roles of U.S. nuclear forces in Europe identified by Yost include serving as a hedge against Russian recidivism, deterring regional powers armed with WMD, providing an alternative to considering dependence on French and/or British nuclear forces, offering an alternative to the pursuit of national nuclear forces, and supplying evidence of the genuineness of U.S. commitments.[367] Yost identifies the key elements of assurance and extended deterrence in NATO as widespread allied confidence in the reliability of the United States, the openness of the United States to allied influence, the U.S. military presence in Europe, the U.S. nuclear weapons presence in Europe as a link to U.S. strategic nuclear forces, allied roles in the nuclear posture, and an agreed strategic policy. Further, Yost discusses three factors which he suggests may make reaching a consensus during the (then) upcoming NATO Strategic Concept review particularly challenging. Those factors include the arms control context, divisions in both public and expert opinion within NATO countries, and concerns regarding the possible consequences of a break from the established arrangements for the sharing of nuclear risks and responsibilities.

NOTES

[1] Elaine Bunn, "The Future of U.S. Extended Deterrence," in *Perspectives on Extended Deterrence* (Fondation pour la Recherche Strategique, Recherches et documents no. 3, 2010), 35 (emphases in original).

[2] Department of Defense, *Department of Defense Dictionary of Military and Associated Terms*, Joint Publication 1-02 (Washington D.C., 2011), 107.

[3] Department of Defense, *Deterrence Operations Joint Operating Concept*, version 2 (Washington D.C., 2006), 3.

[4] Department of Defense, "Sustaining U.S. Global Leadership: Priorities for 21st Century Defense" (Washington D.C., January 2012), 4 (emphasis in original) [hereafter 2012 DSG].

[5] During the Cold War, "deterrence" was often used as shorthand for "nuclear deterrence," reflecting the critical importance of nuclear weapons, and efforts to deter nuclear attack, to the strategic thinking of this era. This practice still persists decades after the end of the U.S.-USSR superpower rivalry despite efforts by USSTRATCOM and others to broaden concepts and discussions of deterrence to include other military capabilities such as space assets, missile defenses, and niche capabilities. General Kevin Chilton and Greg Weaver, "Waging Deterrence in the Twenty-first Century," *Strategic Studies Quarterly* (Spring 2009), 37-41, and Department of Defense, *Ballistic Missile Defense Review Report* (Washington D.C., February 2010), 6-7.

[6] Kenneth Watman et al., "U.S. Regional Deterrence Strategies," RAND Corporation report (Santa Monica, CA: RAND, 1994), 15.

[7] Steven Pifer, Richard C. Bush, Vanda Felbab-Brown, Martin S. Indyk, Michael O. Hanlon, and Kenneth M. Pollack, *U.S. Nuclear and Extended Deterrence*, Brookings Arms Control Series, Paper No. 3 (Washington, D.C.: Brookings, May 2010), 1. The authors of the 2010 Brookings Institution report "U.S. Nuclear and Extended Deterrence," for example, note that the United States sought to deter the Soviet Union from attacking Iran in 1979. Following the Soviet Union's invasion of Afghanistan, the United States was determined to extend deterrence to protect Iran (and, more broadly, the strategically vital Persian Gulf), despite a recent revolution toppling a friendly regime and bringing a virulently anti-U.S. government to power in Tehran.

[8] Jeffrey Larsen, Justin Anderson, Darci Bloyer, Thomas Devine, Rebecca Gibbons, and Christina Vaughan. *Qualitative Considerations of Nuclear Weapons at Lower Numbers and Implications for Future Arms Control Negotiations*, Air Force Institute for National Security Studies Occasional Paper 68 (July 2012), xii-xiii.

[9] Clark Murdock et al. *Exploring the Nuclear Posture Implications of Extended Deterrence and Assurance* (CSIS: Washington D.C., November 2009), 1.

[10] Chilton and Weaver, "Waging Deterrence in the Twenty-first Century," 34-35, and Michael O. Wheeler, "The Changing Requirements of Assurance and Extended Deterrence," IDA Paper P-4562 (Alexandria, VA: Institute for Defense Analysis, July 2010), iii-iv.

[11] For example, during a May 2012 commencement address delivered at the U.S. Air Force Academy, President Obama included one reference to the Democratic People's Republic of Korea (DPRK) within remarks addressing a range of national security and foreign affairs topics (stating the country "cannot be allowed to threaten the world with nuclear weapons"). Two weeks later, the DPRK government's official news agency issued a press release quoting the address and referring to Obama's mention of the DPRK's nuclear weapons program "as revelation of the U.S. foolish design to stir up atmosphere hostile to the DPRK and justify the modernization of its nuclear weapons under the pretext of non-existent 'nuclear threat' from someone." White House Office of the Press Secretary, "Remarks by the President at the Air Force Academy Commencement," address transcript, U.S. Air Force Academy, May 23, 2012, and Korean Central News Agency, "KCNA Slams US Foolish Moves to Justify Its Modernization of Nukes," June 6, 2012.

[12] Conversely, the failure of U.S. leaders or officials to state express security guarantees can leave allies and partners vulnerable to foreign interference. In January 1950, Secretary of State Dean Acheson gave a speech on U.S. security guarantees in Asia, describing a defense perimeter that included Japan but not South Korea. In June 1950, North Korea launched a major invasion of the South. Although historians have found no definitive link between the two events, many believe Acheson's statement – and the national security policy it reflected – led Soviet and North Korean leaders to believe that the United States would not militarily intervene on behalf of South Korea. Max Hastings, *The Korean War* (New York: Simon and Schuster, 1987), 57-58, and Seung-young Kim, *American Diplomacy toward Korea and Northeast Asia, 1882-1950* (New York: Palgrave Macmillan, 2009), 187.

[13] In President Reagan's 1982 State of the Union address, for example, he emphasized the importance of America's long-standing alliances and warned the Soviet Union that the United States would counter any effort to expand the Communist bloc: "We have not neglected to strengthen our traditional alliances in Europe and Asia, or to develop key relationships with our partners in the Middle East and other countries … When radical forces threaten our friends, when economic misfortune creates conditions of instability, when strategically vital parts of the world fall under the shadow of Soviet power, our response can make the difference between peaceful change or disorder and violence." President Ronald Reagan, State of the Union Address, Joint Session of Congress, Washington D.C., January 26, 1982. Similarly, President Clinton's 1998 State of the Union address included messages intended to deter potential adversaries and assure U.S. allies and partners. President Clinton warned Iraqi dictator Saddam Hussein not to contemplate use of WMD ("I know I speak for

everyone in this chamber, Republicans and Democrats, when I say to Saddam Hussein: You cannot defy the will of the world. And when I say to him: You have used weapons of mass destruction before. We are determined to deny you the capacity to use them again.") and pledged to support U.S. allies and partners abroad ("In the months ahead, I will pursue our security strategy with old allies in Asia and Europe, and new partners from Africa to India and Pakistan, from South America to China. And from Belfast to Korea to the Middle East, America will continue to stand with those who stand for peace.)" President William J. Clinton, State of the Union Address, Joint Session of Congress, Washington D.C., January 27, 1998.

[14] Keith Payne, Thomas Scheber, and Kurt Guthe. *U.S. Extended Deterrence and Assurance for Allies in Northeast Asia*, National Institute for Public Policy (NIPP) report (Fairfax, VA: NIPP, March 2010), 9-11.

[15] The experts examined the salvaged wreckage of the *Cheonan* and pieces of a foreign torpedo that was also discovered at the site. They concluded the ship was sunk due to a surprise torpedo attack launched by a nearby submarine. Investigators found a Korean character on one of the recovered pieces of the torpedo and also concluded it matched the design and specifications of a weapon known to be manufactured by the DPRK. In addition, at the time of the attack ROK intelligence was aware of the presence of DPRK submarines in the vicinity of the *Cheonan*. Joint Civil-Military Investigation Group, *Investigation Result on the Sinking of the ROKS "Cheonan,"* May 20, 2010, and Ambassador Han Duk-Soo, "The Cheonan Situation," briefing, CSIS, Washington D.C., May 25, 2010.

[16] White House Office of the Press Secretary, "Statement by the Press Secretary on the Republic of Korea," press release, May 24, 2010.

[17] Embassy of the United States-Korea, "Press Conference with President Obama and President Lee Myung-bak," event transcript, November 11, 2010.

[18] Chinese foreign policy and national security experts, for example, have closely read U.S. national strategic guidance documents since the mid-1990s. Jin Carong, "The US Global Strategy in the Post-Cold War Era and its Implications for China-United States Relations: a Chinese Perspective," *Journal of Contemporary China* 10, no. 27 (2001), 309-315; Colonel Yunzhu Yao, "A Chinese Perspective on the Nuclear Posture Review," Carnegie Proliferation Analysis, May 6, 2010; and Lora Saalman, *China and the U.S. Nuclear Posture Review*, Carnegie Endowment for International Peace (CEIP) Paper (Washington D.C.: CEIP, February 2011), 4-13.

[19] Gary L. Guertner, "European Views of Preemption in US National Security Strategy," *Parameters* (Summer 2007), 33-37; Scott Snyder, "Finding a Balance Between Assurances and Abolition: South Korea Views of the NPR," *The Nonproliferation Review* 18, No. 1 (March 2011), 150-154, and; Lewis Dunn, Greg Giles, Jeffrey Larsen, and Thomas Skypec, "Foreign Perspectives on U.S.

Nuclear Policy and Posture: Insights, Issues, and Implications," Defense Threat Reduction Agency (DTRA) report (December 12, 2006), 250-255.

[20] White House, *National Security Strategy 1990* (Washington D.C.: March 1990), 9.

[21] Ibid, 12.

[22] White House, *National Security Strategy* (Washington D.C.: May 2010), 41 [hereafter 2010 NSS].

[23] 2010 DSG, 2 (emphasis in original).

[24] Ibid.

[25] Department of Defense, *Nuclear Posture Review Report* (Washington D.C., April 2010), xi [hereafter 2010 NPR]. The 2010 *Nuclear Posture Review Report* states "[t]he United States will continue to ensure that, in the calculations of any potential opponent, the perceived gains of attacking the United States or its allies and partners [with nuclear weapons] would be far outweighed by the unacceptable costs of the response."

[26] Richard Estes, "The Role of Strategic Communication Deterrence: Lesson from History," Chap. 12 in Schneider, Barry and Patrick Ellis, eds, *Tailored Deterrence: Influencing States and Groups of Concern*, (Maxwell, AL: Air Force Counterproliferation Center, 2011), 351-352.

[27] Lawrence Freedman, *The Evolution of Nuclear Strategy*, 3rd ed. (New York: Palgrave Macmillan, 2003), 296.

[28] Underlying ROK concerns regarding the continued U.S. commitment to their security in the face of a nuclear-armed DPRK prompted a request during high-level U.S.-ROK meetings in 2009 for an express statement of the U.S. nuclear extended deterrence commitment. The United States agreed, and the two government's 2009 "Joint Vision for the Alliance" states "[t]he continuing commitment of extended deterrence, including the U.S. nuclear umbrella, reinforces [U.S.] assurance [guarantees to the ROK]." White House Office of the Press Secretary, "Joint Vision for the Alliance of the United States of America and the Republic of Korea," press release, June 16, 2009, and Pifer et al., *U.S. Nuclear and Extended Deterrence*, 31-32.

[29] In 1954, Secretary of State John Foster Dulles articulated a strategy of "massive retaliation" to address this imbalance by threatening to use nuclear weapons in response to a conventional attack on NATO: "Local defenses must be reinforced by the further deterrent of massive retaliatory power …. Otherwise, for example, a potential aggressor, who is glutted with manpower, might be attempted to attack in confidence that resistance might be confined to manpower." John Foster Dulles, address, Council on Foreign Relations, Washington D.C. January 12, 1954 in Cynthia Ann Watson, *U.S. National*

Security: A Reference Handbook (ABC-Clio, Inc: Santa Barbara, CA 2002), 163-164.

[30] 2010 NPR, 17.

[31] Ibid, 16.

[32] Ibid, 16.

[33] Ibid, 17.

[34] Ibid, 16.

[35] Embassy of the Republic of Korea in the USA, "The ROK-U.S. Mutual Defense Treaty," n.d.

[36] Article V, United States, "North Atlantic Treaty," in Bevans, Charles I. ed. *Treaties and Other International Agreements of the United States of America, 1776-1949*, vol. IV (Washington D.C.: Department of State, 1968), 829.

[37] Yukio Satoh, "Are the Requirements for Extended Deterrence Changing?" Carnegie International Nonproliferation Conference panel transcript, Washington D.C., April 6, 2009.

[38] Chilton and Weaver, "Waging Deterrence," 36.

[39] Department of Defense, Office of the Assistant Secretary of Defense (Public Affairs), "DoD News Briefing with Secretary Gates and Republic of Korea Defense Minister Kim," press transcript, October 8, 2010.

[40] Jim Garamone, "U.S.-South Korea Alliance Remains Strong, Leaders Say," *American Forces Press Service*, October 8, 2010.

[41] U.S.-ROK Security Consultative Meeting, "U.S.-ROK Security Consultative Joint Communique," 43rd U.S.-ROK Security Consultative Meeting, Seoul, Republic of Korea, October 28, 2011.

[42] During a joint exercise between the United States and Japan titled "Keen Sword," Admiral Umio Otsuka of Japan's Self Defense Force noted its value for improving the ability of the two armed forces to operate as one cohesive entity: "We have already gained ground in terms of increasing our interoperability …. This exercise does a good job of preparing us to work as one entity although we are two individual nations." Mass Communications Specialist Juan Pinalez, "Keen Sword 2011 Brings US and Japanese Sailors Together," U.S. Navy press release, December 6, 2010.

[43] Many allies and partners echo views expressed by Major General Arvydas Pocius, Lithuania's Defence Minister, following his observation of a joint exercise conducted by the United States and its three Baltic NATO allies: "'This training event is based on one of NATO's underlying principles: one for all and all for one, when you come together and stand shoulder to shoulder, and here we are - the three Baltic States and USA' … [in further remarks he]

stressed that the exercise was a great proof of successful strategic partnership between the United States and the Baltic States." Lithuania Ministry of National Defense, Lithuania Armed Forces, "Chief of Defense of Lithuania Observed Joint Training of Baltic and US Troops," press release, October 22, 2010.

[44] Jim Garamone, "U.S., Korean Defense Leaders Announce Exercise Invincible Spirit," *American Forces Press Service*, July 20, 2010.

[45] Mass Communications Specialist 1st Class Ernesto Bonilla, "U.S. Navy EOD Unit Shares Training, Fosters International Partnerships," U.S. Navy Region Hawaii press release, July 19, 2012.

[46] Ibid.

[47] Bonilla, "U.S. Navy EOD Unit"; Mass Communications Specialist 2nd Class Philip Pavlovich, "Sea Spirit at RIMPAC," U.S. Navy press release, July 21, 2012; and William Cole, "RIMPAC Vessels Head Out to Sea for War Games," *Honolulu Star-Advertiser*, July 11, 2012.

[48] Department of Defense, *Quadrennial Defense Review* (Washington D.C., February 2010), 63 [hereafter 2010 QDR].

[49] After conducting research interviews with government officials and subject matter experts from the Eastern European members of NATO considering possibly hosting components of a U.S./NATO missile defense system – components guarded and/or supported by U.S. conventional forces, Polish defense analyst Lukasz Kulesa concluded "[t]he deployment of the US conventional military forces to the region was seen as the most credible backup of the US security assurances." Kulesa found that countries such as the Czech Republic and Poland subsequently offered to host U.S./NATO missile defense systems largely because "the crucial importance of the planned installations for the security of the United States … would guarantee Washington involvement in the affairs of the region." Lukasz Kulesa, "Extended Deterrence and Assurance in Central Europe," in *Perspectives on Extended Deterrence* (Fondation pour la Recherche Strategique, Recherches et documents no. 3, 2010), 122.

[50] Japan, for example, provided $2.3 billion in host-nation support funds in 2012. David J. Berteau and Michael J. Green, dirs, *U.S. Force Posture Strategy in the Asia-Pacific Region: An Independent Assessment* (Washington D.C.: Center for Strategic and International Studies, August 2012), 18.

[51] Donna Miles, "Obama Announces Expanded U.S. Military Presence in Australia," *American Forces Press Service*, November 16, 2011.

[52] Office of the Prime Minister of Australia, "Transcript of Press Conference, Bali," press release, November 19, 2011.

[53] 2010 QDR, 31.

[54] Ibid, 1, 32-33, 103.

[55] DSG, 3.

[56] The 2010 NPR stated that nuclear forces remained essential to extended deterrence and assurance strategies but that the United States would "reduce the role and numbers" of its nuclear arsenal. 2010 NPR, v.

[57] For example, the recent change to U.S. declaratory policy regarding potential biological or chemical weapon attacks conducted against the United States by a non-nuclear adversary rules out the use of a nuclear weapon in response, stating the United States will instead elect to use a "devastating conventional response." 2010 NPR, viii.

[58] Major Wade S. Karren, "Long Range Strike: The Bedrock of Deterrence and America's Strategic Advantage," *Air and Space Power Journal* (May-June 2012), 75.

[59] Jeremiah Gertler, *Operation Odyssey Dawn (Libya): Background and Issues for Congress*, Congressional Research Service (CRS) report, March 28, 2011, 10-11.

[60] 2010 QDR, iv.

[61] Significantly, several prominent Russian national security analysts assert that advanced conventional weapon capabilities are now considered a greater threat than missile defenses or certain nuclear capabilities: "long-range high precision weapons [represent] a new destabilizing factor of greater importance than missile defense, TNW [tactical nuclear weapons] and the US upload hedge in strategic offensive weapons." Alexei Arbatov, Vladamir Dvorkin, and Sergey Oznobishchev, *Russia and the Dilemmas of Nuclear Disarmament* (Moscow: Institute of World Economy and International Relations/Nuclear Threat Initiative, 2012), 26.

[62] Thom Shanker, Eric Schmitt, and David E. Sanger, "U.S. Adds Forces in the Persian Gulf, a Signal to Iran," *New York Times*, July 3, 2012.

[63] 2010 NPR, 1, 15-17.

[64] Ibid, 30.

[65] 2010 NPR, 24.

[66] Keith B. Payne, "On Nuclear Deterrence and Assurance," *Strategic Studies Quarterly* 3, No. 1 (Spring 2009), 56.

[67] Congressional Commission on the Strategic Posture of the United States, *America's Strategic Posture* (Washington D.C.: United States Institute for Peace Press, 2009), 61, and Victor Utgoff and David Adesnik, "On Strengthening and Expanding the U.S. Nuclear Umbrella to Dissuade Nuclear Proliferation," IDA report (Alexandria, VA: IDA, July 2008), 13-16.

[68] As noted by Japanese national security expert Ken Jimbo, "Ensuring the visibility of U.S. nuclear commitment in Asia is still important … it could be flexibly forward-deployed, especially by the air component." Ken Jimbo, "Extended Deterrence and the 21st Century," Carnegie International Nuclear Policy Conference panel transcript, March 2011. *See also* David Yost, "Assurance and US Extended Deterrence in NATO," *International Affairs* vol. 85, No. 4 (2009), 764.

[69] As noted by General Gary L. North, commander of Pacific Air Forces, in response to a reporter writing a story on "continuous presence:" "Both our friends and adversaries are very aware of the force structure laydown in the Pacific." Rebecca Grant, "Bomber Diplomacy," *Air Force Magazine* (December 2011).

[70] Benjamin Stratton, "B-52s Head to Guam for Continuous Bomber Presence Rotation," Air Force press release, June 3, 2010.

[71] The role played by the Patriots in the 1991 Gulf War is important for understanding the mechanics of assurance. Both prior to and during the conflict, allies and partners believed the high-tech systems could effectively defend them against ballistic missile attack. As a result, they provided a degree of assurance to allies and partners throughout the conflict, even as the system's actual battlefield performance fell short of U.S. expectations. Kenneth P. Werrell, *Archie to SAM: A Short Operational History of Ground-based Air Defense* (Maxwell, AL: Air University Press, 2005), 204-208, and Steven A. Hildreth, "Evaluation of U.S. Army Assessment of Patriot Anti-tactical Missile Effectiveness in the War Against Iraq," report for House Government Operations Subcommittee on Legislation and National Security, April 7, 1992.

[72] Department of Defense, *Ballistic Missile Defense Review Report* (Washington D.C., February 2010), 4-9 [hereafter 2010 BMDR].

[73] Ibid, 12.

[74] Japan lodged formal diplomatic complaints with the DPRK following tests conducted in April and July 2009. Sent via China – Japan and the DPRK do not have direct diplomatic relations – the April demarche states the test represents "a threat to the peace and stability of the region, and directly impacts the security of Japan." The Japanese message after the second test went a step further, stating the DPRK's actions represented "grave and provocative" acts. Ministry of Foreign Affairs of Japan, "Japan Protests the Launch of Flying Object by North Korea," press release, April 5, 2009, and "Japan Protests Against North Korea's Missile Launches," press release, July 4, 2009.

[75] Ministry of Foreign Affairs of Japan, "Deployment of US PAC-3 to Kadena," press release, July 20, 2006.

[76] Missile Defense Agency, "Joint Japan-U.S. Missile Defense Test Successful," press release, October 29, 2010, and Ronald O'Rourke, *Sea-based Ballistic Missile Defense: Issues for Congress*, CRS Report, May 21, 2009, 8.

[77] Missile Defense Agency, "Elements: Aegis Ballistic Missile Defense," n.d.

[78] Ministry of Foreign Affairs of Japan, "Deployment of US PAC-3 to Kadena," and Karen Parrish, "U.S., Japan Begin Coordination of Second Radar Installation," *American Forces Press Service*, September 17, 2012.

[79] Ogawa Shinichi, "Missile Defense and Deterrence," National Institute for Defense Studies (NIDS) report (Tokyo, Japan: NIDS, 2001), 32-33.

[80] Saki Dockrill, *Eisenhower's New Look National Security Policy, 1953-1961* (London: Macmillan Press, 1996), p. 29, and Robert R. Bowie and Richard H. Immerman, *Waging Peace: How Eisenhower Shaped an Enduring Cold War Strategy* (Oxford: Oxford University Press, 1998), 98.

[81] State Department, *Foreign Relations of the United* States, *1952-1954*, Vol. II, 582.

[82] "By the close of 1953, SAC had fully equipped 11 of the 17 wings in the atomic strike force. The bomber force included 329 B-47s and 185 B-36s. These aircraft were supported by 137 RB-136s, 500 tankers, and more than 200 fighters. Strategic Air Command personnel numbered almost 160,000 at 29 Stateside and 10 overseas bases." Herman S. Wolk, "The 'New Look,'" *Air Force Magazine* (August 2003).

[83] Lt Gen James Edmundson, "Race for the Superbomb," *The American Experience* (web site), interview transcript, 1999.

[84] John Foster Dulles, address, Council on Foreign Relations, January 12, 1954 in Cynthia Ann Watson, *U.S. National Security: A Reference Handbook* (ABC-Clio, Inc: Santa Barbara, CA 2002), 163-164.

[85] Freedman, *The Evolution of Nuclear Strategy*, 82.

[86] Mary M. Simpson, "News and Notes," *Bulletin of the Atomic Scientists* (February 1, 1954), 58.

[87] Ibid, 85.

[88] In 1958-59, for example, the United States began deploying nuclear cannons, rockets, and medium-range missiles to the ROK. The deployment was a direct response to concerns that the ROK leadership required some form of reassurance to address drawdowns in U.S. conventional forces on the Korean Peninsula. Michael Gordon Jackson, "Beyond Brinkmanship: Eisenhower, Nuclear War Fighting, and Korea: 1953-1968," *Presidential Studies Quarterly*, Vol. 35, No. 1 (Mar 2005), 63-65.

[89] For more on this concept, see Elbridge A. Colby, "The United States and Discriminate Nuclear Options in the Cold War," chapter 3 in *On Limited Nuclear Warfare in the 21st Century*, Jeffrey A. Larsen and Kerry M. Kartchner, eds. (Palo Alto, CA: Stanford University Press, forthcoming).

[90] Scott D. Sagan, "SIOP-62: The Nuclear War Plan Briefing to President Kennedy," *International Security*, Vol. 12, No. 1 (Summer 1987), 38.

[91] "Guidance to the NATO Military Authorities," #25 in Annex II, NATO Defence Planning Committee/Decisions, Document DPC/D (67) 23.

[92] Horst Mendershausen, *From NATO to Independence: Reflections on de Gaulle's Secession* (Santa Monica, CA: RAND Corporation, 1966), 6, and Robbin F. Laird, "The French Strategic Dilemma," Center for Naval Analyses, Paper #407 (November 1984), 2.

[93] France remained politically engaged with the alliance and since the mid-1990s has gradually reintegrated with NATO military bodies. Its nuclear forces, however, remain separate from the alliance, and it is not a part of the NATO Nuclear Planning Group. *See* the discussion on "Flexibility of NATO Membership" within NATO, "Member Countries," n.d.

[94] The Soviet Union tested its first ICBM, the R-7, in 1957.

[95] Walter S. Poole, *The History of the Joint Chiefs of Staff and National Policy, 1965-1968*, Vol. iv (Washington D.C.: Department of Defense), 318-319.

[96] Thomas A. Schwartz, "NATO, Europe, and the Johnson Administration," NATO Research Fellowship Program paper, 15.

[97] Marc Trachtenberg, *A Constructed Peace* (Princeton, N.J.: Princeton University Press, 1999), 204-210.

[98] Freedman, *The Evolution of Nuclear Strategy*, 313.

[99] NATO, "The Harmel Report."

[100] *New York Times*, "LBJ Urges a Buildup for NATO," re-published in *The Miami News*, September 10, 1965, 8B, and Mary N. Hampton, *The Wilsonian Impulse: U.S. Foreign Policy, the Alliance, and German Unification* (Westport, CT: Praegar Publishers, 1996), 112.

[101] J. Robert Oppenheimer, "Atomic Weapons and American Policy," *Foreign Affairs* (July 1953), 529.

[102] Missile Defense Agency, *Nike Zeus: The U.S. Army's First Antiballistic Missile* (Missile Defense Agency: n.d.), 1-10.

[103] Lt Col Charles E. Costanzo, "Shades of Sentinel? National Missile Defense Then and Now," *Aerospace Power Journal* (Fall 2001), and Sharon Watkins Lang, "Who Do You Think You Are?" U.S. Army Space and Missile Defense Command Historical Essay, n.d.

[104] David Yost, *Soviet Ballistic Missile Defense and the Western Alliance* (Boston, MA: Harvard University Press, 1988), 5.

[105] Ambassador Steven Pifer notes that by "early 1970s [there were] over 7,300 [U.S. nuclear warheads in Europe], of which some 2,800 were designated for allied use under programs of cooperation." Steven Pifer *NATO, Nuclear Weapons, and Arms Control*, Brookings Arms Control Series, Paper 7 (July 2011), 6.

[106] "Paper Provided by the Interagency SALT Steering Committee," 31-32, n.d. in Erin Mahan, ed., *Foreign Relations of the United States, 1969-1976, Volume XXXII, SALT I: 1969-1972* (United States Government Printing Office: Washington D.C., 2010), and Sir Michael Quinlan, "The Silent Alliance: UK-FRG Defence Relationships, 1968-69," 189 in Manfred Gortemaker, *Britain and Germany in the 20th Century* (Oxford International Publishers: Oxford, 2006).

[107] NATO, "Alliance Defence for the Seventies," December 4, 1970.

[108] North Atlantic Council, Final Communique, Brussels, December 9-10, 1971.

[109] In discussing the signing of the ABM Treaty and the SALT Interim Agreement, the North Atlantic Council stated their support for both accords, asserting they would "contribute to strategic stability, significantly strengthen international confidence, and reduce the danger of nuclear war." North Atlantic Council, Final Communique, Bonn, May 30-31, 1972. The United Kingdom and France also quietly communicated to the United States their relief that the ABM Treaty a) made their own nuclear forces more credible, as the Soviet Union was now prevented from deploying a defense system that could negate their national offensive forces, and; b) obviated any need for their countries to pursue their own expensive national missile defense systems. "Minutes of a National Security Council Meeting," Washington D.C, March 8, 1971, 417 and "Letter from the Personal Representative to the North Atlantic Treaty Organization (Ellsworth) to President Nixon," Brussels, April 3, 1971, 438 in Mahan, ed., *Foreign Relations of the United States.*

[110] North Atlantic Military Committee, "Final Decision on MC 14/3," January 16, 1968.

[111] Paul Schulte, "Tactical Nuclear Weapons in NATO and Beyond: A Historical and Thematic Examination," 41 in Tom Nichols, Douglas Stuart, and Jeffrey D. McClausland, eds. *Tactical Nuclear Weapons in NATO* (Carlisle PA: U.S. Army War College Strategic Studies Institute, 2012).

[112] Secretary of Defense James Schlesinger, *Annual Defense Department Report for FY1975* (Washington: U.S. Government Printing Office, 1974), 38, 44.

[113] National Security Decision Memorandum 242 (NSDM 242), January 17, 1974.

[114] Hosking, *Russia and the Russians*, 517.

[115] Richard Burt, "The SS-20 and the Eurostrategic Balance," *The World Today*, Vol. 33, No. 2 (February 1977), 45-46.

[116] State Department, "SCC Meeting on PRM-38," Briefing Memo, August 23, 1978.

[117] State Department, "INF Treaty: Narrative," n.d., http://www.state.gov/t/avc/trty/102360.htm , and NATO – Allied Command Operations, "1979-1989: 'Dual Track' Decade – New Weapons, New Talks," n.d.

[118] Benjamin B. Fischer, "A Cold War Conundrum: The 1983 Soviet War Scare," CIA Center for the Study of Intelligence monograph, 1997.

[119] President Ronald Reagan, "Address to the Nation on Defense and National Security," address, Washington D.C., March 23, 1983.

[120] At the 1985 superpower summit in Reykjavik, for example, Reagan suggested to Soviet leader Mikhail Gorbachev that U.S. missile defense technology could be shared with the Soviet Union, ultimately permitting both sides to deploy effective defenses and, in turn, agree to deep reductions in their nuclear arsenals. Gorbachev apparently rejected the offer as unrealistic, noting that the United States refused to make even benign civilian technologies such as "oil drilling equipment, automatic machinery, even milk factories" available to the Soviet Union. Tom Simons, "Memorandum of Conversation," U.S. delegation memorandum, Hofdi House, Reykjavik, October 11, 1986, 5, 14-15.

[121] Christopher Bertram, "Strategic Defense and the Western Alliance," *Daedalus*, Vol. 114, No. 3 (Summer 1985), 281.

[122] William Tuohy, "Former German Chancellor Assails 'Star Wars' and U.S. Deficit," *Los Angeles Times*, September 11, 1986.

[123] Susan J. Koch, *The Presidential Nuclear Initiatives of 1991-1992*, National Defense University Center for the Study of Weapons of Mass Destruction Case Study #5 (National Defense University: Washington D.C., 2012), 6.

[124] Koch, 11.

[125] Lacking any formal verification mechanism, however, it is uncertain if these measures were fully carried out. See David Yost, "Russia and Arms Control for Non-strategic Nuclear Weapons," in Larsen and Klingenberger, Controlling Non-Strategic Nuclear Weapons (United States Air Force Institute for National Security Studies, 2001), 133-137.

[126] President George H.W. Bush, "Address to the Nation on Reducing United States and Soviet Nuclear Weapons," September 27, 2001.

[127] Ibid.

[128] Koch, 11.

[129] North Atlantic Council, "The Alliance's New Strategic Concept," November 8, 1991, #36, 39.

[130] While "missile defenses" are not further defined within the document, most alliance members probably viewed these defenses as either theater missile defense systems similar to the U.S. Patriot systems used during the 1991 Gulf War or a "limited" national defense system capable of intercepting a small number of missiles (but not negating the Russian Federation's nuclear deterrent). U.S. officials briefed the latter type of system to NATO allies in May 1991. North Atlantic Council, "The Alliance's New Strategic Concept," #49, and NATO Defense Planning Committee and Nuclear Planning Group, "Final Communique," #14, May 29, 1991.

[131] DoD, Nuclear Posture Review, briefing, September 22, 1994, slide 35.

[132] Congressional Commission on the Strategic Posture of the United States, *America's Strategic Posture* (United States Institute of Peace: Washington D.C., 2009), 8-9.

[133] DoD, Nuclear Posture Review, briefing, September 22, 1994, slide 4.

[134] Nuclear Posture Review, briefing, September 22, 1994, slide 2.

[135] Testimony of Deputy Secretary of Defense John M. Deutch. Hearing before the Senate Armed Services Committee, 103rd Congress, September 22, 1994 (S. Hrg. 103-870), 16.

[136] CNN, "Clinton Delivers Speech on National Missile Defense," address transcript, September 1, 2000, Washington D.C., and Office of the President, "National Security Strategy for a New Century,"16 (hereafter NSS 1999).

[137] Late within his term, President Clinton elected not to deploy national missile defense, citing recent test failures and a desire to adjust the terms of the ABM Treaty, leaving a decision on deployment to a future administration.

[138]NSS 1999, 35, and Richard P. Cronin, *Japan-U.S. Cooperation on Ballistic Missile Defense*, CRS Report, March 19, 2002, 1.

[139] Camille Grand, "Missile Defense: The View from the Other Side of the Atlantic," *Arms Control Today* (online edition), September 2000. *See also* Australia Department of Foreign Affairs and Trade, "Australia-United States Ministerial Consultations 1999 Joint Communique," November 3, 1999: "Australia encouraged the United States to pursue amendments [to NMD plans] consistent with the spirit and intent of the ABM Treaty in order to maintain an effective Treaty relevant to new strategic circumstances."

[140] NATO Defence Nuclear Planning Group, "Final Communique," December 15, 1994, #20.

[141] Grand, "Missile Defense."

[142] CNN, "Clinton Delivers Speech on National Missile Defense," address transcript, September 1, 2000.

[143] In 1993, for example, it suggested reducing these forces from 185,000 to 100,000 troops. Eric Schmitt, "Clinton Seeking $14 Billion Cut by the Military," *New York Times*, February 4, 1993.

[144] North Atlantic Council, "The Alliance's Strategic Concept," April 24, 1999, #41.

[145] Ibid, #42 and 56.

[146] Richard McMillan, *Aegis TMD: Implications for Australia*, Australian Defence College, Monograph Series, No. 1, 50.

[147] Colonel Patrick M. O'Donogue, "Theater Missile Defense in Japan," Strategic Studies Institute report, September 2000, 3-7.

[148] Office of the Press Secretary, The White House, "Remarks by the President to Students and Faculty at National Defense University," Washington D.C., May 1, 2001 cited by Keith B. Payne, "The Nuclear Posture Review: Setting the Record Straight," *The Washington Quarterly*, Vol. 28, No. 3 (Summer 2005), 135.

[149] "The U.S. will no longer plan, size or sustain its forces as though Russia presented merely a smaller version of the threat posed by the former Soviet Union." Donald Rumsfeld, Foreword, *Nuclear Posture Review Report*, January 9, 2002. *See also* Department of Defense, "Findings of the Nuclear Posture Review," briefing, January 9, 2002, slide 6, and Department of Defense, Office of the Assistant Secretary of Defense for Public Affairs, "Special Briefing on the Nuclear Posture Review," briefing transcript, January 9, 2002. "[We seek] a new framework of relations that sets aside the sort of Cold War hostilities, in particular the idea of ending the relationship with Russia that is based on mutual assured destruction."

[150] Payne, "The Nuclear Posture Review: Setting the Record Straight," 138.

[151] Donald Rumsfeld, "Foreword," *Nuclear Posture Review Report*, January 9, 2002.

[152] Donald Rumsfeld, *Annual Report to the President and Congress*, Department of Defense report (2002), 88 and "Foreword," *Nuclear Posture Review Report*.

[153] Walter Pincus, "Bush Request to Fund Nuclear Study Revives Debate," *Washington Post*, February 9, 2005, A9.

[154] Rumsfeld, "Foreword," *Nuclear Posture Review Report*.

[155] Ibid.

[156] Rumsfeld, *Annual Report to the President and Congress*, 84.

[157] Ibid.

[158] Department of Defense, "Special Briefing on the Nuclear Posture Review," January 9, 2002.

[159] Department of Defense, "Findings of the Nuclear Posture Review," briefing, January 9, 2002, slide 7.

[160] Ibid.

[161] Department of Defense, "Special Briefing on the Nuclear Posture Review," January 9, 2002.

[162] Ibid, slide 6.

[163] "Bush's Missile Defense Stance Prompts Allies to Mull Options," National Defense [online edition], July 2011.

[164] Stanley R. Sloan, "How and Why Did NATO Survive the Bush Doctrine?" NATO Defense College Research Report, 2008, 3-4.

[165] David Yost, "The US Nuclear Posture Review and the NATO Allies," *International Affairs*, Vol. 80, No. 4, 726.

[166] NATO, "Bucharest Summit Declaration," April 3, 2008, #37; CNN, "Bush: Missile Shield No Threat to Russia," April 1, 2008; and Wade Boese, "NATO Summit Results Falls Short of Bush Goals," *Arms Control Today* [online edition], May 2008.

[167] Department of Defense, Office of the Undersecretary of Defense for Acquisition, Logistics, and Technology, "ABM Treaty: President Putin Statement December 13, 2001," n.d.

[168] NATO, "Comprehensive Political Guidance," November 29, 2006, #5 and 7.

[169] Ibid, #16e.

[170] Stephen McFarland. "The Air Force in the Cold War, 1945-1960," *Airpower Journal* [online edition] (Fall 1996).

[171] Elbridge Colby, "The United States and Discriminate Nuclear Options in the Cold War," in *On Limited Nuclear Warfare in the 21st Century*, 88.

[172] During the Cold War, for example, the Soviet Union deployed medium-range nuclear missiles capable of targeting the European members of NATO: "The aim was to take Western Europe hostage: since any threatened missile strike there would not directly affect the United States, the Soviet leaders hoped the American leaders would not respond effectively [to the threat], and a split would open up within NATO." Geoffrey Hosking, *Russia and the Russians: A History*, 2nd ed. (Cambridge, MA: Harvard University Press, 2011), 517.

[173] Denis Healey, *The Time of My Life* (London: Michael Joseph, 1989), 243. Found in Bruno Tertrais, "The Future of Extended Deterrence: A Brainstorming

Paper," in *Perspectives on Extended Deterrence* (Fondation pour la Recherche Strategique, Recherches et documents no. 3, 2010), 8.

[174] Amy L. Catalinac, "Why New Zealand Took Itself Out of ANZUS," *Foreign Policy Analysis* Vol. 6 (2010), 317-319.

[175] David Alexander, "U.S. Lifts Ban on New Zealand Warships, New Zealand Keeps Nuclear-free Stance," Reuters, September 21, 2012.

[176] New Zealand remains committed to its "nuclear free" policy, and by law continues to bar entry to any nuclear-powered ship and to any ship or aircraft carrying nuclear weapons. New Zealand Parliament, New Zealand Nuclear Free Zone, Disarmament and Arms Control Act of 1987, Public Act 86, June 8, 1987, Articles 9-11.

[177] NSS 2010. "The United States of America will continue to underwrite global security …. [But as] we do, we must recognize that no one nation – no matter how powerful – can meet global challenges alone." *See also* the 2010 QDR "[The United States] cannot sustain a stable international system alone" (2010 QDR, 63).

[178] Joseph Nye, "The U.S. can Reclaim 'Smart Power,'" *LA Times*, January 21, 2009.

[179] Assistant Secretary of State Esther Brimmer, "UNGA 67 and U.S. Multilateral Priorities," address, Center for Strategic and International Studies, Washington D.C., September 18, 2012. "[A]round the globe, U.S. multilateral leadership similarly has helped assemble broad coalitions to address crises and avert or stem violent conflict."

[180] 2010 NPT, iv.

[181] 2010 BMDR, 7-8.

[182] 2010 QDR, 17-45.

[183] As stated in the 2012 DSG: "we developed a defense strategy that transitions our Defense enterprise from an emphasis on today's wars to preparing for future challenges, protects the broad range of U.S. national security interests, advances the Department's efforts to rebalance and reform, and supports the national security imperative of deficit reduction through a lower level of defense spending." (2012 DSG, 1).

[184] See, for example:

1) 2010 QDR: "The second theme to emerge from QDR analyses is the importance of ensuring that U.S. forces are flexible and adaptable so that they can confront the full range of challenges that could emerge from a complex and dynamic security environment." (2010 QDR, 18);

2) 2010 BMDR: "In the short term, the United States will address this mismatch between supply and demand with a comprehensive force management

process that adjudicates competing requirements from the combatant commands. This approach underscores the value of developing capabilities that are flexible and adaptive and also relocatable, so that they can be surged into troubled regions in times of political-military crisis." (2010 BMDR, 26).

[185]White House Office of the Press Secretary, "Remarks by President Obama at the Brandenburg Gate, Berlin, Germany" 2013.

[186]White House Office of the Press Secretary, "Remarks by President Barack Obama, Hradcany Square, Prague, Czech Republic," 2009.

[187] Ibid.

[188] 2010 NPR, v-vi.

[189] 2010 NPR, 30.

[190] Ibid, 23.

[191] In response to a question on New START's force limits, Secretary of Defense Bill Gates, Secretary of State Hillary Clinton, and Chairman of the Joint Chiefs of Staff Admiral Mullen stated that the administration's analysis of U.S. nuclear force requirements had found "the limits contained in the New START Treaty would be sufficient to support our deterrence requirements, including extended deterrence for our allies, in the current and projected international security environment." Government Printing Office, "The New START Treaty (Treaty Doc. 111-5)," Hearings Before the Committee on Foreign Relations, United States Senate, 111th Congress (second session), April-May 2010, 78.

[192]2013 RENS: DoD, Report on Nuclear Employment Strategy of the United States Specified in Section 491 of 10 U.S.C, June 12, 2013, 3.

[193]2012 DSG: "*Whenever possible, we will develop innovative, low-cost, and small-footprint approaches to achieve our security* objectives, relying on [combined] exercises, rotational presence, and advisory capabilities" [emphasis in original]. (2012 DSG, 3).

[194] 2010 QDR, 13, 26.

[195] Office of the President, 2010 National Space Policy [2010 NSP], 6 and DoD, 2011 National Security Space Strategy [2011 NSSS], 9.

[196] Australian Government, Department of Defense, "Minister of Defence - Interview with David Speers on SKY News, PM Agenda," September 15, 2011.

[197] 2010 DSG, 3.

[198] 2010 QDR, 8.

[199] 2006 DOJOC, 25.

[200] 2010 QDR, 14. The importance of tailoring extended deterrence and assurance strategies is also emphasized by documents such as the 2010 BMDR,

which states that "regional approaches [to missile defenses] must be tailored to the unique deterrence and defense requirements of each region, which vary considerably in their geography, in the history and character of the threat, and in the military-to- military relationships on which to build cooperative missile defenses." 2010 BMDR, 22.

[201] House Armed Services Committee, "Statement of Dr. Brad Roberts, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy Before the House Armed Services Committee," Congressional testimony, March 31, 2011, Washington D.C.

[202] 2010 NSS, 22. "Military force, at times, may be necessary to defend our country and allies or to preserve broader peace and security …. [This requires] credibly underwriting U.S. defense commitments with tailored approaches to deterrence and ensuring the U.S. military continues to have the necessary capabilities across all domains – land, air, sea, space, and cyber."

[203] 2010 NSS, 23-24, 26; 2010 BMDR, 6-7; 2012 NSS 2,4,5.

[204] 2010 BMDR, 6-7.

[205] 2010 NPR, ix-xii, 19-30.

[206] 2013 RENS, 3.

[207] Ibid.

[208] 2012 DSG, 4.

[209] U.S. Senate Committee on Armed Forces, Subcommittee on Strategic Forces, Joint Statement for the Record, The Honorable Madelyn Creedon, Assistant Secretary of State for Global Security Affairs and the Honorable Andrew Weber, Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs on Fiscal Year 2013 National Defense Authorization Budget Request for Department of Defense Nuclear Forces Programs, Washington D.C., March 28, 2012.

[210] 2010 NPR, 28. "U.S. nuclear weapons will play a role in the deterrence of regional states so long as those states have nuclear weapons, but the decisions taken in the NPR, BMDR, and QDR reflect the U.S. desire to increase reliance on non-nuclear means to accomplish our objectives of deterring such states and reassuring our allies and partners."

[211] See, for example, the 2010 QDR's discussion of American conventional forces in the ROK: "The United States will develop a more adaptive and flexible U.S. and combined force posture on the Korean Peninsula to strengthen the alliance's deterrent and defense capabilities and long-term capacity for regional and global defense cooperation." 2010 QDR, 66.

[212] 2010 QDR, 26. "Security cooperation activities include bilateral and multilateral training and exercises … and efforts to assist foreign security forces

in building competency and capacity. In today's complex and interdependent security environment, [training and other dimensions] of the U.S. defense strategy have never been more important. U.S. forces, therefore, will continue to treat the building of partners' security capacity as an increasingly important mission."

[213] As noted by Admiral Samuel Locklear in April 2013 Congressional testimony on the U.S. defense posture in the Asia-Pacific: "Moving forward, to better deter and defeat aggression, USPACOM is taking steps to improve in-theater critical munitions stockpiles. In the past year, U.S. Army Pacific and U.S. Forces Korea have seen tangible benefits from the rebalance, improving their ability to meet future requirements through enhanced prepositioned stocks." U.S. Senate Armed Services Committee, *Statement of Admiral Samuel J. Locklear, U.S. Navy Commander, U.S. Pacific Command Before the Senate Armed Services Committee on U.S. Pacific Command Posture*, Washington D.C., April 9, 2013.

[214] 2010 NPR, xi.

[215] 2010 NPR, 24.

[216] NATO extended deterrence strategies also include allied Tornado aircraft.

[217] *The Nuclear Matters Handbook: Expanded Edition*, available at http://www.acq.osd.mil/ncbdp/nm/nm_book_5_11/. "The B61 bomb has had 11 variations over time … Five of these Mods [modifications] are still in the current stockpile: B61-3, B61-4, b61-7, B61-10, B61-11." *Nuclear Matters*, 30. The B61-3/4 are carried by DCA; the B61-7/11 are carried by bombers. *Nuclear Matters*, 45.

[218]2010 NPR, 24. "Nuclear-capable bombers are important to extended deterrence of potential attacks on U.S. allies and partners. Unlike ICBMs and SLBMs, heavy bombers can be visibly forward deployed, thereby signaling U.S. resolve and commitment in crisis."

[219] Rebecca Grant, "Nukes for NATO," *Air Force Magazine*, Vol. 93, No. 7 (July 2010).

[220] 2010 BMDR, 6-7.

[221] 2010 BMDR, 12.

[222] 2010 BMDR, vi and 2010 QDR, 103.

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[224] *See* "Strengthening Regional Deterrence and Reassuring U.S. Allies and Partners," 2010 NPR, 31-35.

[225] Ibid, 34.

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[230] 2010 NPR, xii.

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[233] Ibid, 12.

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[235] The USS *Abraham Lincoln* aircraft carrier, for example, has played an important role in the past in deterring Iranian threats to close the Straits of Hormuz or otherwise harass shipping in the Persian Gulf. Budget cuts in early 2013 indefinitely suspended a scheduled refuel/refit required for the carrier to resume future operations. A continuing resolution in Congress in late March provided the necessary funding, but the carrier's time in limbo provides an illustration of how cuts in funding (particularly if amounts and/or timelines associated with cuts are not anticipated in advance) can sideline key U.S. deterrence assets. Joshua Stewart, "After Delay, USS *Lincoln* Arrives for Midlife Refuel," *Navy Times*, March 28, 2013 and Jim Miklaszewski, "USS *Lincoln* Sails Through Straits of Hormuz," NBC News, January 23, 2012.

[236] In mid-2007 Estonia, a member of NATO, experienced a series of persistent denial of service attacks across a range of public and private cyber networks. The volume and scope of the attacks indicated a level of coordination and strategic planning that led some experts – and most Estonians – to suspect the attacks represented a covert, state-sponsored cyber campaign. The United States and other NATO allies established a Cooperative Cyber Defence Centre of Excellence for the alliance in Estonia's capital, Talinn, in May 2008, one year after the attacks. Jaak Aavikso, "Cyber Defence: The Unnoticed Third World War," address, 24th International Workshop on Global Security, Paris, June 16, 2007.

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[238]"Statement of General Keith B. Alexander, Commander, United States Cyber Command, Before the Senate Committee on Armed Services," U.S. Senate, Washington D.C., March 12, 2013, 3, 5.

[239] Victor Cha, "North Korea Threatens to Strike the United States," CSIS Critical Questions, March 29, 2013.

[240] DoD, *Joint Operational Access Concept* [hereafter JOAC], January 17, 2012, i.

[241] Vincent Manzo, "Deterrence in Cross-Domain Operations: Where Do Space and Cyberspace Fit?" *Joint Force Quarterly*, Vol. 66 (July 2012) [online edition].

[242] Ibid, 36.

[243] 2010 QDR, 8.

[244] 2012 DSG, 3 and JOAC, 1-2.

[245] In this hypothetical situation, the United States would likely cover the ally beneath a regional nuclear umbrella, using assets outside of the ally's territory (such as SSBNs on patrol). Some allies, however, might insist that U.S. nuclear forces stationed on its own territory represent the only credible deterrent to a nuclear-armed adversary.

[246] As noted by Director of National Intelligence James R. Clapper in April 2013 testimony before Congress: "We lack uniform agreement on assessing many things in North Korea." Office of the Director of National Intelligence, Public Affairs Office, "Remarks as Delivered by James R. Clapper, Director of National Intelligence, Worldwide Threat Assessment to the Senate Armed Services Committee," April 18, 2013.

[247] Secretary of Defense Robert Gates, "The Security and Defense Agenda (Future of NATO)," address, Brussels, Belgium, June 10, 2011.

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[249] F. Stephen Larrabee, "NATO Forces Approach Financial Day of Reckoning," *RAND Review* (Winter 2012-2013) [online edition].

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[251] 2013 RNES, 3.

[252] "Putin Pushes Nuclear, Space Defense Reform,"*RT.com*, July 26, 2012.

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Deputy Minister of Foreign Affairs of Russia Sergey A. Ryabkov, "Nuclear Disarmament and International Security in the 21st Century," address, Russian Council on International Affairs conference, Moscow, November 8, 2012. *See also* Government of the Russian Federation, "The Military Doctrine of the Russian Federation," February 5, 2010, 8a [English translation provided by Carnegie Endowment for International Peace, Washington, D.C.].

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