

EMPTY SILOS: ELIMINATING THE ICBM FROM THE U.S. NUCLEAR FORCE STRUCTURE

Lauren Kobor

A NEW STRATEGIC AGE AND A NEW LOOK AT U.S. NUCLEAR STRATEGY

The present role of nuclear weapons in U.S. foreign policy is as a deterrent against possible enemies. However, as the modern security environment changes, the United States needs to rebalance its strategic ends, ways, and means. The current U.S. nuclear force structure is a triad consisting of three delivery legs: intercontinental ballistic missiles (ICBMs), bombers, and submarine-launched ballistic missiles (SLBMs). This triad is a Cold War legacy, created to contain the violent expansion of Soviet power in Europe and Asia, and designed to provide a survivable first and second strike capability in the event of a nuclear war with the Soviet Union. Although never tested in battle, the triad operated as a flexible, credible strategy for national decision makers. The United States is now more than two decades past the ending of the Cold War, but still maintains the same nuclear force structure developed to counter the Soviet threat in a conventional bipolar global conflict. With no more Soviet Union, the United States now faces a greater preponderance of small state adversaries, proliferation, and terrorist groups with nuclear ambitions, issues that U.S. foreign policy minimally considered during the Cold War.

The changing security environment raises the question of whether or not the United States still needs a nuclear triad. During the 2011 defense budget debate, former Defense Secretary Leon Panetta stated that the possible \$600 billion budget cut may force the military to eliminate

Lauren Kobor studied the social sciences at the United States Military Academy at West Point, where she graduated in 2012.

its land-based nuclear ICBM program, pressuring Congress into granting the Department of Defense a more favorable budget.¹ According to former Chairman of the Joint Chiefs of Staff Admiral Mike Mullen, “at some point in the future, certainly I think a decision will have to be made in terms of whether we keep the triad or drop it down to a dyad.”² Some military leaders are beginning to see the triad as an unsustainable force structure, especially as each delivery system comes due for modernization. The former Joint Chiefs of Staff Vice Chairman General James Cartwright stated, “The challenge here is that we have to recapitalize all three legs [of the nuclear triad], and we don’t have the money to do it.”³ General John Adams believes, “this budget debate should not be viewed as a catastrophe for national security; rather it represents an opportunity to seriously review our national security strategy.”⁴

The political debate raises strategic questions. What is the role of the nuclear weapon in contemporary U.S. security strategy? Why does the U.S. still have a triad? Can the United States achieve its strategic ends if ICBMs are removed from the force structure? The 2010 Nuclear Posture Review (NPR) defines the role of nuclear weapons in national defense, but does not dictate what force structure would best achieve U.S. strategic ends:

As long as nuclear weapons exist, the United States will maintain safe, secure, and effective nuclear forces, including deployed and stockpiled nuclear weapons, highly capable nuclear delivery systems and command and control capabilities, and the physical infrastructure and the expert personnel needed to sustain them.⁵

Does this force structure still adequately address modern nuclear threats, or should American policy makers take another look at how to best maintain deterrence against a

new variety of enemies, assuming that deterrence is still the primary political aim?

The elimination of ICBMs as a nuclear delivery system has implications on broader nuclear weapons issues as well. President Barack Obama has defined nuclear nonproliferation and disarmament as common international goals. The United States has been a champion of global nonproliferation since the signing of the Non-Proliferation Treaty in 1970, and has recently adopted a Nuclear Zero agenda for the twenty-first century. Ever since dropping the first atomic bombs on Hiroshima and Nagasaki, the United States has viewed its nuclear arsenal as a symbol of power and prestige in the international community. However, the United States has never seen its nuclear military force as a strategic end in itself. Instead, nuclear weapons are perceived as operational means through which doctrines, such as massive retaliation or nuclear diplomacy, can achieve the ultimate strategic and political ends. A vital component of reducing nuclear weapons globally is removing the badge of power associated with a state or actor possessing a nuclear weapon.

The process of quantifying risk in defense policy is tricky. In this paper, the argument will first look at U.S. nuclear strategic ends today and the process by which the modern nuclear strategy and force structure developed throughout the Cold War under the doctrine of deterrence. Understanding that the strategic nuclear means have developed as a response to balancing threats and domestic resources, I will explain in detail the existing nuclear triad in order to distinguish the particular capabilities of each leg and the impact of the triad as a whole. From there, the existing Cold War force structure will be measured against the modern security environment and the various actors within it. Finally, ICBMs as a nuclear platform will be analyzed according to deterrence and the modern security threats to see if a nuclear dyad is capable of maintaining reliability and credibility without the land-based leg.

Purpose and Structure of the Nuclear Triad

The United States has approximately 800 strategic alert warheads, including 450 ICBM warheads and 384 submarine-launched ballistic missiles (SLBMs) on four ballistic missile submarines.⁶ The balance of three launch platforms ensures survivability for a second strike, accuracy in deployment, and crisis control. The current defense posture focuses on maximizing the time in which the President may decide to use a nuclear strike. As the triad stands now, the “heavy bombers [are] off full-time alert, nearly all ICBMs on alert, and a significant number of SLBNs at sea at any given time,” according to the 2010 NPR.⁷ If necessary, however, nuclear bombers can be put into orbit, more submarines can maneuver within range of any target on Earth, and nuclear ICBMs can acquire new targets. Destroying every U.S. strategic nuclear warhead is virtually impossible.

Nuclear bombers possess the ability to go almost anywhere in the world and are highly visible. While they may be unable to penetrate deep into enemy territory, they can be forward deployed as a threatening signal to an adversary. Strategic tools such as signaling and extended deterrence depend on such visibility. The 2010 NPR describes this capability as necessary to “strengthen deterrence of potential adversaries and [signal] assurance of allies and partners.”⁸ Currently, the United States maintains military bases and airfields on nearly every continent, from Europe to the Middle East to Asia, meaning that very few places in the world are unreachable by the U.S. military. By keeping the weapons airborne during a crisis, the bombers enhance their survivability.

With fourteen nuclear-capable Ohio-class submarines under the control of the Navy, the SLBM force is the most survivable of the three legs. According to current doctrine and posture, approximately half of the fleet at any given time will remain forward deployed in the Atlantic and Pacific

oceans.⁹ The SLBN force virtually assures reliability in deterrence—the technology in such systems is the most advanced in the world. While expensive, the United States' capabilities with the submarine force represent the height of nuclear advancement. These nuclear-enabled submarines can strike nearly anywhere in the world from changing and hidden positions, making an enemy attack unlikely.

Intercontinental ballistic missiles offer decision makers the ability to strike a fatal blow to another state from friendly borders. Having the ability to reach out and touch another country without ever leaving the security of your own territory is a powerful tool. According to national policy, the greatest benefits of the nuclear ICBM force include “extremely secure command and control, high readiness rates, and relatively low operating costs.”¹⁰ Additionally, American allies can host a nuclear weapon launch pad within their own borders at relatively little cost to the United States, as in Europe. Nuclear ICBMs are currently the least expensive leg to maintain; however, it is also the least survivable, least flexible, and least likely leg to contribute in a nuclear conflict. Additionally, ICBM silos provide a tempting target to possible U.S. enemies. According to the New Strategic Arms Reduction Treaty (START treaty), the United States will soon undergo the process of “DeMIRVing” every nuclear missile, meaning that each missile will only be capable of carrying a single warhead.¹¹ Russia and the United States intend to “enhance the stability of the nuclear balance by reducing the incentives for either side to strike first”¹² However, this further reduces the relevance of nuclear ICBMs.

Political and military leaders have a variety of opinions on the subject of ICBMs and the nuclear triad, but both have received strong support from various quarters. The Air Force Strategic Command (STRATCOM) Commander, C. Robert Kehler, states, “I believe that a triad of force makes the most strategic sense, make the most operational sense and ultimately is the right way to go forward today.”¹³

He warns that the question of ridding, or even not modernizing, each leg of the nuclear triad “are not all questions for today.”¹⁴ The 2010 NPR also supports maintaining the triad because of its flexibility, dependability, and responsiveness. Each system, according to the report, can cover the technical difficulties of the others. Overall, the nuclear triad as a system, created to combat the Cold War threat, does offer an incredible amount of survivability and accuracy, as well as maximizing presidential decision time.

U.S. Nuclear Strategy

The maximum number of nuclear weapons in U.S. possession at any point in time was reached at the end of 1967, when the United States counted 31,255 weapons.¹⁵ As of late September 2009, the United States possessed 5,113 nuclear weapons, a 75 percent decrease from the end of the Cold War, with a 90 percent decrease in non-strategic nuclear weapons.¹⁶ According to the New START treaty, strategic warheads currently number at 1,720 and, by 2018, would go to a 1,550 warhead ceiling, with approximately 3,000 reserve and tactical nuclear weapons.¹⁷ In the beginning of his second term, however, President Obama indicated a drop to 1,000 strategic warheads and 1,500 reserves, a decision possibly related to the 2013 budget sequester. Although treaties and policies talk of warhead numbers, the true strategic decision will be what the Obama administration cuts within the existing triad.

During the 2010 NPR, Dr. James N. Miller, recently appointed as the Under Secretary of Defense for Policy, emphasized that, “an effective national strategy for reducing nuclear dangers and sustaining the U.S. nuclear deterrent are long-term challenges that will require support from a long succession of U.S. administrations and Congresses.”¹⁸ According to White House policy, President Obama’s nuclear goals, as of 2012, consisted of the following actions:

Reduce the number and role of nuclear weapons by those states that already possess nuclear weapons, starting first with Russia and the U.S.; to prevent additional countries from acquiring nuclear weapons by strengthening the international non-proliferation regime and by holding accountable those states that have violated their obligations, such as Iran and North Korea; to prevent nuclear terrorism by securing vulnerable nuclear materials and strengthening international cooperation on nuclear security; and, to develop new mechanisms to support the growth of safe and secure nuclear power in ways that reduce the spread of dangerous technologies.¹⁹

The president's initial strategic goal in 2009 focused on both reducing the global nuclear arsenal and keeping a "safe, secure, and effective arsenal to deter any adversary."²⁰ Throughout his first term, President Obama has advanced his policy of nonproliferation more publicly than his nuclear deterrence policy, such as his renegotiation of the New START with Russia in the fall of 2010.

In maintaining security, the two greatest nuclear threats to the United States are nuclear terrorism and nuclear proliferation.²¹ The perception of the threat environment has changed dramatically in the two decades of the post-Cold War era. In a bipolar world, the greatest threat was the massive Soviet nuclear arsenal and an unstable political order. Today, Russia is seen as a key strategic ally with common nuclear goals. Because the threat of nuclear terrorism is of great concern to all states, the United States maintains a strong position to pursue aggressive nonproliferation.

Nuclear nonproliferation has not always been a national priority. In the final days of World War II, world leaders took stock of the atomic bomb's destructive power. According to former Secretary of State Henry Kissinger, nuclear weapons were not the shiny new symbol of

American power. Instead, they represented, “a change in the international environment so likely to undermine national security that [they] must be resisted.” Kissinger’s warning, however, was ignored.²² Although historical advances in technology and weaponry reshaped the battlefield, nuclear weapons redefined warfare. A nation could now indiscriminately destroy its enemy without leaving its own borders. How could policymakers and heads of state ‘resist’ such weapons? Would states still be willing to engage in a great power war when the nuclear means could devastate civilization? Policymakers soon adopted deterrence, the new national policy that would guide most national security decisions. The United States, Soviet Union, and several others determined that the risk was acceptable when the perceived alternative was total destruction. Understanding these priorities, states began to arm themselves. Throughout the Cold War, each president, from Truman to Reagan and Bush, approached nuclear strategy differently, although with strands of continuity. According to Stephen Cimbala, an expert on security and nuclear arms control, nuclear weapons have always a form of “armed persuasion,” also known as nuclear diplomacy.²³

Nuclear deterrence is the ability of a state to prevent another actor from engaging in a particular action based on a threat of nuclear force. For the state employing nuclear deterrence theory in practice, political leaders aim to make the cost of an attack too high for enemies who may contemplate nuclear or conventional aggression. The nuclear bomb was originally meant to enhance military capability in executing war, but, as strategic author Bernard Brodie has noted, nuclear weapons instead changed the overall purpose of national security policies and forces: “Thus far, the chief purpose of our military establishment has been to win wars. From now on, its chief purpose must be to avert them. It can have no other useful purpose.”²⁴ The U.S. military could no longer be a chiefly aggressive actor. American security

strategy would now be primarily concerned with defense from the possible destruction.

To achieve this end via deterrence, the U.S. needed to acquire a nuclear force structure that would serve both an operational and political signaling purpose, resulting in the concept of the nuclear triad. The balance of the three purposes varied based on the priorities of the president at the time. Truman valued both war-fighting and deterrent signaling, and thus built up a nuclear force in conjunction with conventional forces. Eisenhower valued the political signal above the enormous cost of maintaining operational capacity, and thus focused on nuclear numbers in his doctrine of massive retaliation. Kennedy, who would experience both the Cuban Missile Crisis and the beginning of Vietnam, sought a balance between the two, but eventually emphasized operational feasibility above a continued missile buildup. These policy changes, during the course of the triad's development, resulted in both a massive, quick expansion of warheads available and the methodical, slower development of new delivery platforms. As the means changed, though, the doctrine of deterrence remained constant throughout the Cold War and into the present.

In order for deterrence to be effective in preventing a nuclear attack by an enemy actor, the American nuclear regime would need to demonstrate both reliability and credibility, a balance postulated in the 1950s by Brodie, one of the first major intellectuals of deterrence theory during the Cold War.²⁵ Reliability refers to the capability to carry out an accurate strike of sufficient size to impose heavy enough costs to outweigh the adversary's possible gains from aggression, while credibility refers to the commitment of political leaders to give the order for such a nuclear attack instead of just threatening to do so. According to former Secretary of State John Foster Dulles, a pioneer of deterrence in policy, "power never achieves its maximum possibility as a deterrent of crime unless those criminal instincts have reason to fear that [it] will actually be used against them."²⁶

If a nation fails to demonstrate and effectively give others the perception that an accurate nuclear attack is both militarily reliable and politically credible, then an enemy actor would not be adequately convinced that the American nuclear attack is a viable threat to their own nation.

The primary challenge in maintaining deterrence as a national security strategy is that the policy's ultimate success depends on the mind of the enemy. If the enemy does not believe the threat, then deterrence has failed, no matter what deterrent actions were taken. To one actor, the threat of an American nuclear bomb destroying a capitol city or their physical military sites may be enough to deter aggression. However, to other actors, the threat against one city may *not* be enough. The U.S. must convince possible enemies that the American military threat, whether through one bomb or a comprehensive missile shield, is too great a price for any aggressive action.

Today, American political and military strategists must develop a nuclear force structure that addresses a variety of threats and actors. There is no longer a single nuclear threat, as in the Cold War. Policymakers must also answer to the American domestic concern. What force structure will provide enough security against foreign threats? While the executive branch is ultimately responsible for the nation's defenses, Congress and the public are critical players in the allocation of funds for defense ventures. Therefore, because of the high price tag associated with the development of nuclear technology, the nuclear policy must also balance against limited national resources. And in answering to military, technical, and political leaders themselves, the nuclear security strategy must be both a war-fighting strategy and political deterrent strategy. The answer to each of these concerns depends on the current administrations balance of priorities. The 2010 Nuclear Posture Review emphasized the need for political continuity in adherence to a nuclear policy, based on the fact that any

policy would require more than just the four or eight years of a single president's term.²⁷

National Security Council Report 68, a landmark resolution that established containment of the Soviet Union as the sine qua non of American foreign policy, resulted in new military policies focused on maintaining global security nearly everywhere as opposed to focusing on one area first.²⁸ This is significant because the document began influencing policy when the Korean War broke out in 1950. MacArthur even advocated for tactical nuclear strikes against the North Korean and Chinese forces. While never implemented, the proposed strikes demonstrate how the weapons at the time were still only appreciated in the context of a wider, conventional military doctrine.

After the aggressive nuclear and military buildup of Truman's NSC-68, President Eisenhower reverted to a greater focus on nuclear diplomacy as a way to balance the Soviet threat against limited U.S. national resources. Eisenhower worried about the stresses placed on the American economy and industrial complex via a mass arms buildup. As a way to balance war-fighting strategy with ideological battle, the President focused on building a substantial nuclear force structure as a means to deter enemy aggression, but did not counterbalance with a substantial buildup of conventional military forces, coining the term "nuclear diplomacy."

Eisenhower defined vital interests separately from peripheral interests. John Foster Dulles, Eisenhower's Secretary of State, elaborated on the change in policy implementation by determining that the new policy would depend on the "deterrent of massive retaliatory power" as the primary defense, a strategy that relied fully on deterrence.²⁹ Dulles expanded with the following analogy:

We keep locks on our doors, but we do not have an armed guard in every home. We rely principally on a community security system so well equipped to

punish any who break in and steal that, in fact, would-be aggressors are generally deterred. That is the modern way of getting maximum protection at bearable cost.³⁰

The Eisenhower administration pursued a new force structure by cutting back on ground forces and investing in nuclear technology and delivery methods, such as hydrogen bomb technology and the new intercontinental jet bombers.³¹ Where Truman favored symmetry by building up both conventional and nuclear assets, Eisenhower favored asymmetry through uncertainty in how exactly his administration would respond to any particular aggressive action. The U.S. military force structure shifted to favoring development of naval and air force assets, two areas which promised to provide America with the greatest advantage over any other nation. U.S. allies could be depended on to fill in ground forces if the need arose.³² The U.S. itself would aggressively pursue an expanded missile arsenal, including both ICBMs, SLBMs and intermediate-range ballistic missiles (IRBMs).³³ Deterrence was the primary “way”, or operational doctrine, of protecting the U.S. from attack, but the variance in technical capabilities, to be used on a tactical level of war, were to enhance the reliability and credibility of the U.S. nuclear threat. As the U.S. developed the ability to strike a wider range of targets with less lead-time and less risk to American defense personnel, the reach of the American nuclear arm extended to cover early every corner of the world.

Fundamentally disagreeing with Eisenhower’s logic and policies, President John F. Kennedy again changed the direction of the U.S. security strategy. He framed his policies around a strategy of ‘flexible response,’ in which the Department of Defense would again build a military balanced between nuclear and conventional capabilities in order to allow the U.S. greater flexibility in responding to different security threats.

REVIEWING DETERRENCE TODAY

Deterrence in a bipolar world had a very clear-cut definition – make your enemies think that you have a more survivable and reliable nuclear force structure than they do in order to keep them from attacking you first. Specifically, convince them that they will not be able to destroy your second strike capability with their first strike, which would leave them vulnerable to a retaliatory strike. Throughout the Cold War, both the U.S. and the Soviet Union had landed, immobile point targets at which to aim. If an attack was imminent, they each knew where the other's missile silos were located and approximately how many missiles to expect. They knew where to attack and where to defend. A unipolar world, however, has presented the U.S. with a new series of threats in a new globalized environment. Very few immobile point targets exist. As stated throughout the 2010 Nuclear Posture Review, the threat of nuclear war on a global scale has decreased, but the risk of experiencing a nuclear attack has never been higher due to the threat of non-state actors using terrorism as operational doctrine.³⁴ The U.S. must now maintain a security strategy that responds to a multitude of nuclear threats; the traditional strategy of deterrence and the nuclear triad may not be the most effective answer to each threat. While most rational states possess the same ultimate goals – survival, defense, and providing for the welfare of its people – how should the U.S. respond to actors that do not possess those same goals, such as a terrorist organization or insular regime? Before analyzing the proper cohesive strategy, policymakers must first understand each possible nuclear threat and the environment in which they operate.

Post-Cold War Threat Environment

As the world moved into the 21st Century, lacking any global wars or conflicts and enjoying unprecedented

stability in global order, many began to believe that the ending of the twentieth century, most violent century in history, had buried its ghosts with its outdated calendars. The Soviet Union had collapsed, removing the existential threat upon which U.S. defense doctrine and the logic of the nuclear triad had been based. The terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, fundamentally changed U.S. security strategy and redefined the major issues of the international community. With the rise of globalism and technology, the global environment is more dynamic and complex than at any other point in history, due to the increased access that every actor has to every other actor. Even with a new threat, however, the U.S. has maintained the nuclear triad as its force structure even though very few conflicts involve nuclear issues or would justify any type of nuclear response. Without the Soviet Union, the U.S. has yet to take a comprehensive look at the nuclear force structure in a way that matches capabilities with possible threats. How should our nuclear means adjust to match our adapting political goals?

The collapse of the Soviet Union has opened the nuclear agenda to a variety of other issues, including nonproliferation, arms control, and nuclear terrorism. World leaders hoped for a “nuclear marginalization” after the end of the Cold War.³⁵ While wars and conflicts would always continue, perhaps nuclear weapons could be so marginalized that they would cease to be a significant factor in national defense strategies. While many nations have adopted ‘no first use’ and ‘no nuclear attacks on non-nuclear states’ policies,³⁶ nuclear weapons still remain one of the most dangerous, relevant, and volatile threats within the world. Cimbala, in a fashion similar to current U.S. military doctrine, defines the threat in terms of overarching nuclear goals: “nuclear deterrence and arms control; anti-nuclear defenses; and nuclear proliferation.”³⁷ According to the “National Strategy to Combat Weapons of Mass Destruction,” based on the classified National Security Presidential Directive 17, the

official U.S. policy in approaching all WMDs focuses on counter proliferation, nonproliferation, and WMD consequence management, known as the “3 Pillars.”³⁸ However, the strategy should also be determined according to the current threats and the political goals associated with those threats.

For the U.S. nuclear regime, policy makers are concerned with three particular actors: legitimate nuclear states, such as China or Russia; rogue states, such as Iran and North Korea; and non-state actors, such as Al Qaeda. However, I have added a category – ‘grey states’ – to occupy the ill-defined place between legitimate nuclear states and rogue states. The criteria for the identification and composition of each of these categories is based on how U.S. policy has addressed and currently addresses these actors from a state and military policy perspective. Each of these threats present particular challenges to U.S. and international security, as well as variations in what types of policies will be effective against each actor. Nearly every one of the states listed below, excepting France and Great Britain, could qualify for entry into a different category based on actions, outside relationships, treaty and institutional participation, and their own domestic goals. The categorization is in no way meant to overly simplify these states’ positions in the international system, but attempts to analyze possible threats that could require a nuclear response from the U.S.

Legitimate Nuclear States

Countries considered ‘legitimate nuclear states’ include only those listed in the Non-Proliferation Treaty established in 1968: the United States, Russia, Great Britain, France, and China. While other states with recognized nuclear regimes also exist, these five states were the first to develop nuclear programs and have been involved in the development of international nuclear treaties and institutions from the onset of the nuclear age. Additionally, these states

are known as the P5 – the five states with permanent seats and veto power on the United Nations Security Council. France and Great Britain maintain relatively small symbolic nuclear stockpiles, and have adopted strategies that typically compliment American nuclear doctrine and means. Most importantly, though, these two states are not threats, in a manner that would be applicable to nuclear deterrence, because of their close political relationships with the United States. This section will focus on Russia and China, who present greater uncertainty with regard to future actions vis-à-vis the United States. The 2010 Nuclear Posture Review notes these two countries in particular as being the two states most necessary to maintaining global nuclear stability and forwarding the nonproliferation movement.

The greatest enemy of the United States for over half of a century, Russia is the only other major state with a substantial nuclear stockpile. Vladimir Putin, current president of Russia, recently asserted that Russia still possesses the capability of destroying the United States in “a half hour or less.”³⁹ The two nations now have a favorable, cooperative relationship regarding their shared interests in nonproliferation and preventing nuclear terrorism.⁴⁰ Russia and the United States recently reinvigorated their nuclear relationship with the signing of the New Strategic Arms Reduction Treaty (New START), which would further reduce nuclear stockpiles, deployed warheads, and delivery systems.⁴¹ Even with the assurances of economic and political interconnectedness, though, the sheer size of the Russian arsenal continues to be a driving factor in U.S. nuclear policy. While the U.S. relationship with Russia is significantly more stable than that with the former Soviet Union, American strategists cannot discount the massive capability of the Russian nuclear force structure. Russia as a successor state of the Soviet Union still may present a threat requiring a deterrent response, but the extensive political and institutional relationships that have developed between the United States and Russia in the past two decades have

increased transparency and highlighted similar political goals. Both states are decreasing their nuclear stockpiles, indicating that the weapons race has ceased.

With regard to China, the United States is concerned with the pace and character of its military development, as well as the lack of transparency around its nuclear development and doctrine.⁴² Based on a 2006 Defense White Paper, analyst Jianqun Teng identified three pillars of China's nuclear policy that serve to support the argument that China is a willing partner in disarmament and nonproliferation: first, that nuclear weapons are only a last resort in war; second, that only the minimum nuclear capability for self-defense will be developed and maintained; and third, that disarmament and international stability among the nuclear powers is paramount.⁴³ While the United States and Russia still possess the greatest nuclear arsenals, they will eventually need to engage the three other NPT nuclear states for disarmament as the disparity between arsenals decreases. China has indicated diplomatically that it is willing to engage in such disarmament talks and actions as long as the other nuclear states act in kind. China's clear priority is in maintaining a stable balance of power among the nuclear states. Because China's relationship with the U.S. in the future is still unclear and unsecured with a lack of treaties, institutions, and a solid political relationship, the U.S. is warranted in keeping a deterrent force in place.

American strategists have faced the issue of balancing power between the five legitimate nuclear weapons states since the signing of the NPT in 1968, indicating that few strategic shifts are necessary beyond what policies have already been implemented. Russia and China, along with France and Great Britain, all share very similar strategic interests with the United States, making cooperation likely in the international environment.

Rogue States

The rogue states in the international nuclear regime, according to U.S. policy, are characterized as being aggressive pursuers of nuclear weapons programs that goes against their original agreement and signing of the NPT. The United States is primarily concerned with North Korea and Iran. Other states that used to be considered rogue, until their proliferation programs were confirmed to have ended, include Libya and Iraq. The ability of these states to pursue nuclear power serves as the most destabilizing factor in the nuclear relationships between the Western powers and Russia and China, as indicated most recently in the tension between the United States and Russia over Iran.

Two states, Iran and North Korea, best represent the 'rogue state' identification in the modern security environment. They are not failed states – both still possess functioning governments with consolidated control and legitimacy within their borders. American policy identifies these two regimes as extreme – one lead by religious fundamentalists, and the other by a military dictatorship.

Modern Iran began pursuing nuclear energy in the 1985, in the middle of the Iran-Iraq War.⁴⁴ The past two and a half decades have been shrouded in secrecy, with the Iranians activating their weaponization program multiple times. The Iranians have always asserted that they only pursue nuclear energy for civilian purposes, but the revelation of several unannounced nuclear facilities and programs, along with certain technological practices, has made the United States suspicious of a militarized program intent on creating a bomb. Iran possesses several types of missiles, although none capable of striking U.S. soil. Critical U.S. interests and resources, such as the Strait of Hormuz and U.S. military bases in the Middle East, are within reach, not to mention Israel, whose very existence is an anathema to the fundamentalist Iranian regime.

Iran is still a member of the NPT, meaning that any militarized pursuit of nuclear weapons violates one of the most fundamental principles of the treaty, namely that non-nuclear states will not become nuclear. Although Iran is a member of the NPT, French scholar Thèrese Delpech gives us three reasons why the country may pursue nuclear power: first, for civilian purposes only; second, as a bargaining tool with the United States and other powers; third, to obtain a nuclear weapon.⁴⁵ Delpech asserts that Iran possesses “indisputable military nuclear ambitions,” but does not necessarily want a direct confrontation with the United States.⁴⁶ Dr. John Mearsheimer argues instead that Iran is currently in its most powerful position.⁴⁷ Acquiring a nuclear bomb would leave Iran open to an attack from a number of actors that would be unwilling to grant it a position of power over the region – Israel and Saudi Arabia are two notable examples – and possibly spark a regional nuclear arms race. By sitting on the cusp of nuclear weaponization, Iran can enjoy all of the benefits of deterrence without the heavy costs. Such a strategy still comes with costs, and Iran has suffered from additional economic and political sanctions, particularly on its oil. Increased political pressure has also affected its relationships with Russia and China, whose support is critical for the survival of its nuclear program.

The other major actor characterized as a rogue state is North Korea. North Korea has possessed a militarized nuclear weapons program since the 1980s.⁴⁸ While originally a signatory of the NPT, the politically isolated state withdrew in accordance with its weaponization. Surrounded by three of the world’s foremost nuclear powers, the North Korean regime sees its nuclear arsenal as a mechanism through which it can consolidate power and survive in a precarious region. Attempts at negotiation, including one as recently as 2012, have failed to temper North Korea’s aggressive brinkmanship with regard to nuclear testing, missile proliferation, and engagements with

South Korea. The isolated country has made significant contributions to the proliferation of missile and nuclear technology, linking with the A.Q. Khan network, Iran, Libya, Pakistan, and more.⁴⁹ The United States has chosen to respond with limited aggressive action. A large military force has been stationed in South Korea since the end of the Korean War, but presidents and their administrations have chosen to stick to negotiations. American deterrence and strong use of signaling, particularly with military and nuclear assets, have likely played a large part in the current relationship.

What threats do rogue states such as Iran and North Korea, who choose to operate outside of accepted international institutions and norms, pose to the United States in the 21st century? The primary concerns of these states actually tend to center on regional power politics. Both states are located in highly volatile regions, and both states see the current balance of power as a threat to their survival. When a state feels that its survival is at risk and institutions have failed to satiate its need for security, it will turn to hard-power options, such as military and nuclear force, to provide security. These rogue states see a nuclear program as a hedge against instability and more powerful states. Neither Iran nor North Korea possesses the resources to match the vast conventional capabilities of the United States, so nuclear power provides the key to a degree of power parity.

Grey States: Pakistan, India, and Israel

Several states exist that are considered neither legitimate nuclear powers nor rogue regimes from the security perspective of the United States. Each of these states refused to sign the NPT upon its release, on principal, and have also developed their own nuclear capabilities while remaining an active participant in the international community. These states include India, Pakistan, and Israel.

India, as a leader of the Non-Aligned Movement, has clearly dictated a strong, principle-based stance against the perceived exclusionary nature of the NPT and the modern nuclear environment. India has adopted a doctrine of “minimum deterrence”, whereby it perceives its nuclear assets as political tools instead of operational war-fighting assets.⁵⁰ What India does possess currently lies in bits and pieces of assembly, but the country has committed to a “No First Use” policy and, as a possible response doctrine, ‘massive retaliation’.⁵¹ Rajesh Basrur, in an analysis of India’s nuclear doctrine for a NATO study, sees the state’s “strategic culture” as “a pattern of thought and action” that is “minimalistic in its (reluctant) acceptance of nuclear strategy and incrementalist in acting upon it.”⁵² According to Basrur, India’s nuclear posture is minimalist, but, due to the number of players and the somewhat murky relationships between the government and the military powers, political and military leaders still possess the ability to expand their operational nuclear capabilities.

India and the United States have fostered a symbiotic nuclear relationship. In 2008, President George W. Bush pioneered the U.S.-India Civil Nuclear Deal, which solidified a detailed security framework based on the Additional Protocol to the NPT in exchange for greater technology and resource access for India. India and Pakistan have demonstrated that, while capable of being pushed to the brink, neither state is willing to release the first nuclear punch. India and China have demonstrated the ability to negotiate and now have a prosperous, friendly relationship based on economic trade. India possesses a formative, conventional military and is more likely to favor conventional conflict resolution of the nuclear option, given its participation in the Non-Aligned Movement.

Another current “gray state,” Pakistan, could, in the near future, surpass both the U.K. and France as “the fourth largest nuclear weapons state.”⁵³ This threatens President Obama’s commitment to reducing nuclear stockpiles and

would further complicate future arms negotiations, especially among the five legitimate nuclear powers. The U.S. has invested over \$100 million in strengthening Pakistani security assets and skills. The United States has a vested interest in maintaining the security of Pakistan's nuclear stockpiles and resources. However, this intense U.S. interest has many Pakistani officials worried that the United States is actually attempting to steal or gain control of Pakistani nuclear resources.

U.S. policymakers are especially concerned about the U.S.-Pakistan relationship, given current U.S. military operations in neighboring Afghanistan. If not properly prioritized, the lack of security around parts of the Pakistani nuclear program could allow an extremist group to gain control of valuable nuclear material. Such material could be sold to an enemy of the United States or used against it by groups that see the United States as an existential threat to their survival. Additionally, Pakistan still lacks effective internal institutional stability, making policy formation and accountability difficult. Finally, the disputed province of Kashmir has proven to be a volatile issue in the past and the source of much rivalry between India and Pakistan.

Maintaining a "posture of ambiguity," Israel is suspected of having nuclear capabilities, but the small state has neither confirmed nor denied the weapons' existence.⁵⁴ Israel, according to Yair Evron, a professor of political science at Tel Aviv University, has demonstrated "self restraint and caution" through its responsible use of nuclear policy and its lack of "coercive diplomacy."⁵⁵ Recently, however, Israel's threats to preemptively strike Iran in the spring of 2012 threatened relations between Israel, the United States, and Iran. The United States, as an ally of Israel, found itself in a difficult position. Although the United States has been active in trying to remove Iran's nuclear weaponization program, could policymakers support a preemptive attack on an otherwise legitimate and stable state? The U.S. decided that it would support Israel based

upon loyalty owed to the alliance, but policymakers have thus far done everything possible to prevent such an attack by the Israelis.

Concerning Israel, the United States must be aware of the small state's perceived security environment. While Israel has thus far proven to be a dependable and restrained ally, it also sees a very real existential threat in the official policies of several of its neighbors. Therefore, it may be willing to take certain deterrent actions that the United States would not otherwise support. Proliferation is not a concern, but a nuclear missile attack may be more realistic.

Non-State Actors

The growth of extremist non-state actors is the primary reason that the risk of nuclear attack, not necessarily nuclear war, has increased dramatically in the 21st century. Such groups, state-sponsored or not, do not represent a defined territory or population. For example, the extremist jihadist group al-Qaeda uses terrorism to achieve their goal of restoring fundamental Islamic law globally and defeating the United States. Terrorism as a tactic looks to affect a state by mobilizing that state's population through fear. These organizations constantly seek bigger ways to paralyze a nation with fear and force a policy shift. Look no further than the attacks on the World Trade Center on September 11th, 2001.

Non-state actors are unique because they exist outside of the state paradigm. In attacking al-Qaeda, the United States cannot bomb its cities, invade its lands, or use direct political pressure through economic sanctions. The U.S. has found effective ways of combating non-state actors, such as violent extremist and terrorist groups, through conventional means, but no acceptable nuclear alternatives exist. While a bunker-buster type of nuclear tipped explosive would be productive in attacking extensive cave networks, such an attack would need to be executed on the soil of

another sovereign state. What, then, would be an acceptable response to a non-state actor's use of a nuclear weapon against a U.S. city? There can be no Cold War doctrine of "massive retaliation" or nuclear strike against a landless enemy. Additionally, the paradigm of the non-state actor, especially a violent extremist group, makes them impervious to the attempts at deterrence by states. An extremist group intent on committing an attack does not care about its victim's nuclear capability or second-strike forces. America's strategic goal of deterring nuclear attacks, then, is obsolete against a non-state actor without territoriality.

CAN THE U.S. MEET ITS STRATEGIC GOALS WITHOUT NUCLEAR ICBMs?

According to Theodore Caplow, the nuclear security environment is more stable than ever before. He argues that, "The classic problem of abolishing international war is nearly solved, although nobody seems to notice. . . For the first time in history, major geopolitical goals are being reached by international consensus with no application or threat of force."⁵⁶ The discussion on whether or not war itself is ending is beyond the scope of this argument, but the current nuclear security environment is at a level of unprecedented stability and security. While we can credit the work of past and current policymakers for achieving such stability, U.S. nuclear strategy cannot be static because the threats facing the United States are dynamic and continuously evolving. With the balance of nuclear forces favoring the traditional nuclear powers, the United States should take advantage of such a moment to prepare for tomorrow's security threats. Such is the basic premise of deterrence – prevent future threats by preparing today's force posture and strategy.

As stated earlier, the effectiveness of nuclear deterrence depends on the administration's ability to deliver both reliability of attack and political willingness to execute

such an attack. The current nuclear triad and maintenance of ICBMs as a nuclear delivery method exist to support the first prong of deterrence – reliability of the attack. The U.S. must be capable of delivering a lethal and accurate nuclear strike on an enemy target. Throughout the Cold War, nuclear bombers, missiles, and submarines offered a balance of flexibility, survivability, payload, and accuracy of fire. No single delivery method could provide all four assurances; so all three were maintained to ensure the overall nuclear force could assure reliability. The current rationale behind maintaining the nuclear triad, as opposed to reducing it to a dyad, is that the three delivery methods offer the same assurances as before. As the 2010 Nuclear Posture Review states, “Retaining all three Triad legs will best maintain strategic stability at reasonable cost, while hedging against potential technical problems or vulnerabilities.”⁵⁷ However, if the United States could maintain its deterrent capability while still providing reliability and political willingness without one of the triad legs, then its removal would be necessary to support further strategic goals, such as nonproliferation.

Strategic policymakers have been aware of the vulnerabilities of the nuclear ICBM force since the 1970s, but the possibility of an enemy eliminating the ICBM leg of the United States through an attack would be “momentous.”⁵⁸ At the time of the Cold War, the question was centered on losing land-based nuclear assets only through an attack by the Soviet Union, but even then, Lawrence Freedman states that loss or removal of ICBMs “was more than compensated for by the other two legs (bombers and SLBMs), which, even somewhat depleted themselves, would still be capable of delivering a powerful retaliatory blow.”⁵⁹ Policy makers, concerned with both credibility and reliability, worried that if the ICBM force were to be taken out, the remaining two legs would be more vulnerable to attack. However, this argument discounts the natural survivability of the bombers and SLBMs. Because

nuclear ICBMs are land-based assets, attackers have a greater probability of successfully eliminating them with a strike due to several reasons. First, a missile silo is a set location. That location is more likely to be discovered by an enemy than the perpetually moving locations of bombers and SLBMs. If another actor, most likely a state, wishes to make an offensive first strike against the U.S., it will only commit to that attack if it perceives that it would eliminate a significant amount of U.S. nuclear assets in order to minimize the effects of a U.S. counterattack. Land-based nuclear ICBMs are the most visible, immobile, and naturally indefensible asset to strike. Although air and sea-based assets may still exist, the enemy's perception of success or injury will play a significant role in the decision to strike. Since deterrence aims to affect the enemy's thought process and decision-making cycle, the removal of land-based nuclear ICBMs would have a palpable effect on the willingness of a state to launch a nuclear strike on the United States.

A missile silo does allow for a vivid signal to a domestic and an international audience.

Nuclear ICBM forces are kept at the ready, signaling that the United States can launch a strike within minutes at any point in time. However, the downfall of keeping these missiles at full notice is similar to an on/off switch – policymakers and military strategists have no room for escalation. Although conventional missiles without their nuclear payload can be tested from time to time, U.S. signaling power has actually been diminished because, unlike bombers, a nuclear missile cannot increase its threatening appearance during situational circumstances. The missiles are always at full readiness. Though sending the message of “always ready” certainly has its own merits, it also limits the flexibility of the President in responding to various situations. ICBMs, then, may actually negate a flexible response as desired by decision makers. Because active nuclear land-based missiles have existed in U.S. policy for decades, the removal of the nuclear ICBM force may prove to have very little effect on potential

enemies. And because the United States also always keeps its other nuclear legs at the ready, the credibility of a nuclear strike is still present. What would be removed is the guarantee of a massive retaliatory strike.

On the topic of massive retaliation via land-based ICBMs, former Secretary of Defense James Schlesinger questions the worth of instant access to such a massive response capability in the case of “anything approximate to a disarming first strike against the United States.”⁶⁰ He discusses the President’s need for an immediate link to a massive retaliatory force:

But such a development could bring into question our ability to respond to attacks in a controlled, selective, and deliberate fashion. It could also give the Soviets a capability that we ourselves would lack, and it could bring into question the sense of equality that the principles of Vladivostok so explicitly endorse. Worst of all, it could arouse precisely the fears and suspicions that our arms control efforts are designed to dispel.⁶¹

The United States would only need a massive retaliatory response against an actor possessing extensive resources itself, such as a state – most likely a legitimate state such as Russia or China, both of which have substantial nuclear capabilities. However, as Schlesinger and Freedman have noted, the use of such a capability would undermine any intermediary or regulatory institutions in place to prevent nuclear annihilation. Additionally, in the case of entering into a conflict with another state, U.S. doctrine favors conventional methods of achieving peace, stability, and survival. Maintaining ICBMs, but replacing the nuclear payload with an advanced conventional payload would better nest the capability within the conventional military force structure. By removing nuclear ICBMs, the U.S. would

maintain a nuclear option and expand conventional options without significantly affecting the state's use of warfare.

Land-based nuclear ICBMs provided the United States with access to static targets nearly anywhere in the world and allowed the President an immediate retaliatory attack capability. During the development of the triad, ICBMs were a counterforce asset, meaning that they could focus on a specific target with unparalleled accuracy. With the less-accurate early bombers and SLBMs, also considered counterforce assets, accuracy was not necessarily guaranteed, but a broad targeting area would heighten the unpredictability of the U.S. threat. However, with improvements in the technological capabilities of bombers and SLBMs, the threats that only ICBMs could meet can now be addressed without the land-based leg. Coupled with an increased emphasis on deliberate attacks and regulatory institutions, the president no longer needs instant access to nuclear ICBMs because the other two legs offer similar, more adaptive responses. Reliability and credibility, then, could still be maintained with only a nuclear dyad.

But how would a dyad stand against the four modern threat actors discussed earlier? While enmeshed in treaties, talks, and international institutions, Russia and China still represent a conventional, great power threat to the United States. Deterrence was a strategic doctrine meant to defend the U.S. against other states, so credibility and operational reliability are still necessary. Russia still possesses the nuclear capability to bring the U.S. into a great-power nuclear war, and that threat continues to significantly impact U.S. nuclear policy and strategy. However, as discussed, the removal of the ICBM force structure would have little impact on the operational capabilities of the U.S. nuclear force structure. The remaining nuclear assets would still be able to combat these large state threats with payload, survivability, flexibility, and accuracy. To rogue states such as Iran and North Korea, military signaling, both nuclear and conventional, is necessary and effective. The United States

needs to control the escalation of its signaling based on the situation because of Iran and North Korea's shared tendency to change threat levels unexpectedly and often within very short spans of time. In regional conflicts, such as that between India and Pakistan, the composition of the U.S. nuclear arsenal would have little impact. The best way to combat the instability in the southeast Asia region through deterrence would be through the conventional forces already in the area. By keeping a presence in the region, as well as actively working with both India and Pakistan to reduce internal and nuclear program instability or vulnerabilities while bringing them under international nuclear regulation institutions, the United States can reduce the possibility of a regional conflict through nuclear attacks. As for the internal instability, presence of non-state actors, and lack of transparency and security within Pakistan, the United States would have little impact by rattling a massive retaliatory saber based on ICBMs. If the primary concern is the central government's lack of control, simply threatening that government would not address the main threatening factors – non-state actors and a lack of security around nuclear facilities. The risk of a non-state actor acquiring a nuclear weapon and then targeting the United States or an ally is considered one of the greatest threats to the United States. The fear, however, comes from the uncertainty of such an attack. Nuclear deterrence as a doctrine has little to no effect on non-state actors because deterrence is fundamentally a physical threat. If an actor has very few physical assets, infrastructure, or territoriality, then the threat of a nuclear strike will have little impact on a non-state actor's decision-making cycle.

By prioritizing realistic operational capacity and deterrent signaling above the need to triple balance the nuclear triad, U.S. policy makers could restructure the nuclear force program in order to balance resources and assets. The nuclear force structure would still be capable of effectively upholding deterrence by continuing to provide

reliability and credibility while removing land-based vulnerabilities and focusing on the operational roles of the various nuclear delivery systems within the modern security environment.

Forwarding the Nonproliferation Movement

The Obama administration has indicated that, other than maintaining a sufficient deterrent strategy for security, nonproliferation remains a major policy goal. The 2010 Nuclear Posture Review stated that nonproliferation addresses the fundamental issue of nuclear weapons – their existence. Wishing to prevent both an accidental attack from a state and an intentional nuclear attack from a terrorist group or other non-state actor, the most basic answer to preventing both is to eliminate the availability of the weapons and, as logically follows, the opportunity to deploy them. Both the U.S. and Russia, who possess the two greatest nuclear arsenals, have identified reducing the availability and proliferation of nuclear weapons as a common priority.

The non-proliferation and nuclear-zero movements depend on international institutions and organizations to regulate and make transparent states' nuclear behaviors. Liberal institutionalism holds that treaties such as the Nuclear Non-Proliferation Treaty, the Comprehensive Test Ban Treaty, the SORT and START initiatives, and the establishment of the International Atomic Energy Association can bind states to certain rules, while also depending on other states to regulate and reinforce one another's behavior. The movement depends on transparency and on states following through with actions that would otherwise be seen as detrimental to their individual sovereignty for the pursuit of a larger, common goal of nuclear security.

The removal of the ICBM leg of the U.S. nuclear triad would cut over 450 nuclear weapons from the international environment, as well as provide a strong signal

to other states to make strategic cuts to their own nuclear force structures, instead of simply making minor cuts over decades. Cutting the ICBM program would also signal to other states that the United States views such capability as less strategically valuable than other platforms. Such a signal could dissuade other states from pursuing the symbolic strength of missile programs.

The United States has several options available to proceed with disarming its nuclear ICBM capability. Policymakers must remember that enhancing the international nonproliferation regime is a major factor in disarming ICBMs, so appropriate caution must be taken in involving the international community. While the U.S. could disarm the missiles itself as a unilateral show of good will and initiative, involving other nuclear weapons states in the process, either through the creation of a new institution or by updating current standards, could compound the benefits to both the U.S. and the nonproliferation movement as a whole. While few other states may be ready to make such a move, considering additional U.S. capabilities are another key factor in this policy decision, transparency and involvement are critical in modern global diplomacy and policy actions.

The critical variable in the current debate, however, is in balancing limited resources. The United States finds itself in a security environment where deterrence, while still necessary and effective in many cases, may not be effective against every threat, namely non-state actors. An updated security strategy, therefore, may be necessary to reduce the role of deterrence in resource allocation and to expand resources and policy options to best meet modern threats. In the future, flexibility with policy options will be more important than flexibility with conducting nuclear strikes. From this perspective, cutting an antiquated strike option in order to allow for advanced updates to the other legs is viable and necessary.

Risks and Alternatives

As in every policy and defense decision, the possible risks in removing America's ICBM program are numerous. There is no question that in disarming all nuclear ICBMs, the U.S. would be voluntarily removing a powerful and unique instrument of war. Such an action would seem impossible under the theory of realism – no self-interested state would actively decrease its own power. This policy decision is only possible under theories that recognize the opportunity for an enlightened self-interest. The nuclear ICBM still represents an unparalleled military asset, and the United States would hardly be considered weaker by maintaining an ICBM force if the U.S. had unlimited resources. In reality, however, national strategists need to balance limited resources with political goals, meaning that both weapons capabilities and political objectives need to be prioritized. Removing the nuclear ICBM force is one option available in the mid to long-term in order to eliminate the nuclear threat globally. Alternatives in policy options, especially when considering a positive, proactive step such as this, do exist and may appeal to various policy sects more convincingly than would the removal of nuclear ICBMs.

Other options include reducing each leg in time, as the SORT and START treaties have done, or, if one leg must be eliminated, cutting the expensive bomber program instead. Land-based nuclear ICBMs, while perpetually on call, do provide the greatest decision-making time for the president if a nuclear strike is called for, either as a first or retaliatory strike. Additionally, they are accurate, inexpensive, and require the least amount of logistical and tactical planning for mobilization. Although SLBMs and bombers still provide reliability, ICBMs increase military strike options in a time of crisis.

Another risk is the ability of a foreign enemy successfully exposing an imbalance in the survivability or accuracy of the new dyad. The U.S. would lose a significant

capacity of its massive retaliation means. ICBMs were cheap and required the least expensive and complex upkeep, making them ideal to stockpile in the case of a massive strike. Submarines and bombers cannot match the immediacy, synchronization, and sheer scale of a coordinated missile attack. Even so, the U.S. would still possess nearly 400 deployed nuclear warheads on submarines alone.⁶² However, the other legs of the dyad, as well as through the continued use of regional or intermediate-range ballistic missiles, could mitigate the risk of attack from an enemy actor. In short, the bombers and submarines are most likely to survive, thus decreasing an enemy's incentive to strike aggressively because of the uncertainty in effectively destroying U.S. nuclear capabilities. If an adversary strikes, but does not destroy the United States' ability to retaliate, then that adversary will suffer a highly destructive punishment for their aggression. Additionally, the continental United States would be safer from attack because of the raised cost of targeting. If the United States removes physical military target points from within its borders, with our nuclear platforms remaining hidden in port, offshore, or airborne locations, an enemy actor would be forced to consider civilian or infrastructural targets as alternatives. While this would not deter a non-state actor or even some other states in the case of actual nuclear war, the cost of a massive strike on U.S. domestic soil is raised by virtue of an international norm against targeting civilian sectors. An enemy will be less likely to use a nuclear attack against a civilian target than against an isolated military post. Adhering to such principles, though, may actually serve to undermine deterrence and the executive's response flexibility. If the United States were to avoid targeting civilian centers, enemy actors may twist U.S. principles by storing major assets in those civilian centers.

The United States also risks the appearance of weakness internationally with the reduction or elimination of one leg of the triad. Although the United States would see

such a move as having a marginal impact on operation and signaling capabilities, such a policy decision could signal to the rest of the world that the United States' economic woes are so great that they have impacted the very core of U.S. strength – the nuclear arsenal. Although reducing nuclear stockpiles through treaties has no such impact, a sudden move, such as the unilateral removal of nuclear ICBMs, could be seen as an act of last resort or desperation. Controlling the perceptions of enemy and possible enemy actors is crucial in maintaining deterrence as a strategic doctrine.

In a democratic state such as the United States, where national perceptions of security rely so heavily on technological and military advantages, the public is unlikely to take the step of removing ICBMs as a capability unless forced into an economic position whereby other, more important means and goals were at stake. Discussion of the removal of the ICBM force is still marginal amongst Congress and the president. The two actors most likely to fight the removal of the ICBM force are the Air Force's missile operators and specialists, and the president. The opposition of the missile operators and specialists would be expected, but the president's opposition would be based on power. Arguably, the ICBM is the weapons system most directly connected to the president himself. The lines of logistical and command barriers are significantly fewer between the president and a missile silo than they are between the president and a bomber or submarine. While the ICBM force has little operational capacity in the modern age, any bureaucracy is unlikely to give up the most powerful tool directly under its command, unless alternative systems are developed to guarantee the power of the president over national defense. Removing nuclear ICBMs would decrease the absolute power of the United States, even if only marginally, but the cost of keeping the system running, from expenditures to opportunity costs and vulnerability, may reduce U.S. power even more, though in a less tangible way.

The nature of a democracy, which is subject to deliberative policymaking and restrictive term limits, may keep policymakers from suffering a tangible reduction instead of an intangible, but more serious, reduction.

Finally, the ICBM leg of the triad has been most valued for two capabilities: immediacy, which has been addressed thoroughly, and permanence. An ICBM, once built, can last for decades with minimal maintenance. Bombers and submarines require more frequent upkeep in order to remain at operational capacity. These systems are more complex and more dynamic, which give the bomber and the submarine an advantage in terms of technology and survivability, but serve as a disadvantage to permanence. The permanence of nuclear ICBMs, however, is in the ICBM, not the nuclear warhead. Transitioning to a force of conventional ICBMs would maintain the permanence of the technology while removing it from the nuclear discussion. The permanence of the technology would actually be extended because the nuclear payload has a shorter expiration date than any other piece of the structure. The nuclear update costs could then be focused on the SLBMs and bombers.

Many policy makers will prefer to simply reduce each leg of the triad equally instead of applying all budgetary cuts to a single leg. However, as discussed earlier, an updated nuclear security strategy must allow the executive more policy options actionable through dialogue and diplomacy. The United States could maintain the status quo while upholding their end of the new START treaty, or it could expand the president's policy options by opening new international discussions. Current non-nuclear missile defense shields are capable of defending against enemy nuclear missile strikes, and conventional ICBMs can still send a powerful threat to other nations. Simply removing nuclear warheads from existing ICBMs would allow the president to maintain effective national security and deterrence policy while opening new diplomatic roads in discussing the future of the international nuclear regime.

CONCLUSION

Removing the use of nuclear ICBMs is a means-based answer to the problem of adjusting the U.S. nuclear force posture to reflect the security environment of the 21st century.⁶³ With the greater interdependency among states, the greater availability and strength of international institutions and organizations, and the greater capabilities of nuclear SLBMs and bombers, the United States is ready to rebalance its Cold War nuclear infrastructure to better fight the increased risk of nuclear attack by rogue non-state actors while maintaining a deterrent and operational force against more traditional threats. The strategic ends, ways, and means of U.S. nuclear policy are ripe for a proactive step forward.

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