



Brig Gen Kenneth Newton Walker

Kenneth Walker enlisted at Denver, Colorado, on 15 December 1917. He took flying training at Mather Field, California, getting his commission and wings in November 1918.

After a tour in the Philippines, he returned to Langley Field, Virginia, in February 1925 with a subsequent assignment in December 1928 to attend the Air Corps Tactical School. Retained on the faculty as a bombardment instructor, Walker became the epitome of the strategic thinkers at the school and coined the revolutionary airpower “creed of the bomber”: “A well-planned, well-organized and well-flown air force attack will constitute an offensive that cannot be stopped.”

Following attendance at the Command and General Staff School at Fort Leavenworth, Kansas, in 1933 and promotion to major, he served for three years at Hamilton Field, California, and another three years at Luke Field, Ford Island, and Wheeler Field, Hawaii. Walker returned to the United States in January 1941 as assistant chief of the Plans Division for the chief of the Air Corps in Washington, DC.

He was promoted to lieutenant colonel in July 1941 and colonel in March 1942. During this time, when he worked in the Operations Division of the War Department General Staff, he coauthored the air-campaign strategy known as Air War Plans Division—Plan 1, the plan for organizing, equipping, deploying, and employing the Army Air Forces to defeat Germany and Japan should the United States become embroiled in war. The authors completed this monumental undertaking in less than one month, just before Japan attacked Pearl Harbor—and the United States was, in fact, at war.

In June 1942 he was promoted to brigadier general and assigned by Gen George Kenney as commander of Fifth Air Force’s Bomber Command. In this capacity, he repeatedly accompanied his B-24 and B-17 units on bombing missions deep into enemy-held territory. Learning firsthand about combat conditions, he developed a highly efficient technique for bombing when aircraft faced opposition by enemy fighter planes and antiaircraft fire.

General Walker was killed in action on 5 January 1943 while leading a bombing mission over Rabaul, New Britain—the hottest target in the theater. He was awarded the Medal of Honor. Its citation, in part, reads, “In the face of extremely heavy antiaircraft fire and determined opposition by enemy fighters, General Walker led an effective daylight bombing attack against shipping in the harbor at Rabaul, which resulted in direct hits on nine enemy vessels. During this action, his airplane was disabled and forced down by the attack of an overwhelming number of enemy fighters. He displayed conspicuous leadership above and beyond the call of duty involving personal valor and intrepidity at an extreme hazard to life.” Walker is credited with being one of the men who built an organization that became the US Air Force.

After you have read this research report, please give us your frank opinion on the contents. All comments—large or small, complimentary or caustic—will be gratefully appreciated. Mail them to Air Force Research Institute/AFRI/RIPF, 155 N. Twining Street, Maxwell AFB AL 36112-6026.



**The Credibility of America's
Extended Nuclear Deterrent**

Eldridge

The Case of the Republic of Turkey

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**The Credibility of America's
Extended Nuclear Deterrent**
The Case of the Republic of Turkey

WILLIAM G. ELDRIDGE
Colonel, USAF

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Foreword

As Iran moves ever closer to a nuclear weapons capability, will other area powers such as Turkey decide to acquire their own nuclear weapons and embark on a crash nuclear weapons program to provide their own deterrent? Or will Turkey's leaders trust in the United States' extended nuclear deterrent for Turkey's security? Col William G. Eldridge has explored this question in depth. To shore up the United States' ability to convince the Turks to stay in the nonnuclear category, he recommends keeping the North Atlantic Treaty Organization (NATO) and bilateral alliances with Turkey strong and, with Turkey, establishing a more common vision for the Middle East. He also advises reducing trade barriers with Turkey, maintaining and even increasing military arms trading and aid, keeping US forces in present numbers in Turkey and improving military-to-military ties, maintaining Turkey as a partner in dual-capable aircraft production, and, for now, keeping some US nuclear weapons in NATO Europe.

Colonel Eldridge also indicates there is little evidence that disarmament trends and the unfortunate misshipment of US nuclear weapons at Minot AFB and mishandling of some classified nuclear missile parts to Taiwan in 2007 and 2008 spurred Turkish leaders to develop their own nuclear weapons program. Turkey currently shows little interest in developing its own nuclear arms or capacity for the same. Turkey appears to be convinced that an obvious US commitment to retaliate against any aggressor attacking NATO states is sufficient for its belief in the United States' extended deterrent pledge to Turkey.

Colonel Eldridge recommends three steps to measure the credibility of US extended nuclear deterrence: (1) examine the case of Turkey for insights on why alliance partners may contemplate proliferation; (2) include Turkey as a partner in building theater missile defenses in the region and fighter aircraft and provide political, economic, and military support to offset some of Turkey's regional threats from Kurdish Workers Party terrorism, Iraqi instability, Iranian nuclear ambitions, Russian energy politics, Israeli-Hamas conflicts, Georgia-Russian frictions, and Greek-Turk conflicts in Cyprus; and (3) watch Tur-

FOREWORD

key carefully for warnings and indicators of any nuclear weapons program to try to counteract it before it can fully develop.

Colonel Eldridge has provided a clearly written, well-researched, and timely analysis of a major concern about the United States' extended deterrent capability in a world of emerging nuclear weapons states in the Middle East and Northeast Asia. All who are concerned about keeping additional states from joining the nuclear weapons club will benefit from this study of Turkey and the effectiveness of our nuclear umbrella to keep it safe and yet a nonnuclear weapons state.

A handwritten signature in black ink, reading "Barry R. Schneider". The signature is fluid and cursive, with the first name "Barry" being the most prominent.

DR. BARRY R. SCHNEIDER
Director, USAF Counterproliferation Center
Air University

About the Author



Col William G. Eldridge

Col William G. Eldridge is the commander of the 28th Operations Group (OG), Ellsworth AFB, South Dakota. He commands the largest operational B-1 group in the Air Force with one operational support squadron and two B-1 bomb squadrons. Colonel Eldridge maintains the combat readiness of the 28th Bomb Wing bomber force for a multitude of worldwide and deterrent roles.

Colonel Eldridge received his commission from the US Air Force Academy in 1990. He has served as a B-1 instructor pilot, a B-2 instructor pilot, and an air campaign strategist for US Air Forces Central Command. His operational experience includes a 40-hour combat mission in the opening days of Operation Enduring Freedom and a tour in the strategy division of the combined air operations center in Southwest Asia in support of Operation Iraqi Freedom.

He has served as a squadron maintenance officer, as the director of operations for the 393rd Bomb Squadron, and as the commander of the 13th Bomb Squadron at Whiteman AFB, Missouri. Prior to assuming command of the 28 OG, Colonel Eldridge was assigned to the Woodrow Wilson International Center for Scholars (WWICS) in Washington, DC.

Abstract

In 2009 the United States completed an 80 percent reduction of its operationally deployed strategic nuclear weapons from Cold War highs. Since 1991 the United States has also reduced its nonstrategic nuclear weapons by over 90 percent. Additionally, the United States removed much of its nuclear arsenal from alert status and continues to decrease its nuclear weapons stockpiles. However, nuclear weapons may still play an important role in deterring an adversary attack against the United States as well as providing a nuclear umbrella to allies.

An extended nuclear deterrent for protecting allies may also contribute significantly to nonproliferation efforts—the nuclear umbrella provides allies an assurance so they do not perceive the need to develop nuclear weapons arsenals for themselves. This study explores the impact of US nuclear weapon policy on the current and future effectiveness of extended nuclear deterrence for the Republic of Turkey. It concludes that the credibility of US extended nuclear deterrence for Turkey depends on many factors and not just the quality and quantity of the US nuclear arsenal.

Preface and Acknowledgments

While assigned as a scholar at the WWICS as part of the US Air Force's SDE program, I became interested in nuclear policy and the purpose of nuclear weapons after a B-52 aircraft mistakenly flew with actual nuclear warheads in August 2007, as well as a March 2008 incident when US intercontinental ballistic missile parts mislabeled as helicopter batteries were inadvertently shipped to Taiwan. These events resulted in the removal of the secretary of the Air Force and the Air Force chief of staff, major command organizational changes, and the overhaul of nuclear weapons procedures. As part of the Air Force's corrective actions following these incidents, Air Force leadership called for research and writing on the nuclear enterprise. This study supports that call.

I am grateful to the WWICS's staff, specifically its library staff, for creating an environment ideal for research and writing. The WWICS's International Security Studies director, Dr. Robert Litwak, provided outstanding guidance during the topic selection. Dr. Kerry Kartchner of the policy division at the Department of State was an excellent research advisor. Also, I am indebted to Dr. Gul-Berna Ozcan, also a WWICS scholar, who provided many government and think-tank contacts which led to interviews cited in this research. Finally, my wife Beth endured multiple readings of this paper and provided much editing assistance.

Chapter 1

Introduction

Our nuclear umbrella, our extended deterrent, underpins our alliances in Europe and in the Pacific and enables our friends, especially those worried about Tehran and Pyongyang, to continue to rely on our nuclear deterrent rather than to develop their own.

—Robert Gates, Secretary of Defense
28 October 2008

Are US nuclear reduction policies and recent nuclear weapons handling mistakes by the US Air Force weakening the nuclear umbrella and provoking nuclear weapons proliferation by encouraging our allies to seek their own nuclear weapons? America's nuclear forces are on a downswing. In 2009 the United States reduced its operationally deployed strategic nuclear weapons by 80 percent of Cold War highs. Since 1991 the United States also reduced its nonstrategic nuclear weapons by over 90 percent. Similarly, France and the United Kingdom reduced their nuclear arsenals, and the North Atlantic Treaty Organization (NATO) nations declared that their remaining US-owned nuclear weapons were primarily for political purposes.

The US systems dedicated to deliver nuclear weapons are a fraction of Cold War numbers. Once numbering over 1,000 intercontinental ballistic missiles (ICBM), more than 40 ballistic nuclear missile submarines, and nearly 1,000 bombers, there are now only 450 ICBMs, 14 submarines, and 113 bombers. The US nuclear arsenal in Europe has shrunk from thousands of nuclear weapons to a few hundred nuclear gravity bombs potentially delivered by small fleets of US and NATO dual-capable aircraft (DCA)—fighter aircraft able to deliver both conventional and nuclear weapons. In the coming years, Russia and the United States likely will continue negotiations to further draw down their nuclear weapons numbers. In the context of nuclear reductions, two incidents of nuclear weapons mishandling by the Air Force in 2007 and 2008 cast doubt for some on the US military's competence for reliably sustaining

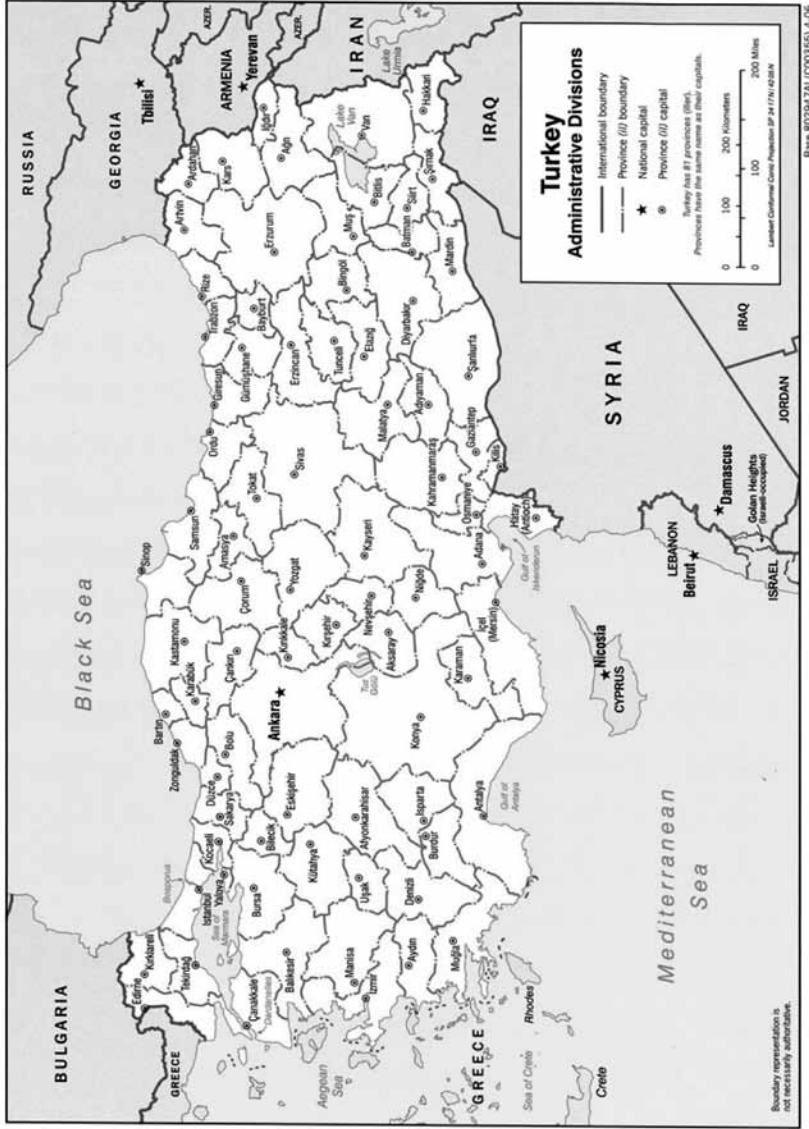
and executing a nuclear mission.¹ Have these incidents, coupled with nuclear inventory reductions, weakened the credibility of the US nuclear deterrent?

Despite the apparent downward trajectory of the resources and care dedicated to the nuclear mission, nuclear deterrence remains a prominent part of US security policy. Nuclear weapons are listed in the *National Defense Strategy* published in June 2008 as a component of deterrence against nuclear attack.² In a 28 October 2008 address to the Carnegie Endowment for International Peace, Secretary of Defense Robert Gates stated that nuclear weapons contribute to achieving two goals: to deter nuclear, chemical, or biological attacks on the United States or its allies, and to provide a nuclear umbrella or extended nuclear deterrent to US allies in the Pacific and in Europe. This nuclear umbrella causes allies to rely on US nuclear weapons for deterrence instead of seeking to acquire their own.³

This study explores the impact of post-Cold War nuclear weapon reduction policies and the Air Force's recent nuclear missteps on the credibility of US extended nuclear deterrence. Additionally, it investigates the power of that deterrent to reinforce nonproliferation. Specifically, it examines the case of the Republic of Turkey.

Why Turkey?

The US-Turkey relationship is a useful case to measure the credibility of US extended nuclear deterrence for several reasons. First, it has been an important and long-standing ally of the United States. However, Turkey's occasional rocky relationship with the United States and Europe, coupled with its Islamic identity, causes concern for some on the durability of US-Turkish and NATO-Turkish alliances. Examining the case of Turkey could provide insights on why longtime alliance partners might contemplate proliferation or might decide to abandon US nuclear protection to pursue their own nuclear arsenals. Lessons from this case possibly could extrapolate to other US allies, such as Japan or South Korea. Second, Turkey's proximity to many Middle Eastern security challenges, including Iran's budding nuclear program, makes it an interesting case for studying ways to diminish an ally's security threats.



Map of Turkey. (From "Turkey: Administrative Divisions," Perry-Castaneda Library Map Collection, University of Texas Libraries, accessed 19 March 2009, <http://www.lib.utexas.edu/maps/turkey.html>.)

Third, because of its close relationship with Pakistan (a known nuclear proliferator) and its indigenous nuclear technical capabilities, Turkey sits high on the list of nations that could develop their own independent nuclear arsenals. Examining Turkey may provide methods for studying and discouraging potential proliferators, including ways to discern the warnings and indicators of a state on the edge of nuclear weapons “tipping.”

Since the mid-2000s, Turkey began to appear in reports, studies, journals, and the press as a potential candidate for pursuing its own nuclear program. In a 2006 *Foreign Affairs* article, “After Proliferation: What to Do If More States Go Nuclear,” Stephen Rosen used Turkey and Saudi Arabia as examples of states that could go nuclear if Iran develops a deployable nuclear weapon.⁴ On 12 December 2006 a Science Applications International Corporation report for the US Defense Threat Reduction Agency stated that Turkey and Japan are two of the United States’ extended deterrent challenges.⁵ In 2008 the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism also listed Turkey and eight other countries as part of a group of nations that had expressed interest in acquiring nuclear weapons.⁶ A February 2008 report to the Committee on Foreign Relations for the United States Senate, “Chain Reaction: Avoiding a Nuclear Arms Race in the Middle East,” listed Turkey, as well as Saudi Arabia and Egypt, as potential nuclear weapons tippers if Iran successfully builds a nuclear weapon.⁷ Following the report, Turkish newspapers began discussing the possibility of Turkey becoming a nuclear weapons power.⁸

Creating additional concern for US policy makers are signals that Turkey may be distancing itself from the West. Turkey did not open its bases for the 2003 US-led operation against Iraq; it has engaged diplomatically with Iran, Syria, and the Palestinian Hamas despite US efforts at times to isolate those regimes; and a 2008 opinion poll reported less than 15 percent of the Turkish populace had a positive view of US policies.⁹ Although US-Turkish relations have oscillated since the end of World War II (see appendix), some scholars warn that to prevent further backsliding, secure a strong long-term relationship, and avert Turkey from “going nuclear,” the United States must take immediate steps to improve the relationship.¹⁰

The Argument: It's All about Relationships and Leadership

This research suggests that it is the strength of the US-Turkish political-security relationship that is the most important factor for ensuring the credibility of the United States' extended nuclear deterrent. In fact, the credibility of the US nuclear umbrella has little to do with the type of its nuclear weapons, the number of warheads, or the negative image of US nuclear competency generated from the Air Force's nuclear handling missteps. Instead, US credibility depends on Turkey's perception of its political, economic, and military ties with the United States. It is the quality of that broader relationship that will also have the greatest influence on whether or not Turkish leaders pursue an independent nuclear weapons capability.

Turkey generally measures the strength of its security relationship with the United States through the lens of the reliability of bilateral and multilateral security and partnership agreements such as NATO and the European Union (EU). Although there are many ways to measure the strength of these types of relationships—domestic polls, media tone, treaties, and agreements—the perception of national leadership is the most important. It is the highest level of Turkish decision makers that will decide the merits of continued reliance on the US extended nuclear deterrent. Undoubtedly, domestic influence and external security threats influence those decision makers, but for Turkey, it is the perception of alliance strength that will have the most influence on its nuclear proliferation decisions.

Research Questions and Methods

By analyzing Turkey as a case study, this research seeks to provide a method for assessing the credibility of US extended nuclear deterrence. It addresses several questions: What are the most important factors that might influence an ally's decision to leave the US nuclear umbrella to pursue a nuclear weapons program? What is the relationship between extended nuclear deterrence and nonproliferation? What are the signs that an ally may be contemplating nuclear proliferation? What can the United States do to strengthen alliance relationships

and stifle proliferation? How do disarmament and arms reduction policies and nuclear handling errors affect the US nuclear umbrella?

To answer these questions, this research relied on primary and secondary sources. Primary sources include interviews with midlevel Turkish policy makers, policy documents, transcripts of public statements, and interviews with Turkish, US, and European political experts. Secondary sources (all unclassified) include scholarly analysis, essays, reports, and articles from US, European, and Turkish sources. Interviews for this paper reference only the expert's job title and are not attributed to a specific person. Despite the promise of nonattribution, some interviewees provided only the official views of their governments; however, most provided important personal insights on the health of US-Turkish security relations and on the reliability of US extended nuclear deterrence.

Outline

The following chapters review extended deterrence theory and practice and make recommendations to improve the United States' extended nuclear deterrence relationship with Turkey. Chapter 2 defines the purpose of nuclear weapons as well as deterrence and extended nuclear deterrence. Chapter 3 offers ways to measure US-Turkish extended nuclear deterrence credibility, and chapter 4 offers policy recommendations and suggestions for the Air Force that may help to strengthen that credibility. Chapter 5 provides conclusions, policy implications, and recommendations that may aid policy development for US-Turkish security relationships, provide inputs for NATO nuclear policy debates, and offer considerations for US nuclear deployments, arms control, and disarmament policies.

Summary, Conclusions, and Recommendations

The political uses for US nuclear weapons have become more important than their military utility. Since the end of the Cold War, the military utility for nuclear weapons has become decreasingly important. However, their political uses—providing allies with a security umbrella and discouraging ally prolifera-

tion—are increasingly relevant. Therefore, nuclear weapons should be designed and deployed primarily to support political goals and alliance building. Military utility is a secondary consideration. Prior to altering its nuclear posture, the United States should discuss proposed changes with allies who rely on extended nuclear deterrence to ensure that their security concerns are acknowledged and addressed.

The reasons that an ally might withdraw from the US nuclear umbrella to pursue its own nuclear weapons arsenal are unique to each ally. The United States requires a specific understanding and a unique strategy for each ally to ensure the credibility of its extended deterrence guarantees. Elements of that credibility include considerations other than just the size and quality of the US nuclear arsenal. Other credibility influences include alliance strength (including the level and frequency of US-ally security consultations), past and present US policies in the ally's region, US-ally trade and military arms transfers, and the local presence of US military forces. Allies may prioritize these elements differently. The effectiveness of these elements can be measured by monitoring warnings and indicators of an ally's intentions and capacities to acquire nuclear weapons.

For Turkey, alliances play the most important role in influencing Turkish leadership's considerations for leaving the US nuclear umbrella to pursue an indigenous nuclear weapons program. In the short term, Turkey is unlikely to pursue a nuclear weapons program if its leadership perceives that the NATO alliance and US-Turkish bilateral relationships remain strong. Of the two relationships, Turkey's bilateral relationship with the United States is more important.

Turkey likely will “tip” if Middle East nuclear proliferation becomes widespread *and* NATO is perceived as ineffective *and* if US-Turkish relationships collapse. According to one Turkish diplomat, “things would have to get really bad” for Turkey to pursue its own nuclear weapons. Despite a rocky history, current NATO-Turkish and US-Turkish relations remain fundamentally sound, but leadership or regional security changes could strain those relationships. Factors working against Turkish nuclear weapons proliferation include the lack of support by senior Turkish leaders, the high value Turkey places on alliance relationships, the lack of funding for civilian or military

nuclear programs, and Turkish treaty agreements forswearing nuclear weapons.

Despite these proliferation disincentives, Turkey will probably hedge against falling behind a potential Middle East nuclear energy (or nuclear arms) race by developing a civilian nuclear power program. As Iran continues pursuing nuclear enrichment and possibly a nuclear weapon, Turkey will likely begin to develop a nuclear power program beyond its current research stage. Turkish leaders do not fear an attack from Iran, but instead they are concerned with the shift in the regional balance of power that may result from a nuclear-armed Iran. Hedging with civilian nuclear power provides scientific and engineering expertise needed for an aggressive Turkish nuclear program if Iran's regional influence increases or a broader Middle East nuclear arms race begins. Therefore, the United States should continue its involvement in Turkey's emerging civilian nuclear programs utilizing the existing 2008 US-Turkish nuclear cooperation agreement (123 Agreement), develop additional cooperation agreements that encourage Turkey to forgo nuclear and spent fuel processing, encourage scientific exchanges, and consider financially supporting Turkey's civilian nuclear energy program.

The credibility of US extended nuclear deterrence for Turkey is best signaled not through US nuclear inventory types or numbers, but by demonstrations of US political, economic, and security relationships with Turkey. Turkey's most important political and security concerns include

- credibility of NATO, EU, and US support for Turkish security;
- Kurdish Workers Party (PKK) terrorism;
- Kurdish activism in Iraq supporting a separate Kurd state;
- Cyprus;
- relations with Iran and Armenia;
- energy security and access; and
- economic strength and domestic stability.

A close US-Turkish partnership that addresses these issues can strengthen US credibility as a reliable ally. A strong US-

Turkish relationship also serves as a disincentive for Turkish nuclear weapons acquisition.

The US Air Force can play a role in strengthening US credibility and in decreasing Turkey's probability for nuclear weapons proliferation. The Air Force's nuclear mishandlings had little effect on Turkish perceptions of US extended nuclear deterrence credibility. Very few Turkish interviewees recalled either of the Air Force's nuclear mishaps. Additionally, the types and capabilities of US nuclear weapons also have little effect on the credibility of US extended nuclear deterrence for Turkey. However, Turkish representatives prefer the existing US nuclear weapons presence in Europe and argue strongly against hasty or unilateral changes. They also believe that the United States must maintain some nuclear weapons capability. The size and composition of that force is a matter for the United States to decide, preferably in consultation with Turkish national leaders. Maintaining Air Force and Turkish dual-capable aircraft in Europe is important to Turkey. The DCAs are a visible symbol of commitment from the United States. Even if US-NATO nuclear weapons employment policies change, then a joint US-Turkish DCA still provides an important military sales tie and an opportunity for military exchanges. Additionally, the Air Force can play an important role in demonstrating a strong security relationship with Turkey by maintaining its presence at Incirlik Air Base; by continuing bilateral, joint, and NATO exercises; and by aiding Turkish antiterrorism operations with assistance in command and control, intelligence sharing, and direct combat action.

Notes

(All notes appear in shortened form. For full details, see the appropriate entry in the bibliography.)

1. DOD, *Report of the Secretary of Defense Task Force on DoD Nuclear Weapons Management Phase I*, 13. In March 2008 the US Air Force discovered that in 2006, intercontinental ballistic missile (ICBM) components were accidentally shipped to Taiwan. In March 2007 a B-52 bomber crew mistakenly flew actual nuclear weapons from Minot AFB, ND, to Barksdale AFB, LA. The B-52 crew believed that the nuclear warheads were removed from the missile bodies.

2. DOD, *National Defense Strategy*, 12.

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3. Gates, "Nuclear Weapons and Deterrence in the 21st Century, Carnegie Endowment for International Peace," 3-4.
4. Rosen, "After Proliferation," 10.
5. Dunn et al., *Foreign Perspectives on US Nuclear Policy and Posture*, 6.
6. Graham and Talent, *World at Risk*, 61.
7. US Senate Committee on Foreign Relations, *Chain Reaction*, x.
8. "Saudi Arabia, Turkey Seen as Possibly Joining in a Nuclear Arms Race"; Kalyoncu, "Why, When and How Turkey Becomes a Nuclear Power"; and Kalyoncu, "How to Handle Turkey's Legitimate Nuclear Aspirations."
9. *Unfavorable Views of Jews and Muslims on the Increase in Europe*, 33.
10. Lesser, *Beyond Suspicion*, 4.

Chapter 2

What Is the Purpose of American Nuclear Weapons?

The power to hurt—the sheer unacquisitive, unproductive power to destroy things that somebody treasures, to induce pain and grief—is a kind of bargaining power, not easy to use but used often.

What nuclear weapons have been used for, effectively, successfully, for sixty years has not been on the battlefield nor on population targets: they have been used for influence.

—Thomas Schelling

Recent attempts to justify upgrades or replacements for US nuclear weapons systems were criticized for failing to provide a sound argument for the purpose of these weapons in a post-Cold War world.¹ With the end of the Cold War, the dominant role for US nuclear weapons has become political uses rather than military uses. Political uses include discouraging attacks against the United States and extended nuclear deterrence. Extended nuclear deterrence means using the US nuclear arsenal to deter attacks on allies.

The security umbrella that nuclear weapons provide may aid nonproliferation goals—allies protected by US nuclear weapons do not perceive the need to build nuclear arsenals of their own. Successful extended deterrence depends upon the defender state's credibility of making good with its protection promises.

Many of the elements that have a positive effect on a defender's credibility are also factors that are disincentives for an ally considering nuclear weapons proliferation. One of the more important factors is the day-to-day political relationship between the defender and its ally. If allied national leadership perceives eroding relationships with its nuclear armed defender, then nuclear weapons tipping, or deciding to pursue an indigenous nuclear weapon arsenal, becomes more likely.

This chapter explains the effects of the rise of political uses for US nuclear weapons, the special case of extended nuclear deterrence, and the linkage between extended nuclear deterrence and nonproliferation.

Political Uses for US Nuclear Weapons

Nuclear weapons can achieve both political and military objectives. After the Cold War, the primary reason for the United States to maintain nuclear weapons has become for political objectives—for deterrence “bargaining.” The secondary reason—for military targeting—has decreased in prominence.

Political uses for nuclear weapons have existed since they were developed, built, and used. After authorizing the nuclear attacks on Hiroshima and Nagasaki, Pres. Harry Truman believed that nuclear weapons were more important as political tools than as military weapons. In 1946 he told his advisors, “You got to understand that this isn’t a military weapon. It is used to wipe out women and children and unarmed people, and not for military uses. So we have got to treat this differently from rifles and cannons and ordinary things like that.”² A few days after authorizing work for a thermonuclear weapon in January 1950, Truman told his staff, “[W]e had . . . to do it—make the bomb—though no one wants to use it. But . . . we have got to have it if only for bargaining purposes with the Russians.”³

Nuclear weapons became more militarily useable by growing in number from 1,000 weapons in 1953 to over 18,000 by the end of Pres. Dwight Eisenhower’s administration. Eisenhower still maintained that nuclear weapons were useful for political bargaining by the development of better nuclear bombers, the ICBM, and the submarine-launched ballistic missile.⁴ In 1954 and 1955 Eisenhower and his secretary of state John Foster Dulles used threats of nuclear warfare to coerce Chinese leader Mao Zedong to end the Quemoy and Matsu crisis and in 1953 to aid negotiations to end the Korean War.⁵ Pres. John F. Kennedy and Pres. Lyndon Johnson thought that the military utility for nuclear weapons was limited and adopted a strategy of “flexible response” in which conventional military forces became more prominent in conflict resolution.⁶

As the Soviet Union's nuclear arsenal grew in the late 1960s and 1970s, US nuclear strategy shifted to "no-cities" counterforce attacks against Soviet military forces and then to "mutual assured destruction" which targeted "countervalue" targets such as cities and industrial centers.⁷ Despite this apparent shift in emphasis to military uses for nuclear weapons, political bargaining—for deterrence—remained the rationale for these "delicate balance of terror" strategies.⁸ Even though Pres. Richard Nixon adopted targeting policies of "balance of terror" and "sufficiency," both had the objective of deterring a Soviet nuclear attack rather than a practical military objective.⁹ Similarly, Pres. Jimmy Carter's administration adopted a "countervailing" targeting strategy with the goal to match the Soviet Union and ensure "that the Soviets were indeed fully deterred from undertaking aggression."¹⁰ During Pres. Ronald Reagan's terms in office, the strategy shifted from countervailing to prevailing in a protracted nuclear war.¹¹ However when the Cold War ended, targeting policies and theories began to fade while a renewed emphasis developed on the political uses for US nuclear weapons.

When the Soviet Union dissolved in the early 1990s, US nuclear targeting strategies decreased in prominence while the political rationale for maintaining nuclear weapons came to the forefront. In 1991 Pres. George H. W. Bush unilaterally ordered all nuclear bombers off alert and cancelled several nuclear modernization plans.¹² In the first US strategy statement after the collapse of the Soviet Union, the 1991 *National Security Strategy* stated that deterring the Soviets was still the top priority of US nuclear forces, but the document hinted at challenges in targeting:

Despite the threat still posed by the existence of Soviet nuclear weapons, the likelihood of their deliberate use by the Soviet state is declining and the scenario which we frequently projected as the precursor of their use—massive war in Europe—is less likely than at any other time since World War II. These developments affect questions of nuclear targeting, the alert status and operational procedures of our forces and ultimately the type and number of weapons sufficient to ensure our safety and that of our allies. We have already begun to make adjustments to our nuclear forces and to the policies that guide them in recognition of the disintegration of the Warsaw Pact and changes in the Soviet Union itself.¹³

NATO policies also shifted emphasis from military utility to political uses for nuclear weapons. The 2004 "NATO's Nuclear

Forces” states that “NATO has radically reduced its reliance on nuclear forces. Their role is now more fundamentally political, and they are no longer directed towards a specific target.”¹⁴ NATO maintains a nuclear weapons sharing agreement permitting the United States to base a few hundred nuclear gravity bombs in Europe under the custody and control of the United States. The role of these weapons is primarily political.¹⁵

Recent nuclear policies continue to emphasize and prioritize the political uses for US nuclear weapons over military uses. Neither Pres. George W. Bush’s March 2006 *National Security Strategy* nor the DOD’s June 2008 *National Defense Strategy* provided a targeting strategy for nuclear weapons.¹⁶ Instead, both declared counterproliferation and deterrence as their primary role. Underscoring the importance of deterrent uses for US nuclear weapons, Secretary of Defense Robert Gates, in a 2008 presentation to the Carnegie Endowment for International Peace, commented that “as long as others have nuclear weapons, we must maintain some level of these weapons ourselves to deter potential adversaries and to reassure over two dozen allies and partners who rely on our nuclear umbrella for their security, making it unnecessary for them to develop their own.”¹⁷ This political goal for the US nuclear arsenal—to serve as a tool of nonproliferation—has become increasingly prominent in US nuclear strategy.

The rise of prominence for the political uses of US nuclear weapons affects policy decision making in a few ways. First, the size and makeup of the US nuclear arsenal can be flexible. After the Cold War ended and Russia was no longer perceived as the primary adversary for US and NATO nuclear planning, deep nuclear weapons reductions became possible. Because targets and target types (military uses) are decreasingly important factors for US nuclear force posture, the numbers of weapons and type of deployment might be best determined by political objectives, bargaining goals, and available logistics infrastructure. Second, coordination with allies that may benefit from the nuclear umbrella becomes increasingly important. Any changes to force structure should include consultation (bargaining) with allies. Otherwise the United States risks weakening an important use of its nuclear arsenal—to protect allies. Third, the political rationale for nuclear deployment and force structure decisions may

not seem sensible to military planners. For example, a NATO nuclear force with US nuclear gravity bombs employed on short-range dual-capable fighters may not provide the most survivable or operationally successful military option for nuclear weapons employment. However, the political benefit the weapons provide by discouraging nuclear proliferation among allies and by reassuring allies through extending deterrence may be more important objectives than military usefulness.

A Special Case of Deterrence: Extended Nuclear Deterrence

As defined by two political scientists, extended deterrence is “deterrence of an attack on another party.”¹⁸ Using nuclear weapons to provide extended deterrence has been called extended nuclear deterrence, which has become one justification for the US nuclear arsenal.¹⁹ The 2006 *National Security Strategy* argues that US nuclear weapons, as a part of a “New Triad” that includes both nuclear and conventional capabilities, defenses (such as missile defense), and logistical infrastructure, “will better deter some of the new threats we face, while also bolstering our security commitments to allies.”²⁰ For extended deterrence to work, the defending country’s commitments to the ally must be credible.

How a defending nation can offer a credible extended deterrent to an ally has been the subject of several studies, resulting in two prominent theories.²¹ First, early deterrent credibility thought, led by political scientist Thomas Schelling, offered the commitment theory.²² Schelling’s commitment theory suggested that effective nuclear deterrence required the defending nation to provide signals of its commitment. Signaling commitment by troop deployments or by armed intervention shows a potential attacker that the defender has strong resolve to act. This was the basis for the domino theory in Southeast Asia that rationalized US intervention against communist-backed insurgents in South Vietnam would keep the entire region from falling under communist rule. The shortfalls of Schelling’s theory became evident: after the United States failed to keep Vietnam from becoming a communist country, Southeast Asia did not

cascade into communism. Empirical analysis by other political scientists also noted shortfalls of his theory.²³

The second theory, called inherent credibility, refutes Schelling's commitment theory by suggesting that credibility depends on the defender's interest in the ally, and it is the strength of this interest that determines the effectiveness of deterrence.²⁴ Political scientists Paul Huth and Bruce Russett, two leading deterrence scholars, summarized this theory, stating, "successful deterrence is very much more than just a matter of having a favorable military balance, and very much a matter of the nature and extent of ties between the defender state and the state it wishes to protect."²⁵ Other political scientists added to the theory arguing that not only are defender-ally ties important but the defender's regional interests are as well.²⁶ Both of these variants of inherent credibility theory offer similar methods of measuring a defender's commitment to an ally.

By using an empirical expected utility model to examine 54 cases of deterrence from 1900 to 1980, Huth and Russett concluded that the most important elements of a defender's credibility for successfully deterring an attack on an ally included

1. trade (economic linkage between the defender and ally);
2. political-military relationship and assistance (arms trading with ally); and
3. local military balance (defender and ally superiority in forces above the attacker).²⁷

They also discovered credibility elements that played a lesser role in effective extended deterrence. These elements included alliances, the defender's past behavior, and military superiority. The defender's possession of nuclear weapons had a minor influence on effective deterrence. Huth and Russett concluded, "A quest for strategic nuclear superiority is unlikely to be the most effective means for providing security to America's friends and allies in a crisis, or to America itself." Instead, the researchers stated that "an important contribution to effective deterrence may emerge from achievement of a goal that is usually sought for other purposes—maintaining and strengthening the ties of mutual interest among nation-states in an open global economic system."²⁸ Other researchers found similar results.

Researcher Vesna Danilovic used a similar mathematical model to assess the success of extended deterrence as a function of the importance a defender places on the ally's surrounding region. Danilovic suggested that "although a particular state may not have great significance for a major power, it may still be important if it is located in the region of critical strategic importance."²⁹ Using cases from 1895 to 1985, Danilovic tested the probability that a defender will extend deterrence against an aggressor to an ally and found that "regional stakes as a source of inherent credibility of extended threats—is a powerful predictor of the choices that major powers make in their conflicts with other nations."³⁰ Danilovic measured a defender's regional salience using the following elements: alliance bonds, diplomatic exchanges, colonial possessions (for cases prior to 1939), foreign trade, past behavior of the defender (in the region), and costly signals (troop mobilization or display of force).³¹ These elements of credibility were similar to those used by Huth and Russett. As a result of the research, Danilovic offered the following policy advice: "In terms of policy implications for US post-cold war diplomacy, the analysis indicates that a 'micromanagement' of particular foreign policy issues needs to be conducted within the framework of a 'grand strategy.'"³²

Political science scholars Curtis Signorino and Ahmer Tarar discovered similar credibility elements. However, their conclusions on the most important elements differed.³³ Using a different and arguably more accurate model, Signorino and Tarar found that "military alliances, long-term balance of forces, nuclear weapons, military arms transfers, and foreign trade all affect deterrence success."³⁴ Unlike Huth and Russett, the researchers found that the role of nuclear weapons "(1) generally incline the defender to assist the [ally]; (2) generally increase the probability of deterrence success; but (3) depending on the values of the other variables, may increase or decrease the likelihood of war."³⁵

Each of these theories has limitations when applied to the credibility of American extended nuclear deterrence for Turkey. First, they predict outcomes for immediate extended deterrence which occurs when the attacker begins to seriously consider an attack while the other side prepares for retaliation.³⁶ However, as defined in this study, extended nuclear deterrence is more general and enduring, with the United States maintaining nu-

clear and military forces to defend Turkey even though no attack is imminent.³⁷ Despite this difference, many of the elements for credibility may still apply for a more general deterrence because implementing or strengthening these elements—political, economic, and military ties—requires a long-term strategy. In other words, these credibility elements must be in place before a conflict.

All theories tested deterrence against an attacker state. However, in this study the attacker is unknown or may be a non-state, such as a terrorist organization. These deterrence elements may still apply regardless of the origin of attack. Although not inclusive, combining the conclusions and results of these studies provides a way to measure the credibility of US extended deterrence for Turkey. Table 1 summarizes these elements from each of the three researchers and applies them to this case study.

To summarize, the credibility of extended deterrence depends more on the defender-ally relationship than on the strength of the defender's military or nuclear forces. Measuring the strength of this credibility includes many elements, but the most important include alliances, foreign policy support, foreign trade, military arms transfers, local military balance, and the presence of nuclear forces.

For this study, Turkish policy makers were asked in interviews to rank the applied deterrence elements in order of importance. Many provided the following:

1. Stability of US-Turkish alliances
2. US support for Turkish foreign policies and US interests in the Middle East
3. US-Turkish foreign trade
4. US military arms transfers to Turkey
5. Numbers of US forces based in Turkey
6. Status of US nuclear forces

These elements are evaluated in the next chapter to provide an assessment of US extended nuclear deterrence credibility for Turkey. Addressing and strengthening these credibility ele-

Table 1. Elements of credibility for extended deterrence

Researcher(s)	Huth and Russett	Danilovic	Signorino and Ahmer	Combined elements applied to case study
Elements		Regional alliance bonds/diplomatic exchanges	Military alliance	Strength of US-Turkish alliances (bilateral, NATO, others)
		Past defender behavior in region/costly signals		US-Turkish foreign policy support trends/US interest in Middle East
	Foreign trade	Regional foreign trade	Foreign trade	US-Turkish foreign trade trends
	Arms transfers		Military arms transfers	US-Turkish military arms transfers trends
	Local military balance		Long-term balance of forces	US forces in Turkey trends
			Defender possesses nuclear weapons	Presence of US nuclear forces

Created by author based on Paul Huth and Bruce Russett, "What Makes Deterrence Work?," World Politics 36, no. 4 (July 1984): 496–526; Vesna Danilovic, "Sources of Threat Credibility," Journal of Conflict Resolution 45, no. 3 (June 2001): 341–69; and Curtis A. Signorino and Ahmer Tarar, "A Unified Theory of Extended Immediate Deterrence," American Journal of Political Science 50, no. 3 (July 2006): 586–605.

ments may have a dual purpose—they may also affect Turkish leadership thinking about pursuing nuclear weapons.

Linking Extended Nuclear Deterrence and Nonproliferation

Although deterrence against an attack on the United States plays a prominent role in American nuclear weapons policy, the political uses of nuclear weapons also include assurances, or security guarantees, to allies for the purpose of deterring an attack on them and as a “bargain” to discourage proliferation. This use for nuclear weapons has been mentioned in US policy documents and statements. The 2006 *National Security Strategy*, in referring to the security provided to allies by the “New Triad” argues, “Such security commitments have played a crucial role

in convincing some countries to forgo their own nuclear weapons programs, thereby aiding our nonproliferation objectives.”³⁸ Additionally, the *National Security and Nuclear Weapons in the 21st Century* states, “US nuclear weapons deter potential adversaries from the threat or use of weapons of mass destruction against the United States, its deployed forces, and its allies and friends. In the absence of this ‘nuclear umbrella,’ some non-nuclear allies might perceive a need to develop and deploy their own nuclear capability.”³⁹

One way to measure the US nuclear umbrella’s effectiveness as a method of nonproliferation requires examining the potential warnings and indicators revealed by a state considering tipping towards developing a nuclear weapons arsenal. Tipping indicators have been exhaustively studied and can be divided into two categories: intentions and capabilities.⁴⁰ This section provides a review of these warnings and indicators, arguing that elements of deterrence credibility can affect them by providing proliferation disincentives.

In offering warnings and indicators of proliferation, researcher Peter Lavoy acknowledges that an acute security threat can be a precursor to proliferation, but by itself is insufficient. Instead, Lavoy argues, national leadership plays the greatest role, often providing overt signals of proliferation intentions.⁴¹ Calling these signals “nuclear mythmaking,” Lavoy defines them as occurring when national leaders

1. emphasize their country’s insecurity or its poor international standing;
2. portray this strategy as the best corrective for these problems;
3. articulate the political, economic, and technical feasibility of acquiring nuclear weapons;
4. successfully associate these beliefs and arguments; and
5. convince senior decision makers to accept and act on these views.⁴²

Reinforcing Lavoy’s argument, political scientist Etel Solingen provides a theory for predicting the proliferation intentions of state leadership. In Solingen’s award-winning book *Nuclear Logics*, he explains that the relationship between a ruling re-

gime and its state is “the most important frontier for understanding nuclear choices and outcomes.”⁴³ Solingen concludes that state leaders with economic growth and global economization agendas are less likely to advocate nuclear weapons programs than states that are inward-looking and less engaged in the global economy.⁴⁴

In addition to leadership influence, Lavoy said that technical nuclear capabilities such as political and international support, economic feasibility, military employment capability, and technical feasibility are important warnings and indicators. However, each capability will require influence by the myth-makers for legitimacy.⁴⁵ Of these capability indicators, Lavoy further defines technical feasibility to include scientific training and education, procurement, and an increasing role of military and intelligence organizations in nuclear efforts.⁴⁶ Researcher Alexis Blanc added the development of fissionable material (mining, milling, and refining the nuclear materials for constructing a nuclear bomb), weapons research, and the country’s status with the Nonproliferation Treaty (NPT) as additional indicators of feasibility.⁴⁷ Table 2 summarizes these researchers’ warnings and indicators.

Several of these warning and indicator factors may be influenced by the elements of credibility for extended deterrence. For example, ensuring the strength of US-Turkish alliances may affect how Turkish leadership perceives the seriousness of an Iranian nuclear weapons capability. Additionally, if the United States remains the predominant military arms exporter to Turkey, then this dependence on US arms may increase the effort and expense required for Turkey to field its own independent nuclear weapons delivery system. Similarly, strong economic ties between the United States and Turkey may contribute to economic growth, encouraging Turkish leadership to remain outward looking in their economic policies, which decreases the likelihood of a Turkish nuclear weapon according to Solingen.

Summary and Cautions

The primary role for US nuclear weapons in the post-Cold War world is for political uses. Without a dominant adversary,

Table 2. Nuclear weapons tipping point warnings and indicators

Type Indicator	Indicator/Warning	Definition	Application to Case
Intentions	Rise of security threat	Major shift in country's security situation such as an initiation or acceleration of a neighbor's nuclear bomb program	–Iran successfully builds nuclear weapon –Increase in Middle East nuclear proliferation
	Regime and state relationship	–Outward looking: leaders advocate economic growth and global integration –Inward looking: leaders and populace less dependent on international markets, investments, institutions, more nationalistic	–Regime policies for economic growth –Regime trends towards nationalism
	Leadership mythmaking	Leadership emphasizes security concerns: –Presents nuclear weapons as a solution –Public statements, policy debates –Travel patterns (leadership and scientific/program managers) –Convince others in government to do the same	–Leadership public statements and policies on nuclear weapons –Leader/scientific travel patterns
Capabilities	Technical feasibility	–Scientific training/education –Procurement –Military and intelligence organizations assist nuclear efforts –Support from other states –Fissionable material production –Weapons development	–Turkish investment in nuclear research –Turkish investment in civilian nuclear power –Nuclear support from other states (Pakistan/Russia) –Progress on refining fissionable material –Weapons development progress
	Economic feasibility	–Capacity to meet financial costs –Capacity for industrial spin-off	–Financial abilities –Civilian nuclear power capability
	Political/international support	Capacity to manage political problems with developing nuclear weapons: –Impact on relations with other states –Effect of alliance commitments on regime stability –Treaty obligations	–Turkish popular support for military nuclear program –Turkish popular support for civilian nuclear program –Importance of alliances on regime stability –NPT obligations
	Military/strategic employment capability	Capacity to develop operational nuclear weapons, policies, and military operations	–Turkish military capability to field, command/control, and employ nuclear weapons

Created by author based on Peter R. Lavoy, "Nuclear Proliferation over the Next Decade," *Nonproliferation Review* 13, no. 3 (November 2006): 434–54; and Etel Solingen, *Nuclear Logics* (Princeton, NJ: Princeton University Press, 2007), 13–17.

military targeting has become a lesser reason to maintain a nuclear arsenal. One of the political uses for US nuclear weapons is extended nuclear deterrence, which is the use of nuclear weapons to protect an ally from attack. Deterrence requires credibility, which is composed of many elements. The credibility of a defender's extended deterrent may not be based solely on the strength of the defender's military (or nuclear) forces. Instead, credibility elements include the strength of alliances between the defender and ally, the defender's political and economic support for the ally, trade relationships, and the status of military forces, including the presence of nuclear weapons. These elements not only contribute to deterrence credibility, but may also influence the ally's decision to pursue its own nuclear weapons arsenal. In other words, ensuring a credible extended deterrent may be a method of preventing proliferation. Strong alliances decrease the impact of a rising security threat. Additionally, ties between a defender's and an ally's economies and military may positively influence an ally's perception of its own regime strength, making a decision for building a nuclear weapon less likely.

Some of this chapter's suppositions must be accepted cautiously. The links between extended nuclear deterrence, credibility, and nonproliferation are largely theoretical. Much of the theory is based on immediate deterrence against a specific attacker and not on long-term deterrence against an undefined foe. Additionally, deterrence success is difficult to measure—the fact that an attack did not occur may be the result of many factors, of which some may never be known. Also, deterrence theory focuses on deterring an adversary rather than deterring an ally from considering proliferation. Nevertheless, many of the elements of credibility and the warnings and indicators for nuclear tipping still may provide a useful model for measuring the effectiveness of the US protective umbrella for the Republic of Turkey and for assessing Turkey's incentives and capabilities to pursue its own nuclear weapons.

Notes

1. Woolf, *Nuclear Weapons in US National Security Policy*, 4, 20–22. To address shortfalls in strategic vision, the US Congress commissioned a study

on 11 July 2008 to “examine and make recommendations with respect to the long-term strategic posture of the United States.” See US Institute of Peace, “Congressional Commission on the Strategic Posture.”

2. McDonough, *Nuclear Superiority*, 14.

3. Gaddis, *Strategies of Containment*, 80.

4. McDonough, *Nuclear Superiority*, 18.

5. Cold War historian Gaddis recounts the conversation between President Eisenhower and his secretary of state John Dulles: “If we defend Quemoy and Matsu,” Dulles told Eisenhower in March 1954, “we’ll have to use atomic weapons.” Eisenhower agreed and deliberately let it be known that the use of nuclear weapons was under consideration: “I hoped this answer would have some effect in persuading the Chinese Communists of the strength of our determination.” Gaddis assesses that “Mao Zedong did back down, something he might not have done had it not been for the American nuclear threats.” On nuclear weapons influencing the outcome of the Korean War, Gaddis comments, “It is clear now, however, that Chinese and North Korean exhaustion, together with Stalin’s death in March 1953, brought about the [Korean] armistice.” Gaddis, *Strategies of Containment*, 167–68.

6. McDonough, *Nuclear Superiority*, 19. However, US nuclear inventories and delivery systems grew considerably in the Kennedy and Johnson administrations, as McDonough states, “to make nuclear deterrence more credible and nuclear war, if it indeed took place, more limited.”

7. *Ibid.*, 21.

8. *Ibid.*

9. *Ibid.*, 23.

10. *Ibid.*, 25.

11. *Ibid.*

12. Schmitt, “Bush’s Arm Plan.”

13. DOD, *National Security Strategy*, 1991.

14. NATO, “NATO’s Nuclear Forces,” 5.

15. *Ibid.*

16. *National Security Strategy*, 2006; and DOD, *National Defense Strategy*.

17. Gates, “Nuclear Weapons and Deterrence in the 21st Century, Carnegie Endowment for International Peace,” 4.

18. Huth and Russett, “What Makes Deterrence Work?,” 496.

19. The origin of the term is uncertain. Extended nuclear deterrence is mentioned by Weede, “Extended Deterrence by Superpower Alliance,” 231–54; Glaser, “Nuclear Policy without an Adversary;” Rosen, “After Proliferation,” 9–14; and Solingen, *Nuclear Logics*, 59. Dr. Bradley Roberts of the Arlington, VA-based think tank Institute of Defense Analyses holds regular workshops on US extended nuclear deterrence.

20. *National Security Strategy*, 22. The old triad, a Cold War construct developed for nuclear delivery redundancy, consisted of nuclear forces employed using aircraft, submarines, and land-based ICBMs.

21. Danilovic, “Sources of Threat Credibility in Extended Deterrence,” 341–69; and Huth and Russett, “What Makes Deterrence Work?,” 496–526.

22. Danilovic, “Sources of Threat Credibility in Extended Deterrence,” 344.

23. Ibid., 346.
24. Ibid., 348.
25. Huth and Russett, "What Makes Deterrence Work?," 497.
26. Danilovic, "Sources of Threat Credibility in Extended Deterrence," 348.
27. Huth and Russett, "What Makes Deterrence Work?," 516.
28. Ibid., 524.
29. Danilovic, "Sources of Threat Credibility in Extended Deterrence," 348.
30. Ibid., 365.
31. Ibid., 355.
32. Ibid., 366.
33. Signorino and Tarar, "A Unified Theory of Extended Immediate Deterrence," 586–605.
34. Ibid., 592.
35. Ibid., 598.
36. Huth and Russett, "What Makes Deterrence Work?," 496.
37. Ibid.
38. *National Security Strategy*, 22.
39. US Department of Energy and DOD, *National Security and Nuclear Weapons in the 21st Century*, 1.
40. Sagan, "Why Do States Build Nuclear Weapons?," 54–86; Solingen, *Nuclear Logics*; and Blanc and Roberts, "Nuclear Proliferation."
41. Lavoy, "Nuclear Proliferation over the Next Decade," 435.
42. Ibid.
43. Solingen, *Nuclear Logics*, 13.
44. Ibid., 17.
45. Lavoy, "Nuclear Proliferation Over the Next Decade," 437.
46. Ibid.
47. Blanc, "Nuclear Proliferation."

Chapter 3

Assessing US Extended Nuclear Deterrence for the Republic of Turkey

[On relations between the United States and Turkey]: It is not as good as before. There is a chance to make better.

—Turkish Parliament Member (2008)

Help aid the Kurdish issue solution. It is international, not just internal. If it is [a] problem for Turkey, if [the] United States is not helping, the US loses credibility.

—Turkish GTP (strong Turkey party)
Board Member (2008)

The presence of NATO prevents Turkey [from pursuing nuclear weapons]. But that does not mean if NATO loses them [nuclear weapons], then Turkey will get them. Domestic support is zero.

—Turkish Foreign Minister
(December 2008)

In a 2008 essay for the Turkish paper *Today's Zaman*, Turkish author Mehmet Kalyoncu provided a scenario in which Turkey decides to build nuclear weapons.¹ He envisioned declining US presence and influence in Iraq coupled with an increasingly aggressive Iran. While completing a nuclear weapons program, Iran increases aggressive rhetoric against Israel, fuels unrest in Iraq, and encourages domestic strife in Riyadh, Damascus, and Cairo. As a result, the Turkish public pressures the government to address the declining regional security issues and criticizes the ruling party for its reliance on Western security alliances such as NATO, the United States, and the EU. The United States and the EU both fail to provide assistance for a Turkish nuclear weapons program, forcing the Turks to turn to their old ally Pakistan for assistance.

Kalyoncu's fictional scenario includes many of the theoretical elements that influence the credibility of an extended deterrent: alliances, political relationships, regional issues, and trade. This chapter uses credibility elements to evaluate the strength of US extended nuclear deterrence for the Republic of Turkey and assesses the likelihood of Turkey's pursuing a nuclear weapons program. The assessment concludes that the credibility of US extended nuclear deterrence for Turkey is currently good but possibly eroding. This is occurring not because of nuclear reduction policies, nor due to recent nuclear missteps by the Air Force, but because of the perceived weakening of the political-security relationship between the United States and Turkey.

Some of the factors affecting declining credibility may affect Turkish leadership's decision to pursue its own nuclear weapons program. This research concludes that Turkey currently has a low capability to build nuclear weapons but the Turkish leadership may enhance that capability by pursuing a civilian nuclear power program. Divining the Turkish leadership's intentions for a nuclear program is difficult—Turkish leaders publicly state that they do not favor pursuing nuclear weapons. Turkish midlevel ministers echo those assertions, and the Turkish public remains unsupportive of nuclear weapons. However, some US reports and political insiders disagree.

Assessing Credibility Elements for US Extended Deterrence

Using qualitative analysis, this section assesses the elements of extended deterrence credibility as applied to the Republic of Turkey as either good (strong relationship with little impact on deterrence credibility), cautious (some issues or negative trends with some impact on deterrence credibility), or poor (major problems that may negatively affect US deterrence credibility). From an assessment of these elements, this research finds that the credibility of US extended deterrence for Turkey is good but requires some maintenance (see table 3).

Table 3. Assessing credibility elements for US extended deterrence

Elements	Rating	Trend
Strength of US-Turkish alliances (bilateral, NATO, and others)	Good	Worsening
US-Turkish foreign policy support trends/US interest in Middle East	Cautious	Worsening
US-Turkish foreign trade trends	Cautious	Improving
US-Turkish military arms transfers trends	Good	Improving
US forces in Turkey trends	Cautious	Worsening
US nuclear forces	Good	Static
Overall Assessment	Good	

Strength of US-Turkish Alliances=Good/Worsening

The strength of US-Turkish alliances is not as strong as in previous times. Historically, Turkey's bilateral relationship with the United States has had ups and downs (see appendix). In 1952 the United States fully supported NATO membership for Turkey and stationed nuclear missiles in Turkey, sharing launch control under a "dual-key" procedure with Turkish military crews during the Cold War.²

However, one of the major issues causing Turkey to question the value of its US alliance occurred in 1964. After Turkey threatened to intervene to assist Turkish Cypriots battling Greek Cypriots, Pres. Lyndon Johnson sent the "Johnson Letter" to the Turkish prime minister warning that if the intervention caused a Soviet response, the United States might not come to Turkey's aid.³ In 1975 US-Turkish relations were again strained when the United States implemented an arms embargo against Turkey after its military operations in Cyprus resulted in a partition of the island.⁴ Both issues followed the United States' unilateral decision to withdraw its nuclear missiles from Turkey during the 1962 Cuban missile crisis. Even though Turkey was compensated with military aid, the failure of the United States to consult with Turkish leaders stressed their relationship.⁵

The end of the Cold War further tested US-Turkish relations. In 2008 a member of the Turkish parliament said that the relationship was "not as good as before."⁶ His perception possibly was based on events surrounding both US-led Gulf Wars in 1991 and 2003 which cost Turkey financially. Turkey fully supported US efforts during the 1991 Gulf War but suffered economic losses estimated at \$6 billion (US) due to the loss of

inexpensive Iraqi oil imports.⁷ The Turkish parliament narrowly rejected approval for the United States to use Turkey as an invasion route into Iraq at the beginning of the 2003 Gulf War despite a promise of a multibillion-dollar aid package.⁸ There is also a perception in Turkey that the United States and NATO were slow to fulfill their defensive requirements for Turkey in 1991 and 2003 in case of an Iraqi missile attack.⁹

The United States has taken steps to repair its relationship with Turkey, but more may be required. After meeting with Turkish prime minister Tayyip Erdogan in 2007, Pres. George W. Bush announced intelligence aid for Turkey's fight against the terrorist-labeled PKK. Shortly after the meeting, President Bush sent an agreement for US-Turkish civilian nuclear cooperation to the Congress for approval.¹⁰ Maintaining a strong US-Turkish bilateral relationship is important since some Turks believe this is Turkey's most important alliance and it may be the key factor in preventing Turkey from pursuing its own nuclear weapons program.¹¹

NATO also plays a role in Turkey's perception of US extended deterrence. Turkey's relationship with NATO remains strong but may be declining. Turkey is NATO's second largest military force, aiding operations in Kosovo and Afghanistan.¹² NATO serves as an "essential security organization for Turkey" and binds it to Europe without EU membership.¹³ It also provides an additional communication link with the United States.¹⁴ Even though NATO remains an important security alliance, some Turkish officials have expressed dissatisfaction "and a feeling that Turkey has given more to NATO than NATO has provided Turkey."¹⁵ Some younger Turkish military officers have less faith in NATO than older officers who worked within NATO during the Cold War.¹⁶ These trends led a Senate Foreign Relations Committee study to conclude that "Turkish perceptions regarding the trustworthiness and reliability of NATO have declined."¹⁷

US-Turkish relations have endured multiple trials and likely will survive future trials. Most Turkish officials interviewed for this study were optimistic. A Turkish parliament member stated that there is a "chance to make [relations] better with the new US president."¹⁸ Perceptions of US-Turkish alliance strength perhaps are the most important indicator of the credibility of

US extended deterrence for Turkey. These perceptions do not rely solely on alliance strength. They may change based on how effectively the United States and Turkey can resolve, or at least tolerate, their diverging approaches to Middle East policy.

**Foreign Policy Support Trends/US–Middle East
Interest=Cautious/Worsening**

Since 2003 US and Turkish foreign policies, especially in the Middle East, have become divergent, and the trend is worsening. Additionally, Iran's pursuit of a nuclear program, presumably to obtain nuclear weapons, further complicates US-Turkish relations because each differs in its approach to the problem. Turkey maintains dialogue with Iran while the United States has not.¹⁹ This difference may be because Turkish leaders do not perceive an Iranian nuclear weapon as a security threat. Instead, they see it as a threat to the regional power balance.²⁰

Turkey and the United States differ on policy approaches to Iran and also on other regional issues. Since the majority election of Turkey's Justice and Development Party (AKP) in 2007, the new president and prime minister have adopted foreign policies of engagement with Iran, Syria, and Sudan, as well as with the Palestinian political organization Hamas.²¹ The AKP's policies of engagement are at odds with the United States' attempts to isolate or sanction these nations and regimes. Unless the United States and Turkey find a more common ground for Middle East policies, the differences in approach may damage relations between the two allies and negatively affect Turkish perceptions of US extended deterrence.

US-Turkish Foreign Trade Trends=Cautious/Improving

Neither Turkey nor the United States depends on the other for significant trade volume. Since the 1980s Turkey's economy has become more open and less state-directed, causing export levels to dramatically increase.²² As a result, trade levels between the two countries continue to grow. US exports to Turkey doubled from \$3.1 billion (B) in 2002 to \$6.6B in 2007.²³ Additionally, between 1947 and 2007 the United States provided Turkey over \$12.5B in economic aid and more than \$14B in military assistance.²⁴

However, the United States contributes only a small fraction to Turkey's total imports and exports. In 2007 Turkey's total imports were over \$139B, but the US share was only \$6B.²⁵ In 2006 the United States ranked as Turkey's fifth largest trading partner, providing only 4.8 percent of Turkey's imports.²⁶ Turkey's major import suppliers include Russia (13.8 percent), Germany (10.3 percent), China (7.8 percent), Italy (5.9 percent), the United States, and France (4.6 percent).²⁷ The top four US trade items sold to Turkey were iron and steel, cotton, aircraft and aircraft parts, and heavy machinery and machinery parts.²⁸ Similarly, export numbers are low. The United States is not in the top five export partners for Turkey; trade coming to the United States is less than 4 percent of Turkey's total exports. Turkey does not have a free trade agreement with the United States and is not in the top 30 importer/exporter nations to the United States.²⁹

Because Turkey and the United States do not depend extensively on each other for economic wealth, foreign trade is not a significant factor influencing the credibility of the extended deterrent. Theoretically, because the United States and Turkey have a low trade dependency, the United States might be less likely to aid Turkey if it is attacked. Despite the low commercial trade dependence, military arms trade between the two countries is significant.

US-Turkish Military Arms Transfer Trends=Good/Improving

The United States maintains robust arms sales to Turkey with about 80 percent of its military's "dense-industrial activity" conducted with the United States.³⁰ In the years from 1950 to 2007, foreign military sales from the United States to Turkey were the third highest among European countries at \$12.8B (the United Kingdom ranked first at \$15.8B, and Germany was second at \$14.4B).³¹ From 1998 to 2001, Turkey was the sixth largest purchaser of US defense articles and services totaling \$2B (Saudi Arabia was the largest with \$12.6B).³² From 2002 to 2005, Turkey was the 10th largest receiver of US defense goods totaling \$1B (the largest was Egypt with \$5.8B). In 2005 Turkey received \$1.5B in defense contract agreements from the

United States (Greece was first with \$2.1B).³³ These purchases represent about 10 percent of Turkey's total expenditures on military equipment during the mid-2000s.³⁴

Although not the highest military arms sales partner for the United States, Turkey is and has been a significant recipient of US military sales, and the trend will likely continue. In 2007 Turkey signed an agreement to purchase about 100 F-35 Joint Strike Fighters. Turkish defense officials expressed specific interest in the "block 4" F-35 version—a DCA able to perform both conventional and nuclear missions.³⁵ One Turkish minister remarked in 2008 that Turkey would like "to continue to play a part" in the DCA mission as a way to share the burden and maintain a voice in NATO nuclear policies.³⁶ Strong military arms sales can add to the credibility of US extended deterrence for Turkey.

US Forces in Turkey Trends=Cautious/Worsening

Despite strong military equipment sales, the numbers of US forces stationed in Turkey have steadily decreased since the end of the Cold War. Today, the United States maintains a major military presence at only one installation in Turkey—Incirlik Air Base (AB)—and deploys fewer than 2,000 military personnel throughout the country.³⁷ Even prior to the end of the Cold War, US forces in Turkey faced restrictions due to political wrangling. In July 1975, shortly after the United States announced an arms embargo against Turkey in response to its military intervention into Cyprus, Turkey voided a 1969 defense cooperation agreement and closed 25 US military installations.³⁸ The bases were reopened in March 1976, but under Turkish control. In 1980 the United States and Turkey signed a bilateral defense and economic cooperation agreement that, in some circumstances, requires Turkish parliamentary approval for the United States to use Turkish air bases for reasons other than training.³⁹

By 1984 there were 11 major US military facilities, including air bases, naval facilities, and intelligence sites, hosting about 24,000 American troops and dependents in Turkey.⁴⁰ The end of the Cold War brought drastic reductions. In 1997 the United States announced a 40–50 percent reduction in personnel per-

manently assigned to Incirlik AB as part of a realignment that returned more than 800 US military locations in Europe to the host nations.⁴¹

Exercising its rights under the 1980 agreement, Turkey placed restrictions on US use of Turkish facilities and bases for operations supporting the 2003 Iraq war.⁴² Theoretically, the reduction of US military presence in Turkey decreases the credibility of its extended deterrent. Additional troop withdrawals may cause Turkish leadership to question US dedication to defending Turkey because these reductions remove an important indicator of the US commitment to NATO.

Presence of US Nuclear Forces=Good/Static

Turkish policy makers believe that the United States should maintain a nuclear arsenal, with the makeup of that arsenal a US matter. Turkish officials also strongly support the presence of US nuclear weapons in Europe to assist NATO. They maintain that US nuclear weapons are an important political symbol of US commitment to both the NATO alliance and Turkey.⁴³ Summarizing interviews with senior officials, Turkish researcher Mustafa Kibaroglu concluded:

Turkish officials consider nuclear weapons more as political weapons than as having a significant military value; they do not seriously think of contingencies where nuclear weapons could or even should be used. Having said that, they do believe in the deterrent value of US nuclear weapons stationed in [NATO countries]. The fundamental reason why Turkish officials want to keep the [nuclear] weapons [in NATO] has more to do with the nature and the scope of Turkish-American relations in particular and Turkey's place in the Western alliance in general. Turkish officials also see the deployment of these weapons as part of the "burden sharing" principle within the Alliance.⁴⁴

Midlevel Turkish officials assert that US nuclear weapons supporting NATO are an incentive for Turkey to not seek a nuclear weapons program. However, one official confided if NATO "loses them," Turkey likely will not pursue its own nuclear weapons program since its "domestic support is zero."⁴⁵

The mishandling incidents by the US Air Force in August 2007 and March 2008 had little impact on Turkish perception about the strength of the US nuclear arsenal as an extended deterrent. Most interviewed were not familiar with the incidents or only vaguely recalled the events. Most ministers were more

concerned about a paragraph in a 2008 Air Force Blue Ribbon Panel report that implied NATO nuclear weapons were not adequately secured.⁴⁶

Officials interviewed for this study also believe that the current US nuclear arsenal is adequate for extended nuclear deterrence. However, they suggested discussing and consulting with allies prior to US changes in policy or nuclear force structure, especially if changes would affect weapons support to NATO. They stated that consultations and discussions demonstrate commitment to the alliance and also acknowledge the allies' contributions to alliance burden-sharing.⁴⁷

Summary: US Extended Deterrent Credibility=Good but Cautious

This research assesses that overall US credibility to provide an extended deterrent to Turkey is good, but some areas may require improvement. First, alliance building and assurance activities remain important. Often, alliance building and assurance can take the form of consultations prior to decision making to avoid allegation of unilateralism. Second, although US-Turkish foreign policies may not ever mesh perfectly, discussion and inclusion may be ways to improve this credibility element. Third, any improvements to trade relations, such as reducing trade barriers, also may strengthen US-Turkish ties. Finally, US military forces assigned in Turkey are an important element of credibility and should not significantly decrease. Nearly all interviewed stated that Incirlik AB is an important symbol of US-Turkish relations. Maintaining or improving these elements of credibility may also prove useful in assuring Turkish decision makers that pursuing a nuclear weapons program is unnecessary.

Assessing Nuclear Weapons Tipping Point: Warnings and Indicators

Indicators of nuclear weapons tipping are related to elements of credibility; the quality of credibility elements may affect the will of an ally to tip. To assess the likelihood of Turkey pursuing a nuclear weapons program, this research rated each of the

warning and indicators provided in table 4 as low (limited potential for affecting decision to proliferate), cautious (an area of concern), or high (extensive potential for effecting decision to proliferate). The short-term probability that Turkey may tip is low. However, Turkish decision makers may hedge by building a civilian nuclear power program. Indigenously building a nuclear weapon could take Turkey two to 11 years.⁴⁸ With assistance from a third party, such as Pakistan, the time could be much shorter. The complete assessment is depicted in table 4.

Although some high-level Turkish political leaders allegedly stated privately that Turkey is considering a nuclear weapons program, there is little public acknowledgment and even less domestic support for such a program.⁴⁹ However, due to regional security issues—Iran's suspicious nuclear program—Turkish leaders may become more interested in pursuing nuclear hedging capabilities by further developing their civilian nuclear program.

Rise of Security Threat=Cautious

After the Cold War, threats to Turkish security became more diverse, but few seem to require Turkey to develop nuclear weapons for its defense. However, if Iran develops a nuclear weapons capability, Turkish leadership may face pressure to hedge against the regional influence Iran could gain from attaining a nuclear-armed status.⁵⁰ A Turkish minister noted, "Politically speaking, it hasn't been possible to go ahead so far, but now because of Iran, the nuclear energy option is on the table."⁵¹ In interviews with senior US officials, Turkish officials concede that a strong US-Turkish alliance could provide a non-proliferation incentive even if Iran builds a nuclear weapon. These officials provided the following insights to a US Senate Foreign Relations Committee staff study after a closed-door interview session:

These politicians emphatically responded that Turkey would pursue nuclear weapons as well. They stated "Turkey would lose its importance in the region if Iran has nuclear weapons and Turkey does not." Another said it would be "compulsory" for Turkey to obtain nuclear weapons in such a scenario. However, when staff subsequently asked whether a US nuclear umbrella and robust security commitment would be sufficient to dissuade Turkey from pursuing nuclear weapons, all three individuals agreed that it would.⁵²

Table 4. Assessing nuclear tipping point warnings and indicators

Type Indicator	Indicator/Warning	Application to Case	Assessment	Trend
Intentions	Rise of security threat	<ul style="list-style-type: none"> –Iran successfully builds nuclear weapon –Increase in Middle East nuclear proliferation 	Cautious	Increasing caution
	Regime and state relationship	<ul style="list-style-type: none"> –Regime policies for economic growth –Regime trends towards nationalism 	Low	Increasing caution
	Leadership myth-making	<ul style="list-style-type: none"> –Leadership public statements and policies on nuclear weapons –Leader/scientific travel patterns 	Low	Steady
Capabilities	Technical feasibility	<ul style="list-style-type: none"> –Turkish investment in nuclear research –Turkish investment in civilian nuclear power –Nuclear support from other states (Pakistan/Russia) –Progress on refining fissionable material –Weapons development progress 	Low/cautious	Increasing caution
	Economic feasibility	<ul style="list-style-type: none"> –Financial abilities –Civilian nuclear power capability 	Low	Steady
	Political/international support	<ul style="list-style-type: none"> –Turkish popular support for military nuclear program –Turkish popular support for civilian nuclear program –Importance of alliances on regime stability –Nonproliferation treaty obligations 	Low	Steady
	Military/strategic employment capability	<ul style="list-style-type: none"> –Turkish military capability to field, command/control, and employ nuclear weapons 	Low	No change

One minister said that Turkey has no plan to pursue nuclear weapons, but that could change if “everybody else [in the Middle East] got them.”⁵³

Turkey’s most acute threats are generally regional. First, terrorist attacks from the PKK, which maintains bases in northern Iraq, are the primary threat. Nearly every interviewee for this research stated that US assistance to combat PKK terrorism was the best way the United States could strengthen its credibility with Turkey.

Second, Turkey is concerned about Iraqi stability. Turkey fears that anarchy in Iraq could result in a Kurdish state carved from northern Iraq and southeastern Turkey. One interviewee stated, “Help aid the Kurdish issue solution. It is international, not just internal. If it is [a] problem for Turkey, if [the] United States is not helping, the US loses credibility.”⁵⁴

Third, Turkey is troubled about Cyprus. Disagreement with Greece on the future of the split Turkish-Greek populace on the island threatens Turkey’s bid for EU membership and strains relations with its NATO partners.⁵⁵

Fourth, Turkey desires good relations with its neighbors, specifically Iran, Russia, Armenia, and Syria. It shares a border with eight countries, and many of its neighbors, such as Armenia, Azerbaijan, Greece, Iraq, and Georgia, provide a wide range of security and political challenges for Turkish leaders.

Finally, internal stability, which is closely tied to economic stability and energy security, is an important concern for Turkish leaders.⁵⁶ To most Turks, these issues are more pressing than Iran’s nuclear program. These issues also provide avenues for the United States and Turkey to improve their political and economic relationships which, in turn, could strengthen US extended deterrence and decrease the incentives for a Turkish nuclear program.

To manage these threats and issues, Turkey depends on support from NATO, the EU, and the United States. Turkish leaders desire strength from these entities because any weakening of these alliances threatens Turkish political and economic security and could encourage Turkish leaders to consider a nuclear weapon program.⁵⁷

Regime and State Relationship=Low

The relationship between Turkey's leaders and its populace is becoming increasingly open and democratic. This trend diminishes the possibility of Turkey going nuclear. Since its reelection to a parliamentary majority in July 2007, the AKP has pursued reforms that aid economic growth and strengthen democracy. The party's top priority is joining the EU.⁵⁸ Turkish president Abdullah Gul announced that EU membership was the government's "main agenda."⁵⁹ Pursuit of EU membership resulted in domestic reforms as early as 2001 when the Turkish Parliament approved constitutional amendments improving the rights of women, eliminating virginity tests for schoolgirls, and abolishing the death penalty during peacetime.⁶⁰ In 2004 legislative reforms continued with penal code revisions that provided greater protections for women and tougher penalties for torture and honor killings.⁶¹ EU membership also provided incentives for Turkish civilian leadership to redefine the military's role in politics by changing the National Security Council from a military-led authority to a civilian-led advisory group.⁶² These moves to improve the quality of Turkish democracy have also positively influenced economics.⁶³

Since the 1980s incentives and reforms enacted by the Turkish government changed the economy from state-run to a growing and outward-looking economy. The result was a boom in export growth from 2.6 percent of gross domestic product in 1979 to 8.6 percent in 1990.⁶⁴ In 1995 Turkey signed a customs union with the EU, contributing to the 6 percent economic growth from 2002 to 2007.⁶⁵ The successes of its open economy are incentives for the AKP to continue these reforms. Theoretically, this shift to a more open and economically secure regime may also provide disincentives to Turkish leaders considering pursuing nuclear weapons. If Turkish leaders decided to seek nuclear armament, these economic gains could be lost because of international sanctions that would undoubtedly follow. In turn, economic hardships could fuel strong public opposition against the government. Currently, it is unlikely that the AKP would be willing to pay this high political price of going nuclear. AKP leaders have publicly stated that they have no interest in developing a Turkish nuclear weapons capability.

Leadership Mythmaking=Low

There are very few indicators of Turkish leaders engaged in “nuclear mythmaking”—signs of advocating a nuclear weapons program as a solution to security or political problems. In discussing regional nuclear proliferation, President Gul stated that Iran has the right to develop nuclear energy but not nuclear weapons. “We don’t want to see weapons of mass destruction in this region. If it’s in our neighborhood, we definitely don’t want to see it, he said.”⁶⁶ However, some high-level Turkish officials have privately remarked to US officials that Turkey may contemplate a nuclear proliferation if Iran continues its nuclear program.⁶⁷ One stated, “Politically speaking, it hasn’t been possible to go ahead so far, but now because of Iran, the nuclear energy option is on the table.”⁶⁸ Midlevel ministers, however, maintain that proliferation may have to be more extensive in the Middle East before Turkish leadership decides to pursue a nuclear program since there is scant domestic support.⁶⁹ Polls confirm the low support for nuclear weapons. In 2006 a survey showed that 88.1 percent of Turks wanted Europe free of nuclear weapons.⁷⁰

Some Turkish mythmaking occurred shortly after the May 1998 nuclear weapons tests by Pakistan and India. On 18 May 1998 retired Turkish general Erdogan Oznal stated that “Turkey must develop its own nuclear policy.”⁷¹ On 14 March 2000 Turkish transportation minister Enis Oksuz said, “Our possession of the nuclear bomb will strengthen our security and enhance our deterrence amid this nuclear environment. Having such a bomb in Turkey’s hand is security. It provides deterrence.”⁷² Since then, public rhetoric from Turkish leaders in favor of pursuing a nuclear program has been nearly nonexistent.

This could indicate that Turkey’s leadership does not have serious intentions for a nuclear weapons program. However, they may consider developing civilian nuclear power as a hedge or using the threat of tipping as a political bargaining chip. Regardless, Turkey’s technical capabilities for a civilian or independent military nuclear infrastructure remain low.

Capabilities=Low

Turkey's current capability for building and operationalizing a nuclear weapon is low.⁷³ With scant indigenous capability, its leadership would need to rely on another country to quickly acquire nuclear weapons. It would take up to two years to develop the infrastructure required to maintain and deploy an acquired nuclear weapon; to manufacture its own nuclear weapon could take up to 11 years.⁷⁴

Technical Feasibility=Low/Cautious

Because Turkey's nuclear program remains in the research phase, its technical feasibility to produce its own nuclear arsenal remains low.⁷⁵ It began nuclear research in 1956 by establishing the Turkish Atomic Energy Commission.⁷⁶ Since that time, Turkey has constructed two research reactors of which only one remains operational at Istanbul Technical University under the UN's International Atomic Energy Agency (IAEA) safeguards.⁷⁷ The Turkish government has attempted to start a civilian nuclear power program many times since the mid-1960s, but each attempt fizzled because of coups, financial difficulties, or pressure from the United States (see appendix). On 28 September 2008, Turkey accepted a bid from Russia's Atomstroyexport for a nuclear power plant. However, financial difficulties may postpone construction.⁷⁸ The United States supplies all of Turkey's fissile material holdings.⁷⁹ Turkey conducts some uranium mining and refining, but some sources claim that no uranium has been produced.⁸⁰

Despite these indigenous limitations, Turkey has a history of contacts with other nations for assistance in nuclear issues. Argentina and Pakistan provided or were suspected of providing nuclear aid.⁸¹ The United States monitored both relationships and was seemingly successful in pressuring Turkish leaders to curtail them.⁸² Although Turkey's nuclear capabilities are low, the government continues to pursue a nuclear energy program which could provide the experience and knowledge necessary for a future weapons program. Additionally, Turkey's traditional ally Pakistan could be a potential source of nuclear weapons expertise if Turkish leadership seriously decided to pursue a nuclear weapons program.

Economic Feasibility=Low

Several of Turkey's attempts to attain a civilian nuclear energy program were abandoned due to financial difficulties. A 1976 deal with two Swedish companies to build a nuclear energy reactor collapsed in the 1980s due to disagreements over financing and a change in governmental leadership after a military coup.⁸³ Despite progress in 1985, negotiations for a nuclear power plant built by a Canadian company also fell apart over financing and payment methods.⁸⁴ In 1994 Turkey again requested bids for a nuclear power plant. A South Korean company won the bid, but financing and domestic opposition caused the project to go nowhere.⁸⁵ Current negotiations with Russia for nuclear power aid have also stagnated. Economically, Turkey would require significant amounts of foreign aid to fund a civilian nuclear energy program.

Political/International Support=Low

There are several political and international barriers that would inhibit Turkish pursuit of a nuclear weapon, causing this indicator to be low. First, a decision to build nuclear weapons would severely strain Turkish alliances with NATO and the United States, as well as jeopardize successful accession into the EU.⁸⁶ Because Turkish military and civilian leaders value these alliances, they are significant barriers for nuclear weapons proliferations. However, a dramatic change in Turkish government to a regime that adopts isolationist policies and devalues these alliances could be a potential warning sign of proliferation. Second, Turkish popular support for nuclear weapons is low, and support for civilian nuclear power is marginal.⁸⁷ Low popular support for both civilian and military nuclear programs provides a significant proliferation barrier to an increasingly democratic and open Turkish government. Third, Turkey is a signatory to nearly all relevant nuclear agreements (see table 5).

Reaffirming Turkey's commitment to nuclear nonproliferation at the 2007 UN Conference on Disarmament, Ahmet Uzumcu, ambassador to the conference, said, "Turkey believes that the NPT is still a unique and irreplaceable multilateral instrument, the cornerstone of the global nonproliferation regime, and the essential foundation for the pursuit of nuclear

Table 5. Status of relevant nuclear agreements for Turkey

Agreement	Party to Agreement?	Significance
NPT	Yes (signed 1969/ratified 1980)	Nuclear Nonproliferation Treaty. Nonnuclear-weapon-state parties agree not to acquire nuclear weapons.
IAEA SGA	Yes (concluded 1980)	International Atomic Energy Agency (IAEA) Safeguards Agreement. All nonnuclear-weapon-state parties to the NPT are required to conclude a comprehensive safeguards agreement with the IAEA.
IAEA AP	Yes (signed 2000/ratified 2000)	Additional protocol to IAEA Safeguards Agreement. Provides IAEA additional authority to investigate a state's nuclear activities.
CTBT	Yes (signed 1996/ratified 2000)	Comprehensive Test Ban Treaty
CPPNM	Yes (ratified 1985)	Convention on the Physical Protection of Nuclear Material
CPPNM Amd	No	Amendment to CPPNM
SQP	No	Small quantities protocol. Some NPT state parties with small quantities of fissionable material have added a small quantities protocol to their safeguards agreements.
CENNA	Yes	Convention on Early Notification of a Nuclear Accident
CACNARE	Yes	Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
CNS	Yes	Convention on Nuclear Safety
SFM	No	Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management

Reprinted from Senate Committee on Foreign Relations, Chain Reaction: Avoiding a Nuclear Arms Race in the Middle East, 110th Cong., 2nd sess., February 2008, 45.

disarmament. We should exert every effort to protect its integrity and credibility.”⁸⁸ Attempts to pursue nuclear weapons would require Turkish leaders to withdraw from these agreements, further straining valued alliances and international relationships. There is no indication that Turkish leaders are considering withdrawing from any of their international non-proliferation or safeguard agreements.

Military/Strategic Employment Capability=Low

Turkey's ability to field, control, and employ a nuclear weapon indigenously is low. It has the ability to contribute DCAs to NATO for its nuclear mission—the Turkish air force maintains F-16 aircraft which can deliver either conventional or nuclear

munitions. However, NATO maintains oversight of the nuclear policy and posture of its members.⁸⁹ In 2002 NATO reduced readiness requirements for its DCAs from weeks to months.⁹⁰ Turkey's only ballistic missile system is its US-supplied Army Tactical Missile System with a 560 kilogram payload, but the system was designed for conventional payloads.⁹¹ With its reliance on NATO's command structure and the United States for potential nuclear weapons delivery systems, Turkey may require years to develop an indigenous employment and command and control capability for its own nuclear weapons.

Few Warnings and Indicators of Real Intentions and Capabilities

There are few warnings and indicators that Turkish leaders have the intention, or are developing the capability, to pursue a nuclear weapons program in the next few years. Turks view Iran's apparent pursuit of nuclear weapons as a spoiler to the regional balance of power, not a security threat. Unless nuclear proliferation becomes widespread in the Middle East, it is unlikely that Turkey will begin a nuclear weapons program. Such a program may also require a change in the open political and economic policies endorsed by Turkish leadership since the 1980s.

As the government becomes more open and decentralized in pursuit of economic improvements and eventual EU membership, the Turkish populace's lack of support for all things nuclear becomes an increasingly important factor for Turkish decision makers contemplating acquiring nuclear weapons. Nuclear mythmaking is low, and no Turkish leader or minister publicly endorses a nuclear weapons program.

Privately, high-level leaders suggest that Turkey may contemplate a nuclear program but also admit that they are secure under the US umbrella of protection—at least for now. Turkish technical, economic, and military capabilities for supporting a nuclear weapons program are also low. Finally, political and international support remains low. Turkey seemingly values its alliances and treaty obligations, making nuclear weapons tipping all the less likely.

Summary and Conclusions

The credibility of America's extended nuclear deterrent for Turkey is good but could be worsening. Although Turkey remains dedicated to NATO and its bilateral relationship with the United States, the methods that the United States and Turkey use to deal with Middle East issues are divergent. US-Turkish trade, another indicator of credibility, is improving, but trade dependence between the two nations is low. An area of caution is the decreasing US military presence in Turkey. Offsetting this concern is the robust military arms trade between the United States and Turkey, one of the few remaining indicators of US commitment to Turkey's defense. Finally, Turkish leaders maintain that US nuclear forces are adequate in providing an extended nuclear deterrent, but strongly link their credibility to the presence of US nuclear weapons in Europe and to Turkey's present and future ownership of DCAs. US nuclear reductions and the recent US Air Force mishaps seemingly had little effect on the perception of the credibility of US extended nuclear deterrence for Turkey.

Maintaining the credibility of US extended deterrence may prevent Turkish leaders from deciding to pursue nuclear weapons.⁹² Turkey's active participation in NATO and its bilateral relationship with the United States may reduce the fear that regional issues seriously threaten Turkish security. Additionally, Turkey's pursuit of EU membership may encourage already increasing trends toward open trade and governance.

Overtly, Turkish leaders do not advocate pursuing nuclear weapons, nor are they aggressively improving technical, economic, or military capabilities. However, pressure to hedge Turkey's position in nuclear expertise by pursuing nuclear energy sources may occur if Iran continues to acquire nuclear production elements. Finally, Turkish leaders would have to renounce their international commitments to NPTs and agreements to build indigenous nuclear weapons. There is little public support for such a reversal.

Notes

1. Kalyoncu, "Why, When and How Turkey Becomes a Nuclear Power."
2. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 63; Cooley, *Base Politics*, 102; and Gaddis, *We Now Know*, 264.

3. Cooley, *Base Politics*, 114; and Larrabee, *Turkey as a US Security Partner*, 27.
4. Cooley, *Base Politics*, 117; and Larrabee, *Turkey as a US Security Partner*, 28.
5. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 30.
6. Unattributed interview with Turkish parliament member (AKP Party), 11 November 2008.
7. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 25; and Larrabee, *Turkey as a US Security Partner*, 28.
8. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 16, 70; and Cooley, *Base Politics*, 132.
9. US Senate Committee on Foreign Relations, *Chain Reaction*, ix.
10. White House, "President Bush and Prime Minister Tayyip Erdogan Discuss Global War on Terror"; and "Bush Seeks Congress Approval for US-Turkey Nuclear Deal."
11. Unattributed interview with Turkish foreign minister, 8 December 2008.
12. US Senate Committee on Foreign Relations, *Chain Reaction*, 39.
13. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 61, 103.
14. *Ibid.*, 65.
15. US Senate Committee on Foreign Relations, *Chain Reaction*, 39.
16. *Ibid.*, 40.
17. *Ibid.*
18. Unattributed interview with Turkish parliament member (AKP Party), 11 November 2008.
19. Larrabee, *Turkey as a US Security Partner*, 12.
20. US Senate Committee on Foreign Relations, *Chain Reaction*, x; and Roberts, "Extended Deterrence in the Emerging Global Security Environment."
21. Larrabee, *Turkey as a US Security Partner*, 79; Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 25; Migdalovitz, *Turkey*, 3; and Lesser, *Beyond Suspicion*, 45.
22. Kasaba, *Cambridge History of Turkey*, 287; and US Department of State, "Background Note."
23. US Department of Commerce, "HS Total All Merchandise—Exports to Turkey in Thousands (\$ USD)."
24. US Department of State, "Background Note."
25. *Ibid.*
26. US Central Intelligence Agency, "Turkey."
27. *Ibid.*
28. US Department of Commerce, "HS Total All Merchandise—Exports to Turkey in Thousands (\$ USD)."
29. US Department of Commerce, "Existing Free Trade Agreements."
30. Larrabee, *Turkey as a US Security Partner*, 27.
31. US Department of Defense, Security Cooperation Agency, "Historical Facts Book," 18–20.

32. Grimmett, "US Arms Sales: Agreements with and Deliveries to Major Clients, 1998–2005," 3.
33. *Ibid.*, 4.
34. Gill, *SIPRI Yearbook 2008*, 239.
35. "Turkey Signs Memorandum of Understanding."
36. Unattributed interview with Turkish foreign minister for NATO, 8 December 2008.
37. The US Air Force maintains a small presence at seven other facilities in Turkey. Office of the Deputy Undersecretary of Defense (Installations and Environment), "Base Structure Report Fiscal Year 2008 Baseline"; and Cooley, *Base Politics*, 259.
38. Banks, Muller, and Overstreet, *Political Handbook of the World*, 1351.
39. Migdalovitz, *Turkey*, 16.
40. Cooley, *Base Politics*, 103.
41. "Number of US Air Force Personnel at Air Base in Turkey Reduced."
42. Larrabee, *Turkey as a US Security Partner*, 29.
43. In a report on Eastern European attitudes on US nuclear policy, one official stated, "Nuclear modernization is a US decision." See Dunn et al., *Foreign Perspectives on US Nuclear Policy and Posture*, part I, slide 31. In interviews by the author, one Turkish minister stated that reductions of nuclear weapons would be "supported by all." However, the same minister maintained that NATO should "not change for the sake of change." Unattributed interview with Turkish foreign minister, 8 December 2008.
44. Kibaroglu, "Isn't It Time to Say Farewell to Nukes in Turkey?," 449–50.
45. Unattributed interview with Turkish foreign minister, 8 December 2008.
46. Unattributed interview with US foreign minister for NATO, 9 December 2008; and Nuclear Threat Initiative, "Review Questions Security over US Nukes in Europe."
47. Unattributed interview with Turkish foreign minister, 8 December 2008.
48. Estimate provided by Roberts, Blunt, and Hersman, "Trends in Proliferation."
49. Unattributed discussion with US government official, 16 January 2009.
50. US Senate Committee on Foreign Relations, *Chain Reaction*, 36.
51. *Ibid.*
52. *Ibid.*, 41.
53. Unattributed interview with Turkish foreign minister, 8 December 2008.
54. Unattributed interview with powerful Turkey party (GTP) nongovernmental organization board member, 22 October 2008.
55. Larrabee, *Turkey as a US Security Partner*, 23.
56. Lesser, *Beyond Suspicion*, 71.
57. Campbell, Einhorn, and Reiss, *Nuclear Tipping Point*, 167.
58. Banks, Muller, and Overstreet, *Political Handbook of the World*, 1353.

59. Kinzer, "US Must Share Power in the New World Order, Says Turkey's Controversial President."
60. Banks, Muller, and Overstreet, *Political Handbook of the World*, 1353.
61. Ibid.
62. Cagaptay, "European Union Reforms Diminish the Role of the Turkish Military."
63. Turkey continues to struggle with EU membership. The key issues range from Turkey's refusal to allow Cyprus shipping into its ports to women's workforce rights and judicial reforms. See BBC, "Q&A."
64. Kasaba, *Cambridge History of Turkey*, 287.
65. US Department of State, "Background Note," 3.
66. Kinzer, "US Must Share Power in the New World Order, Says Turkey's Controversial President."
67. US Senate Committee on Foreign Relations, *Chain Reaction*, 41; and unattributed discussion with US government official, 16 January 2009.
68. US Senate Committee on Foreign Relations, *Chain Reaction*, 36.
69. Unattributed interview with Turkish foreign minister for NATO, 8 December 2008.
70. Greenpeace, "Nuclear Weapons in Europe," 6.
71. Martin, *Nuclear Threat in the Eastern Mediterranean*, 70.
72. Campbell, Einhorn, and Reiss, *Nuclear Tipping Points*, 159; and Martin, *Nuclear Threat in the Eastern Mediterranean*, 70.
73. For a similar conclusion on Turkish capabilities, see Blanc and Roberts, "Nuclear Proliferation," 40.
74. Roberts, Blunt, and Hersman, "Trends in Proliferation."
75. Blanc and Roberts, "Nuclear Proliferation," 39.
76. Kibaroglu, "Turkey's Quest for Peaceful Nuclear Power," 34.
77. International Atomic Energy Agency, "Nuclear Research Reactors in the World."
78. Karabat, "Turkey Inches Forward in Quest for Nuclear Power"; and *RIA Novosti*, "Turkey to Scrap Tender for Nuclear Power Plant—Paper."
79. Reaching Critical Will, "Model Nuclear Inventory—2007."
80. Kibaroglu, "Turkey's Quest for Peaceful Nuclear Power," 41; and Reaching Critical Will, "Model Nuclear Inventory—2007: Turkey."
81. Campbell, Einhorn, and Reiss, *Nuclear Tipping Point*, 145.
82. Ibid.; Martin, *Nuclear Threat in the Eastern Mediterranean*, 38; and Kibaroglu, "Turkey's Quest for Peaceful Nuclear Power," 37–38.
83. Martin, *Nuclear Threat in the Eastern Mediterranean*, 35; and Kibaroglu, "Turkey's Quest for Peaceful Nuclear Power," 35.
84. Martin, *Nuclear Threat in the Eastern Mediterranean*, 36–38; and Kibaroglu, "Turkey's Quest for Peaceful Nuclear Power," 36.
85. Martin, *Nuclear Threat in the Eastern Mediterranean*, 39.
86. US Senate Committee on Foreign Relations, *Chain Reaction*, 40–41.
87. In a 2006 Greenpeace survey, 88 percent of Turks desired Europe free of nuclear weapons. Greenpeace, "Nuclear Weapons in Europe," 6. For a history of domestic reaction to nuclear power, see Martin, *Nuclear Threat in the Eastern Mediterranean*, 48–53.

88. Reaching Critical Will, "Model Nuclear Inventory-2007."
89. NATO, "NATO's Nuclear Forces," 8.
90. *Ibid.*, 13.
91. Arms Control Association, "Worldwide Ballistic Missile Inventories."
92. One study concluded, "Based on meetings with Turkish officials and US Embassy personnel in Ankara, staff believes the state of United States-Turkey relations and Turkish perceptions regarding the reliability of NATO will serve as the decisive factors in Turkey's decision regarding nuclear weapons." US Senate Committee on Foreign Relations, *Chain Reaction*, 41.

Chapter 4

Improving US Extended Nuclear Deterrence for the Republic of Turkey

The United States should not wait until Iran crosses the nuclear threshold before seeking to influence Turkey's nuclear decision-making, and would be wise to take steps now to restore the bilateral relationship with Turkey.

—2008 Senate Foreign Relations Committee Report

The United States and Turkey must find a new foundation for their relationship. While the Soviet threat which prompted their partnership has ended, the United States and Turkey still share many strategic interests, including fighting terrorism and ensuring stability in the wider Middle East region.

—Frances Burwell (2008)

Strengthening US extended nuclear deterrence for the Republic of Turkey requires strengthening the overall political relationship between the two countries. This is not an easy task since US-Turkish foreign policies appear to be diverging and the United States seems to have few levers to influence Turkish leadership decision making. This chapter offers options for strengthening US-Turkish relations in ways that may ensure the credibility of US extended deterrence, which may also provide disincentives for Turkish leaders to pursue a nuclear weapons program.

Addressing Credibility Elements

Because Turkish leadership perceives bilateral and international alliances as important guarantors of its security, the United States should ensure that these alliances and institutions remain effective and meaningful. Failing to consult with Turkish leadership and publicize the dialogue prior to major policy

decisions has harmed US-Turkish relations. Removing Jupiter missiles from Turkey in 1962, the Johnson letter of 1964, and the 1975 arms embargo are still perceived as US slights in contemporary Turkish politics and public opinion.¹ However, efforts to include Turkish leadership in alliance decision making and joint participation in military operations and procurement (burden sharing) may improve the political relationship. Continuing Turkish involvement and leadership in NATO operations, in nuclear and security policy decisions, and in the development of new military equipment, such as the Joint Strike Fighter, encourage burden sharing. Burden sharing, in the words of one Turkish minister “brings [Turkey] to the top of the group, adding political value.”² Additionally, the United States should continue to support Turkey’s bid for EU membership. Failure to achieve EU membership could isolate Turkey from the West. Conversely, achieving EU membership could strengthen Western ties and may provide another disincentive for nuclear weapons proliferation. A US congressional study concluded that the closer Turkey is to US and European political and security institutions, the less likely it will be to pursue a nuclear weapon.³ Supporting alliances that Turkey values can add to the credibility of US extended deterrence.

Keep Bilateral, NATO, and European Alliances Strong and Relevant

Alliances may also provide strong levers for the United States to discourage Turkish leaders from proliferation. In a joint statement with the US secretary of defense, the Turkish minister of defense stated that the “US is important for us as the biggest supporter of our NATO membership.”⁴ If Turkey ever seriously considered pursuing nuclear weapons, then any US move to change Turkey’s status in NATO could have a strong effect on Turkish leaders’ decision-making calculus.

Two important issues require progress in resolving in order for Turkey to better strengthen its alliance ties with the EU and the United States: Cyprus and Armenia. Relations between the island of Cyprus’ two ethnic groups (Greeks and Turks) were always tense.⁵ The United Kingdom, Turkey, and Greece worked out a power-sharing arrangement between the two groups

when Cyprus gained its independence from the United Kingdom in 1960. Following a 1974 Greek military coup on the island, Turkey invaded Cyprus. A UN-monitored partition settled the crisis, with Turkish people settling in the north under Turkish military protection and with Greeks in the south. Cyprus joined the EU in 2004 even though Turkey maintains control of the north. The Cyprus division remains an obstacle for Turkey's accession into the EU and strains its relations with Europe and at times NATO.⁶ The United States should aggressively help broker a resolution to the Cyprus issue.

Despite few gains in resolving Cyprus issues, Turkish leaders have thawed their tense relations with neighboring Armenia.⁷ However, a nearly passed Armenian genocide resolution by a US congressional committee in 2007 threatened to harm US-Turkish relations and make Turkish-Armenian negotiations more difficult.⁸ The proposed resolution condemned the Ottoman Empire for deporting two million Armenians in 1915 and killing an estimated 1.5 million deportees.⁹ The attempted resolution greatly strained US-Turkish relations and remains a thorny issue.¹⁰ Future attempts at a similar resolution could, as a US Senate-commissioned report warned, "significantly damage United States-Turkey bilateral relations, promoting a political estrangement that could impact Turkish perceptions of the US security guarantee. Such a development could ultimately affect Turkey's eventual decision regarding nuclear weapons."¹¹ The United States should find another way to address the Armenian claims or let Turkey and Armenia resolve the matter.¹²

Establish a More Common Vision for the Middle East

US policy makers can expect Turkey to take a more independent approach to foreign policy, especially in the Middle East. The Cold War's end opened Turkey's access to its eight neighbors. Economic incentives and security issues necessitate that Turkish leaders remain aggressively engaged in the region. Although isolation and economic sanctions against adversarial Middle Eastern governments may be useful political tools for the United States, they can be politically and economically costly methods if used by Turkey. As a result, Turkey will po-

litically interact with the region differently than the United States. Additionally, US policy makers can expect the ruling AKP to ease domestic policies that restrict public Islamic practices.¹³ Increased regional engagement (sometimes at odds with US policies) and changing religious tolerations may not be signals that Turkey is developing security alternatives away from the United States and Europe. Instead, these may be signs that Turkish leaders are diversifying Turkey's foreign policy and attempting to improve its credibility with its populace and Middle Eastern nations.¹⁴ The United States could use Turkey's prominent place in the Middle East as a "go-between" for tough issues.¹⁵ Turkey played this role before—in April 2007 Ankara hosted talks between the United States, the EU, and Iran.¹⁶ When Turkey acts as an intermediary between the United States and the Middle East, it can improve its bilateral relationship with the United States. A strong bilateral relationship can improve the credibility of extended deterrence.

Reduce Foreign Trade Barriers

As a way to strengthen alliance credibility, both Turkey and the United States could improve trade relations by decreasing trade barriers. According to a 2008 report from the World Trade Organization's office of the US Trade Representative (USTR), Turkey maintains high tariff rates on food and agricultural products.¹⁷ The report also states that the Turkish government often does not issue import licenses for some after-sales service equipment, distilled spirits, and agricultural goods (such as meat and poultry), essentially banning these products from Turkish markets. Additionally, the USTR report suggests that the Turkish government could improve intellectual property rights and protections for copyright material and pharmaceutical products. Similarly, the United States could reduce trade barriers for Turkish goods.

An April 2008 European Commission report listed US tariffs on food products, textiles, footwear, leather goods, ceramics, glass, and railway cars as significant.¹⁸ Some of these goods, such as textiles, apparel, and industrial machinery, are important export items for Turkey.¹⁹ Altering some of these barriers as well as continuing US foreign direct investment to Turkey

(\$2.1B in 2006) may improve the already increasing trade levels between the two alliance partners. Although changes to foreign trade barriers may not significantly increase US-Turkish economic dependence (in 2008 Turkey was the 31st largest US export market, and the United States was Turkey's fifth), improving trade relations may indirectly add strength to the two countries' political and security relationship.

Maintain or Increase Military Arms Trading and Aid

Turkey already receives a significant portion of its military aid, equipment, and training from the United States and NATO partners. However, these areas can be improved by broadening military exchange programs, expanding NATO exercises, increasing military aid, and adding missions for joint US-Turkish development, such as remotely piloted aerial systems. The US military shared intelligence in 2007 and 2008 to aid Turkish military operations against the PKK. This reportedly had a positive impact on some Turkish decision makers. In 2008 a Turkish parliament member stated that although the United States did not directly help fight the PKK, getting intelligence information from the United States should improve the relationship.²⁰ The United States could consider joint direct military action against the PKK if Turkey exercised its NATO security guarantees to combat terrorism as the United States did following the 9/11 attacks. The US branding of the PKK's Iranian wing as a terrorist organization and the freezing of any of its financial assets should also add to the credibility of US protections for Turkey.²¹ Continuing or increasing military ties is an important element of US extended deterrence credibility, and the United States should look for ways to improve the connection.

Avoid Additional Reductions in Turkey-Based US Military Forces

With its military forces already at a post-Cold War low, the United States should avoid further reductions of forces based in Turkey. One of the important symbols of US security commitments to Turkey is the presence of US troops on Turkish soil. Currently, that presence is concentrated at Incirlik AB near Adana, Turkey. Turkish governmental officials support

keeping the base at Incirlik. One minister stated that the base was “tangible evidence of US-Turkish relations.”²² However, the same minister cautioned that the base “will not be as easy to use.”²³ One noted political analyst reached a similar conclusion: “The United States should therefore not count on being able to use Turkish bases, particularly Incirlik for combat missions in the Middle East.”²⁴ Turkish leaders also play a role in keeping US forces in the region. To ensure that Incirlik remains open, the government should consider easing restrictions on Incirlik’s use.

Maintain Turkey as a Partner in Dual-Capable Aircraft

Turkish officials stated that they would prefer to operate aircraft similar to those used by the US Air Force, preferring types that have the potential for dual roles.²⁵ The Turkish air force operates military F-16 combat aircraft similar to those operated by the US Air Force.²⁶ Some F-16s have a dual-role capability meaning that they can perform both conventional and nuclear missions. Turkish leaders maintain that cooperation on the F-16 replacement, the F-35 Joint Strike Fighter (JSF), “will bolster our relationship and will serve to strengthen the interoperability of our armed forces.”²⁷ Turkey committed \$175 million to the JSF project, and it is now a partner in F-35 development with eight other US allies.²⁸ Block 4 versions of the F-35 are scheduled to be dual capable. US-Turkish partnerships in operating the F-16 and developing the F-35, the DOD’s largest acquisition program in its history, can signal alliance commitment as well as increase military arms dependency. Additionally, Turkey’s participation in the F-35 program may provide the perception that its status is equal to that of other US allies. “Even though our participation might be small concerning the project in question,” stated one Turkish minister on the F-35 commitment, “I would like to stress the fact that whatever the phase we participate in we would like to be and we shall be a partner amongst equals.”²⁹ The United States should maintain and encourage Turkey’s participation in DCA programs as a way to improve the credibility of extended deterrence even if the United States removes its nuclear weapons from Europe.

Keep Nuclear Weapons in Europe—For Now

Until an alternative demonstration of US extended deterrence can be negotiated with Turkish leaders, US nuclear weapons stationed in Europe to support NATO missions should remain. Although difficult to justify for military reasons, the weapons provide an important symbolic and political representation of US commitments to NATO and Turkey.³⁰ They also provide a uniquely close method of burden sharing between the two countries. Similar to the “trip wire” effect of basing US troops in Turkey, nuclear weapons in Europe also provide a trip wire by ensuring a US response if the weapons’ security becomes threatened. More importantly, the weapons also may serve as a disincentive for proliferation. NATO nations hosting US nuclear weapons likely will not perceive the need to start their own nuclear programs.

For Turkey, nuclear weapons based in Europe also ensure that its security concerns are taken seriously.³¹ Turkish political leaders sometimes express the view that Turkey has given more to NATO than it has received. By participating in NATO’s nuclear mission with European-based US nuclear weapons, Turkey earns an equal voice in the alliance and elevates its importance as a bilateral partner with the United States.

If the United States decides to reduce its nuclear weapons presence in Europe, it should do so only after negotiations with NATO allies, specifically Turkey. It is the lack of coordination and negotiation that most harmed the US-Turkish alliance after Pres. John F. Kennedy confidentially decided to remove US Jupiter nuclear missiles from Turkey following the Cuban missile crisis in 1962.³² Some US policy makers and researchers have reported that Turkish leaders are considering an indigenous nuclear weapons program in response to Iran’s apparent pursuit of nuclear weapons, and this would become a near certainty if the United States removed its weapons from Europe.³³ However, midlevel Turkish ministers were less committed, suggesting that the US nuclear presence in Europe can be substituted with other assurances. One stated that “ultimately, they are US weapons. If they disappear, then what is the US’s intent?”³⁴ If the United States reduces or removes its nuclear weapons from Europe, then other extended deterrent credibility

elements may require reinforcement. Additional troop levels, joint missile defense operations, and exchanges involving US Navy nuclear submarines are possibilities for preserving the credibility of US commitments to Turkey's defense.

Adding Weight: Preventing Tipping

Many of the suggestions for improving credibility could have the additional effect of discouraging nuclear weapons proliferation tipping. Encouraging Turkey to forgo the development of nuclear weapons requires addressing potential intentions and discouraging capabilities.

Discouraging Intentions

Discouraging Turkish interest in pursuing nuclear weapons requires decreasing Turkish security threats, avoiding meddling in Turkish internal affairs and monitoring potential Turkish leadership nuclear mythmaking.

The United States should help prevent Turkish security concerns from becoming acute. First, preventing Iran from acquiring nuclear weapons would remove a potential justification for a Turkish nuclear program.³⁵ With its close Iranian ties, the Turkish government could play a role in US-Iranian negotiations, which could also strengthen US-Turkish relations. Additionally, working to prevent widespread nuclear proliferation in the Middle East removes another reason for Turkish leaders to decide to go nuclear. Basing some form of missile defense in Turkey, or integrating Turkey into a European missile defense system, may also provide a way to decrease potential Turkish security concerns as well as increase US military presence on Turkish soil—an important extended deterrent credibility element.³⁶ Finally, the United States should find a way to effectively address Turkey's PKK issues.

Author and researcher Stephen Larrabee recommended the following: (1) press the Kurdish government in Northern Iraq to cease PKK activities and close bases; and (2) insist that northern Kurds arrest and turn over PKK leaders to Turkish authorities.³⁷ Both actions would go far, the scholar argues, to

reducing anti-Americanism in Turkey. PKK terrorism remains Turkey's "most important issue."³⁸

While the United States can aid with Turkey's external threats, it should remain a supportive bystander in Turkish domestic politics. Turkish leadership has adopted economic and domestic policies that have resulted in successful economic growth and global integration. Both are characteristics of countries that are less likely to choose to proliferate. Any perceived meddling by the United States into Turkish politics likely would prove counterproductive and could result in fueling fundamentalism and destructive nationalism—characteristics of states more likely to pursue nuclear weapons.³⁹ To reinforce Turkish trends in economic growth and openness, the United States could increase incentives for foreign direct investments, support pipeline and energy developments, foster tourism, and improve science and technology exchanges.⁴⁰ Better bilateral trade relations could improve deterrent credibility. Additionally, increased trade may lead to increased economic security which could further fuel the Turkish government's trend towards a more open economy.

Finally, the United States should monitor Turkish nuclear mythmaking—statements by political leaders that accentuate security concerns and offer nuclear weapons as a solution. Nuclear mythmaking can be an indicator or warning of proliferation intentions. Leadership's travels to and scientific exchanges with nations that support nuclear weapons proliferation should also be monitored. Both these indicators remain low for Turkey. Renouncing weapons of mass destruction (WMD), the Turkish general staff published the following:

We believe that states of the region should terminate their efforts for developing such weapons [WMD] and their delivery means and become party to the nonproliferation regimes and treaties as soon as possible. In this respect, the need for a WMD-free zone in the Middle East is of paramount importance. Turkey does not possess WMD and does not intend to have them in the future. It adheres to all major international treaties regarding nonproliferation of those weapons and their delivery means where as it actively participates and supports all the works pertaining to non-proliferation in NATO.⁴¹

Official rhetoric condemning proliferation could be expanded to include joint declarations from both Turkey and the United

States (or NATO). Such statements could make proliferation politically risky for Turkey.

Stifling Capability

Although Turkey maintains a low capability to produce its own nuclear weapons, the United States should monitor warning signs of potential changes to those capabilities and offer incentives to Turkey to discourage it from acquiring nuclear weapons. First, the United States should monitor Turkey's technical feasibility for nuclear arms development. This includes Turkish investment in nuclear research and in civilian nuclear power. The "123 Agreement" between the United States and Turkey is a good vehicle for the United States to observe Turkish nuclear activities through cooperation and nuclear technology exchange. Brought into effect on 2 June 2008, the agreement established opportunities for US-Turkish exchanges in technology, materials, reactors, and components for nuclear research and power production.⁴² The agreement also has an added benefit of providing US insight into Turkish nuclear knowledge. It should remain in force, and its provisions aggressively exercised.

Second, the United States should watch potential support from other nuclear suppliers, particularly Russia and Pakistan. In the late 1980s and early 1990s the United States successfully monitored and blocked supposed nuclear technology transfers between Turkey, Pakistan, and Argentina.⁴³ Delaying exchange agreements or threatening alliance standing may prove sufficient levers to discourage proliferation—United States concerns delayed the US-Turkish 123 Agreement until they were "sufficiently resolved."⁴⁴ The United States should aggressively monitor and encourage enhanced international transparency of nuclear technologies transfers, even between allies, and apply international pressure if proliferation occurs.

Third, the United States should monitor Turkish capabilities in fissionable materials refining and weapons development. These capabilities currently are at low levels, and Turkey is party to most UN nuclear agreements allowing IAEA inspections of its nuclear research and mining programs.⁴⁵ The United States should recognize Turkey's compliance with these agree-

ments and encourage Turkish leaders to continue their advocacy of a nuclear-weapons-free Middle East.

Finally, the United States should maintain close ties with the Turkish military and continue to provide military equipment. This relationship offers the United States a way to monitor Turkish military developments and apply pressure with export controls if nuclear weapon capabilities ever emerged.

In addition to technical feasibility, the United States should monitor Turkey's economic capacity to develop nuclear programs. Historically, Turkey's attempts at starting a civilian nuclear program repeatedly faced financial difficulties. If it became evident that Turkey was pursuing a nuclear weapons program, the United States applied economic pressures by reducing or eliminating its foreign direct investments and restricting trade. As a positive incentive, the United States could financially aid Turkey's civilian nuclear program. US financial assistance may ensure Turkish nuclear developments remain demilitarized by keeping the United States knowledgeable of Turkish nuclear technical capabilities.⁴⁶

The United States also should monitor Turkey's treaty obligations, specifically under the NPT. Turkish leaders repeatedly state their support of the NPT and their desire for a Middle East free of WMDs. Going nuclear would require Turkish leaders to abandon their UN nuclear pledges, which could damage Turkish leadership credibility, their NATO standing, and bilateral relationship with the United States. Because alliance relationships are important to Turkish leaders, any threat of alliance damage may prove an effective bargaining lever to prevent Turkey from tipping toward nuclear proliferation.

Summary and Conclusions

Maintaining the credibility of US extended deterrence for Turkey requires a complex strategy of addressing Turkish political and economic concerns to demonstrate the strength of the partnership. Most importantly, Turkey and the United States need to stay actively engaged in their alliances. Unilateral approaches to security issues by either country harm the relationship, while burden sharing and alliance networking make it stronger. Conversely, because NATO and potential EU member-

ship is important to Turkish leaders, it can be an effective lever to discourage proliferation. Reducing trade barriers and increasing military arms sales are additional options that the United States could utilize to improve its credibility as a Turkish security partner. Additionally, US military forces based in Turkey and US nuclear weapons in Europe both remain important symbols of US commitments. Reducing either without negotiating suitable substitutes could weaken US credibility.

The United States should also monitor tipping point warnings and indicators. To mitigate issues that may encourage Turkish intentions or capabilities to pursue nuclear weapons, the United States should act to stifle the impact of potential security threats, such as a nuclear-armed Iran. Keeping Turkey as a partner in JSF development, regional missile defense, and nonproliferation enforcement while simultaneously avoiding meddling in its internal politics may prove effective in reducing the potential reasons for a Turkish nuclear bomb. Also, by monitoring Turkish technical and economic capabilities, the United States could more effectively lead the early application of levers to prevent tipping.

Implementing a strategy to improve extended deterrent credibility that also has the benefit of discouraging proliferation requires a thorough understanding of the ally. The next chapter offers conclusions and policy implications for applying extended deterrence as a method of nonproliferation that may be applicable to other allies.

Notes

1. Unattributed interview with Turkish foreign minister, 8 December 2008.
2. Ibid.
3. US Senate Committee on Foreign Relations, *Chain Reaction*, 43.
4. DOD, "Secretary Gates Press Conference."
5. Banks, Muller, and Overstreet, *Political Handbook of the World*, 1351.
6. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 57.
7. Gursoy, "Obama Discusses Armenia, Mideast, Afghanistan with Turkish Officials."
8. US Senate Committee on Foreign Relations, *Chain Reaction*, 42.
9. US House. *Affirmation of the United States Record on the Armenian Genocide Resolution*, 2007, sec. 2.

10. Gursoy, "Turkey Sees Looming Armenian Resolution in U.S. as a Risk Factor."
11. US Senate Committee on Foreign Relations, *Chain Reaction*, 42.
12. Gursoy, "Obama Discusses Armenia, Mideast, Afghanistan with Turkish Officials." President Obama reportedly signals that the United States "would refrain from taking any step that would harm these efforts."
13. Schleifer, "Turkey Votes to Lift Head-Scarf Ban, but Battle Continues." AKP leadership permitted women to wear head scarves to Turkish universities. As Turkish politics become increasingly democratic, it is likely that political leadership will continue to ease restrictions on public displays of Islamic traditions in order to win the votes of a population that is over 99 percent Sunni Muslim.
14. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 26.
15. Larrabee, *Turkey as a US Security Partner*, 82.
16. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 45.
17. Office of the United States Trade Representative, "Turkey."
18. European Commission, *United States Barriers to Trade and Investment*, 8.
19. US Department of State, "Background Note."
20. Unattributed interview with Turkish parliament member (AKP Party), 11 November 2008.
21. Gursoy, "US Brands PKK's Iranian Wing, PEJAK, a Terrorist Organization."
22. Unattributed interview with Turkish foreign minister, 8 December 2008.
23. Ibid.
24. Larrabee, *Turkey as a US Security Partner*, 29.
25. Unattributed interview with Turkish foreign minister, 8 December 2008.
26. Larsen, *Future of U.S. Non-Strategic Nuclear Weapons Weapons and Implication for NATO*, 75.
27. DOD, "United States and Turkey Sign Memorandum of Understanding."
28. F-35 Joint Fighter Program Office, "The F-35 Lightning II."
29. DOD, "United States and Turkey Sign Memorandum of Understanding."
30. Institute for Defense Analyses, "Extended Deterrence and Assurance in the Emerging Global Security Environment, Case Study."
31. Ibid.
32. Lesser, *Beyond Suspicion*, 20.
33. Institute for Defense Analyses, "Extended Deterrence and Assurance in the Emerging Global Security Environment, Case Study."
34. Unattributed interview with Turkish foreign minister, 8 December 2008.
35. Campbell, Einhorn, and Reiss, *Nuclear Tipping Point*, 167.
36. Ibid.
37. Larrabee, "Turkey's New Middle East Activism," 82.
38. "News Transcript, Secretary Gates Press Conference with Turkey's Minister of Defense."
39. Lesser, *Beyond Suspicion*, 91.

40. Burwell, "Evolution of US-Turkish Relations in a Transatlantic Context," 38–40.

41. Turkish General Staff, "Weapons of Mass Destruction (WMD)."

42. US Department of State, *US-Turkey Agreement for Peaceful Nuclear Cooperation (123 Agreement)*.

43. Campbell, Einhorn, and Reiss, *Nuclear Tipping Point*, 161–64.

44. *American Free Press*, "Bush Pushes US-Turkey Nuclear Cooperation."

45. US Senate Committee on Foreign Relations, *Chain Reaction*, 45.

46. Campbell, Einhorn, and Reiss, *Nuclear Tipping Point*, 167.

Chapter 5

Conclusions and Policy Implications

Extended deterrence is absolutely essential for Turkish security and to support Turkey's decision to renounce nuclear weapons.

—Science Applications International Corporation study, 2006

Conclusions

For the case of the Republic of Turkey, US nuclear reduction policies and the US Air Force's nuclear weapons handling mistakes in 2007 and 2008 did not significantly affect the credibility of the United States' extended nuclear deterrent. Additionally, there is little evidence that disarmament trends or the mishandling events have encouraged Turkish leaders to consider developing a nuclear weapons program. Both the intentions and capabilities for a Turkish nuclear weapon remain low while the credibility of the US promise for extended deterrence remains good, but it may be weakening.

The reason that nuclear reduction and nuclear mishandling issues may not play prominently in Turkish proliferation decision making likely is due to the character of extended deterrence—the credibility depends on many elements, with the status of US nuclear weapons playing a minor part. Which elements an ally values the most depends on that ally's unique security concerns as well as the political relationship established with its protector. For example, South Korea and Japan may more highly value the size and type of the US nuclear arsenal dedicated to their protection due to the potential nuclear threat from North Korea. Therefore, extended deterrence strategies require a specific approach for those allies.

Turkish leaders value their country's alliance relationships, and its bilateral relationship with the United States is the most important. However, Turkey's NATO membership and its selection to serve as a temporary member on the UN Security Council

also provide valued alliance bonds. Additionally, the Turkish government continues to pursue EU membership and lists this as a top priority.¹ To maintain a credible nuclear and military umbrella over Turkey requires the United States to continue to facilitate and encourage Turkish involvement and leadership in these and other alliances. Failing alliance credibility may be the crucial incentive for Turkish leaders to abandon their nuclear weapons abstinence. For Turkey, the quality and size of the US nuclear arsenal plays an important, but much smaller, part in deterrence credibility and as a nonproliferation tool.

Since the end of the Cold War, nuclear weapons have become increasingly more politically useful while their military value has diminished. Nuclear weapons remain valuable bargaining tools for deterrence and, especially in the case of Europe, as symbols of alliance commitment. Nuclear weapons used to extend deterrence to alliances may have an additional benefit of discouraging nuclear weapons proliferation by allies. For this reason, any change to US nuclear posture, such as basing, modernizing, and disarmament, requires close dialogue with allies that rely on a nuclear umbrella—especially with those allies capable of acquiring their own nuclear weapons arsenals.

Turkish leaders likely would withdraw from under US extended deterrence and acquire their own nuclear weapons if they perceived a collapse of alliance credibility. Currently, the warnings and indicators for a Turkish nuclear weapons breakout remain low. Nevertheless, the United States should continually strive to evaluate and, when possible, strengthen the elements of extended deterrence credibility. These elements include alliance strength, US policies and practices in the Middle East, US-Turkish commercial trade, US-Turkish military arms sales, the presence of US military forces in Turkey, and the presence of US nuclear weapons in the United States and Europe. In addition, the United States should maintain a durable nuclear force with some portion of that force based in Europe until other commitment options can be negotiated.

Even if these credibility elements can be improved, US policy makers can expect Turkey to hedge against falling behind a Middle Eastern nuclear race by pursuing a civilian nuclear power program. Iran's pursuit of a nuclear infrastructure, possibly including nuclear weapons, may upset the Middle East

balance of power. To remain politically relevant in the region, Turkish leaders could decide to pursue their civilian nuclear power program more aggressively. A civilian nuclear program builds scientific knowledge and improves regional status. For example, Armenia invited Turkey to assist in its nuclear power plant upgrades despite the historically tense relations between the countries.²

Strengthening credibility elements for extended deterrence may also affect the intentions and capabilities of an ally considering nuclear weapons tipping. Addressing Turkey's most important security concerns not only adds to alliance credibility, but may also discourage proliferation by removing a common cause for tipping: external security threats. Turkey's concerns include

- credibility of NATO, EU, and US support for Turkish security;
- PKK terrorism;
- Kurdish activism in Iraq supporting a separate Kurd state;
- Cyprus;
- relationships with Iran and Armenia;
- energy security and access; and
- economic strength and domestic stability.

Although few of these political and security concerns seem solvable with nuclear weapons, they may provide fuel for myth-making rhetoric to justify nuclear weapons proliferation. One way to dampen pro-proliferation rhetoric is for the United States to remain engaged in Turkish security issues so that no issue becomes too grave.

The US Air Force also may be able to contribute to assuaging Turkish security issues. First, it is important that the Air Force maintain a high level of care and advocacy of US nuclear weapons programs supporting NATO. Although the mishandling of mistakes in 2007 or 2008 did not seem to greatly affect Turkish perceptions of US deterrent credibility, Turkish officials prefer the existing nuclear posture in Europe and oppose unjustified changes.

Second, maintaining Air Force and Turkish DCAs in Europe remains important to Turkey. The aircraft provide a symbol of US commitment to Turkish defense and also represent Turkish dedication to a high-visibility NATO mission.

Third, the Air Force should advocate continued military presence at Incirlik AB. The base is an important gateway to the Middle East as well as the most visible and tangible US military force commitment to Turkish defense. Incirlik AB could provide a hub of support for assisting Turkey in its antiterrorism missions including command and control, surveillance, intelligence, and, potentially, combat operations.

Policy Implications

Know Your Ally as Yourself

Effective extended deterrence, including extended nuclear deterrence, requires a strategy that considers each ally individually. However, policy makers also need to consider linkages in US nuclear arsenal changes—some reductions or force posture changes may be acceptable to one ally but troubling to another. Only with a thorough understanding of an ally's security and domestic concerns can the United States assess the credibility of its extended deterrence. The credibility elements outlined in this paper may provide a starting template for achieving better understanding. Similar studies for Japan, South Korea, and Australia likely would shed light on the most important reasons that those allies might forsake the US nuclear umbrella for weapons of their own.

A Strong Defense May Be the Best Offense

Turkey faces a variety of security challenges. Most are at its doorstep: PKK terrorism, Iraqi instability, Iranian nuclear ambitions, Russian energy politics, Israeli-Hamas conflicts, Georgian-Russian frictions, Cypriot Greek-Turk wrangling, and Armenian-Turkish tensions. The United States can provide political, economic, and military support to help prevent some of these threats from becoming acute by strengthening credibility elements of extended deterrence. Since this re-

quires practicing deterrence without a specific deterrence target, alliance building using defensive systems may prove to be the best approach. The United States should consider adding Turkey as a partner for possible theater missile defense systems and future fighter aircraft. Both countries should decrease trade barriers. The United States should consider offering financial and technical assistance for Turkey's budding civilian nuclear power program. Similar defensive approaches may be useful for other US allies. How well these approaches may be working could be measured by observing proliferation warnings and indicators.

Watch the High Ground: Monitor Proliferation Warnings and Indicators

Warnings and indicators that could lead to nuclear weapons proliferation provide a way to measure the effectiveness of US extended nuclear deterrence. Similar to credibility elements, these indicators and warnings may vary for different countries and allies. At the least, the indicators listed in this paper provide a foundation for guiding proliferation monitoring strategies. The signs of proliferation include security threats, the relationship between the ruling regime and its public, leadership rhetoric, technical and economic feasibility, third party support, and military capabilities. The ally's regime and its relationship to its populace require particular attention. Changes within a regime from a democratic and outward economic orientation to a regime less democratic and inward looking may be indicators of future proliferation. Although not always easy to discern, these factors may provide the foundation for proliferation assessments as well as the basis for measuring credibility success.

Notes

1. Gursoy, "Turkey's PM Erdogan Seeks Leap Forward in EU Entry Bid in 2009."
2. "Armenia Invites Nuclear Cooperation."

Appendix

US-Turkish Relations Timeline Post-WWII

BOLD=significant nuclear policy events

1946	USSR demands territorial concessions and naval bases from Turkey; Turkey provides final refusal
Feb. 1947	United Kingdom withdraws military assistance from Greece and Turkey
Mar. 1947	Pres. Harry S. Truman asks Congress for aid and receives \$400 million in aid for Greece and Turkey; Turkish aid goes to its military and to build Turkish bases for long-range aircraft
1950	Turkey's Democratic Party (DP) defeats the Republican Party (RPP). Prime Minister Adnan Menderes governs for three terms until a 1960 military coup
1950-52	Turkey supports Korean War with 4,500 troops—the third largest UN contingent
Feb. 1952	Turkey and Greece join NATO; US fully supports Turkish membership
8 Dec. 1953	Pres. Dwight Eisenhower's "Atoms for Peace" address at United Nations
1954	Construction finished on Incirlik AB, near Adana, Turkey; US Air Force begins use
July 1955	US-Turkish bilateral agreement to cooperate in the peaceful uses of nuclear energy
27 Aug. 1956	Turkish Atomic Energy Commission (TAEC-TAEK) created by Act No. 6821, under prime minister to coordinate efforts to build nuclear research reactors

and training centers and to issue licenses for power plants

- 1957 NATO adopts New Look strategy in which nuclear weapons become the primary method for deterring and responding to potential Soviet aggression in Europe
- 1 May 1959 **Construction begins on first research reactor (1 megawatt [MW] pool type, called Turkish Reactor-1 [TR-1]) at Cekmece Nuclear Research and Training Center (CNRTC-CNAEM, formally established in 1961) near Kucukcekmece Lake outside Istanbul**
- Oct. 1959 **Eisenhower administration completes agreement with Turkey to base 15 nuclear-armed Jupiter intermediate range ballistic missiles there to strengthen NATO, post-Sputnik**
- 27 May 1960 Military coup led by Gen Cemal Gursel justified as a response to alleged corruption and increasing authoritarian views by DP's leaders; National Unity Committee established
- Summer 1961 **Jupiter nuclear missiles under US control begin deployment to Turkey as authorized by NATO council; Pres. John Kennedy almost cancels deployment because the missiles are obsolete, but Turks protest**
- 1 Jan. 1962 **TR-1 commissioned/goes critical, closes on 17 September 1977 (now dismantled); 15 January 1978 construction started on 5 MW reactor (called TR-2) in same building; went critical on 10 December 1981, shut down 22 August 1995, restarted in 1998 (possible accident in March 1993 involving release of radioactive contamination in Kucukcekmece Lake)**

- 5 Mar. 1962 **Last Jupiter missiles in Turkey become operational**
- 14–28 Oct. 1962 **Cuban missile crisis. President Kennedy secretly decides to remove Jupiter missiles from Turkey as part of the exchange for the USSR to remove missiles from Cuba; Turks not consulted about missile removal but are compensated with military aid including F-104G fighter aircraft**
- 22 Oct. 1962 **Turkish crews begin manning Jupiter sites under “dual-key” procedures, sharing control with the United States**
- 1–25 Apr. 1963 **Jupiter missiles removed from Turkey; decision announced in January 1963**
- 1964 “Johnson letter” to Turkish president Ismet Inonu: Turkey threatened to intervene in Cyprus to aid Turkish Cypriots battling Greek Cypriots. To prevent Turkish intervention, Pres. Lyndon B. Johnson sends a letter to Turkish prime minister warning him that if USSR attacks Turkey to protect the Greek Cypriots, the US and NATO may not come to Turkey’s defense
- 1965 Justice Party takes parliamentary power with Prime Minister Suleyman Demirel
- NATO working group on nuclear planning established; Turkey becomes a group member by lot**
- Work reportedly starts on nuclear power plant proposal; by 1970 a 400 MW CANDU plant chosen; proposal called for plant operations in 1977**
- 1966 **Ankara Nuclear Research and Training Center (ANRTC) established; reorganized in 1993**

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- Feb. 1967 **During NPT negotiations Turkey expresses concern to US Department of State about security guarantees to non-nuclear states**
- 28 Jan. 1969 **Turkey signs the NPT, not ratified until 17 April 1980 (possibly due to internal political turbulence or military influence); safeguards agreement with IAEA signed 20 October 1981; Additional Protocol signed 12 July 2001**
- 12 Mar. 1971 Turkish military intervention (“Generals’ Memorandum”) to quell perceived political anarchy and violence; military rule with a civilian government from 1971 to 1973
- 1971 **Plans for first nuclear power plant abandoned post-coup—first nuclear power attempt fails; Turkish Electric Authority (TEK) established to take over electric generation with its Nuclear Power Plants division (NPP)**
- 1973 Elections bring Prime Minister Bulent Ecevit to power in January 1974
- 20 Jul. 1974 Turkey intervenes in Cyprus after Cypriot National Guard overthrows elected Cyprus president; Turk military campaign successful and another ordered on 13 August 1974 which secures 40 percent of Cyprus and establishes a north-south partition of the island
- Oct. 1974 United States implements arms embargo in October 1974 but defers implementation until February 1975 for negotiations; viewed by Turks as a slap in the face to a loyal ally; in late 1974 a new government led by Suleyman Demirel freezes US military activity in Turkey until 1978

- 1975 Turkish government transfers control of Incirlik AB to its military in response to US arms embargo by Congress following Cyprus incident
- June 1976 **TAEK licenses Akkuyu site for nuclear power reactor; in 1977 negotiations begin with two Swedish companies (Asea-Atom and Stal-Laval) for 660 MW boiling water reactor; deal collapses in mid-1980s from failure to agree on financing and a Turkish military coup**
- Sept. 1977 **TR-1 research reactor shut down and dismantled at CNAEM in Istanbul reportedly for financial reasons**
- Oct. 1978 Pres. Jimmy Carter's administration negotiates new basing deal with Turkey; Turks base acceptance of the deal on US aid
- 11 Mar. 1979 **Istanbul Technical University's research reactor (TRIGA Mark-II 250 kilowatt) goes critical; construction started on 1 April 1975; only remaining research reactor in Turkey (IAEA safeguarded)**
- 12 Sept. 1980 Turkish military coup led by Gen Kenan Evren (military runs government for next three years until elections in November 1983)
- 1980 **Post-coup, nuclear power program abandoned for second time**
- 1980 Turkey and United States sign a bilateral Defense and Economic Cooperation Agreement (DECA) to govern use of Incirlik AB; in some cases the DECA requires Turkish parliamentary authorization for US requests to use the base for reasons other than training
- 1981 **United States expresses concern about proliferation of nuclear materials with weapons implications between Turkey and Pakistan**

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- 1982 **TAEK-TAEC reconstituted as Turkiye Atom Enerjisi Kurumu (TAEK-TAEA) under prime minister's authority: Turkey's nuclear regulatory agency. It oversees four research centers at Cekmece, Ankara, and Lalahan Animal Health and Nuclear Research Center**
- Nov. 1982 Turkish parliament adopts new constitution that provides the parliament the right to allow foreign forces in Turkey
- 1983-93 Turkish prime minister and then-president Turgut Ozal improves relations with United States; also reforms and improves economy
- 1983 **General Directorate for Mineral and Exploration (MTA-established in 1935) duties expanded to include mining for nuclear fuels (and again in 1994)**
- Fall 1983 **TAEK invites bids for nuclear power plants; letters of intent sent to three companies: Canada (655 megawatt electrical [MWe]), Germany (990 MWe pressurized water), and United States (one or two 1185 MWe boiling water) at Sinop on Black Sea; Sinop location discovered to be unacceptable due to geographic fault lines**
- 1985 **Turkey signs nuclear cooperation agreement with Canada; negotiations over financing and payment methods (such as build-operate-transfer, suggested but details never settled) for nuclear power plants continue until 1993; eventually third attempt for nuclear power abandoned**
- 1986 **Nuclear fuel pilot plant at CNAEM begins operation: accomplishes uranium refining and conversion to uranium dioxide (UO₂) and manufactures UO₂ pellets**

- 3 May 1988 **Turkey and Argentina sign 15-year nuclear cooperation agreement hoping to duplicate Argentina's push for fuel cycle independence; study 300 MWe PWR (Argos) at Akkuyu**
- Oct. 1990 **Argentina agrees to build a CAREM-25 small nuclear power plant (9 or 10 MW) in 1992 for Turkey; former director of TAEK Yalcin Sanalan stated it was too small for electricity, too big for research, but right size for plutonium production; United States and others oppose the joint project; Turkey cancels fourth project attempt in 1991**
- 1991 Gulf War I (Operation Desert Storm) created economic hardships for many Turks: promised US aid never materialized, economic losses were estimated at \$35-150 billion, Turkish general staff resigned after Ozal's pledge to support US, Iraqi oil exports through Turkey were cut off as part of UN sanctions (estimated cost at \$6 billion), 100,000 troops were deployed along Turkish-Iraqi border (estimated cost of \$300 million), Turkey allowed United States to fly sorties out of Turkish bases, Turkey provided safe haven for Kurds
- USSR collapses, Cold War ends
- Oct. 1992 **TEK sends requests for proposals; Canada responds on 28 October 1992**
- 1994 **1994 TEK divides into two companies (TEAS and TEDAS); TEAS issues bids for consulting services for nuclear plant; Korea wins as cheapest at \$350 million (US); in March 1996 bids for Akkuyu site opened but not released until 17 December 1996 requiring 100 percent financ-**

- ing; bids delayed multiple times; domestic opposition strong and 24 mayors in the region objected, saying it would damage tourism and agriculture—mainstays of the local economy; bidding selection slipped and operating date slipped from 2000 to 2003 to 2005**
- 1996 **Comprehensive Test Ban Treaty (CTBT) signed by Turkey (ratified in 2000)**
- July–Aug. 1996 Turkey concludes \$23 billion, 25-year natural gas deal with Iran
- June 1997 “Post-modern” Turkish military coup; Islamist government of Prime Minister Necmettin Erbakan replaced by conservative government of Prime Minister Mesut Yilmaz; further interrupted nuclear power contract bidding/award
- Apr. 1997 Turkey becomes a member of the Missile Technology Control Regime
- Jan. 1999 Minority government of Bulent Ecevit of Democratic Left Party replaces Yilmaz government
- Nuclear power plant decision pushed back until after elections, but decision never made; energy minister Cumhur Ersumer said, “If we cannot reach a decision it will be interpreted that Turkey has given up on nuclear plants forever”; protests in January 2000 against the plant; fifth attempt seemingly abandoned in July 2000**
- 1999 Turkish forces apprehend PKK leader Abdullah Ocalan; United States plays role in operation; PKK declares unilateral cease-fire
- June 2000 **Turkey becomes a member of the Nuclear Suppliers Group**

July 2000	Additional Protocol for IAEA verification ratified
11 Sept. 2001	9/11 attacks on United States; NATO Article V applied; Turkey begins assistance to US-NATO operations in Afghanistan
3 Nov. 2002	Justice and Development Party (AKP) wins parliament, and Tayyip Erdogan becomes prime minister
1 Mar. 2003	US invasion of Iraq; seen by Turkey to worsen PKK issues; Turkish parliament narrowly rejects use of Turkey as base for the invasion despite multibillions in promised aid, possibly due to (1) political damage for newly elected AKP party and (2) the belief that a better aid deal could be negotiated; Turkish public opinion 85–90 percent against the war—may have feared repeat of effects of first Gulf War including economic hardship and PKK resurgence; military may have allowed controversy in order to embarrass Ergodan
June 2004	PKK attacks begin again after PKK declared unilateral cease-fire in 1999
Dec. 2004	European Union starts accession negotiations with Turkey
2005	Turkey allows United States to use Incirlik AB as a cargo hub but forbids combat aircraft
Feb. 2006	Turkish energy minister Hilmi Guler announces plans to build up to five nuclear power plants, first at Sinop, operational by 2012, citing rising oil prices and dependence on Russia
Summer 2006	Turkey sends peacekeepers to Lebanon
2006	South Caucasus gas pipeline opens
Mar.–Apr. 2006	Turkish prime minister Erdogan telephones Iranian president to seek access for Turkish

- ambassador to visit 15 British naval and marine personnel captive in Iran
- 22 July 2007 Turkish elections maintain AKP in power
- 2007 Turkey takes overall command of Multi-national Task Force South in Kosovo
- Fall 2007 PKK attack in southeast Turkey kills 40; United States tried to dissuade Turkish reaction, called on Kurd regional government to take action
- 10 Oct. 2007 US House of Representatives Committee on Foreign Affairs passes a nonbinding resolution (27–21) declaring the 1915 Ottoman-Armenian incident, which occurred at the closing years of the Ottoman Empire, to be genocide; greatly damages US-Turkish relations; garners reaction from Turkish prime minister, military staff; resolution does not go to House for a vote
- 5 Nov. 2007 Pres. George Bush meets with Turkish prime minister Erdogan; meeting considered “milestone in counterterrorism efforts” after agreements for US-Turkish increased intelligence sharing in efforts against PKK in northern Iraq
- 21 Mar. 2008 Cypriot president Dimitris Christofias and Turkish leader Mehmet Ali Talat meet and agree to establish processes for reunifying the island, divided since 1974
- 22 Jan. 2008 **President Bush sends Congress an agreement signed by President Clinton on 26 July 2000 to ensure nuclear cooperation between the United States and Turkey**
- 28 Sept. 2008 **Russia’s Atomstroyexport offers bid for nuclear power plant for Turkey in Akkuyu district; it is the only bid received**

4 Nov. 2008 **Turkish government begins legal procedures for second nuclear power plant in Sinop**

References

- Banks, Arthur S., Thomas C. Muller, and William R. Overstreet, eds. *Political Handbook of the World*. Washington, DC: CQ Press, 2008, 1349–60.
- Bernstein, Barton J. “The Cuban Missile Crisis: Trading the Jupiters in Turkey?” *Political Science Quarterly* 95, no. 1 (Spring 1980): 97–125.
- Burwell, Frances G., ed. “The Evolution of US-Turkish Relations in a Transatlantic Context.” US Army War College Colloquium Report. Carlisle, PA: Strategic Studies Institute, April 2008, 6–19, 30–34, 62–70, 96.
- Campbell, Kurt M., Robert J. Einhorn, and Mitchell B. Reiss, eds. *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices*. Washington, DC: Brookings Institute Press, 2004, 147–50.
- Cooley, Alexander, *Base Politics*. New York: Cornell University Press, 2008, 101–18, 131–32.
- Gaddis, John Lewis. *The Long Peace: Inquiries into the History of the Cold War*. New York: Oxford University Press, 1987, 41, 153.
- . *We Now Know: Rethinking Cold War History*. New York: Oxford University Press, 1997, 164, 264.
- International Atomic Energy Agency. “Nuclear Research Reactors in the World.” IAEA Research Reactor Data Base. Accessed 29 January 2009. <http://www.iaea.org/worldatom/rrdb/>.
- Kibaroglu, Mustafa. “Isn’t It Time to Say Farewell to Nukes in Turkey?” *European Security* 14, no. 4 (December 2005): 443–57.
- . “Turkey’s Quest for Peaceful Nuclear Power.” *Nonproliferation Review* (Spring/Summer 1997): 33–44.
- Martin, David H. *Nuclear Threat in the Eastern Mediterranean: The Case against Turkey’s Akkuyu Nuclear Plant*. Nuclear

APPENDIX

- Awareness Project Report. Ontario, Canada: Nuclear Awareness Project, June 2000, 33–39, 44.
- Migdalovitz, Carol. *Turkey: Selected Foreign Policy Issues and US Views*. Congressional Research Service (CRS) Report for Congress. Washington, DC: CRS, 29 August 2008, 12–16.
- Nash, Philip. *The Other Missiles of October: Eisenhower, Kennedy, and the Jupiters 1957–1963*. Chapel Hill, NC: University of North Carolina Press, 1997, 2, 103, 163;
- Organisation for Economic Co-operation and Development (OECD) Nuclear Energy Agency. “Turkey.” OECD Nuclear Energy Agency Report, 6–10. Accessed 28 November 2008. <http://www.nea.fr/html/general/profiles/turkey.html>.

Abbreviations

AB	air base
AKP	Justice and Development Party
AP	additional protocol
B	billion
CACNARE	Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency
CENNA	Convention on Early Notification of a Nuclear Accident
CNS	Convention on Nuclear Safety
CPPNM	Convention on the Physical Protection of Nuclear Material
CTBT	Comprehensive Test Ban Treaty
DCA	dual-capable aircraft
DOD	Department of Defense
EU	European Union
GTP	Powerful Turkey Party
IAEA	International Atomic Energy Agency
ICBM	intercontinental ballistic missile
JSF	Joint Strike Fighter
NATO	North Atlantic Treaty Organization
NPT	Nonproliferation Treaty
OG	Operations Group
PKK	Kurdish Workers Party
SDE	senior developmental education
SFM	Spent Fuel Management
SGA	Safeguards Agreement
SQP	Small Quantities Protocol
USTR	US Trade Representative
WMD	weapons of mass destruction
WWICS	Woodrow Wilson International Center for Scholars

Bibliography

- American Free Press. "Bush Pushes US-Turkey Nuclear Cooperation." *Google.com*, 23 January 2008. Accessed 1 October 2008. http://afp.google.com/article/ALeqM5jREnx_wx-XUVC9BShQNXRdfIshYg.
- "Armenia Invites Nuclear Cooperation." *Hurriyet Daily News*, 3 March 2009. http://www.hurriyet.com.tr/english/domestic/11119523_p.asp.
- Arms Control Association. "Worldwide Ballistic Missile Inventories: Factsheet." Accessed 29 January 2009. <http://www.armscontrol.org/factsheets/missiles>.
- Banks, Arthur S., Thomas C. Muller, and William R. Overstreet, eds. *Political Handbook of the World*. Washington, DC: CQ Press, 2008.
- Bernstein, Barton J. "The Cuban Missile Crisis: Trading the Jupiters in Turkey?" *Political Science Quarterly* 95, no. 1 (Spring 1980): 97–125.
- Blanc, Alexis. "Nuclear Proliferation: A Historical Overview." Lecture. Stimson Center, Washington, DC, 14 January 2009.
- , and Bradley Roberts. "Nuclear Proliferation: A Historical Overview." Institute for Defense Analyses Document D-3447. Alexandria, VA: Institute for Defense Analyses, March 2008.
- British Broadcasting Corporation. "Q&A: Turkey's EU Entry Talks." *BBC News*, 11 December 2006. Accessed 27 January 2009. <http://news.bbc.co.uk/go/pr/fr/-/2/hi/europe/4107919.stm>.
- Brody, Richard A. "Deterrence Strategies: An Annotated Bibliography." *Journal of Conflict Resolution* 4, no. 4 (December 1960): 443–57.
- Burwell, Frances G., ed. "The Evolution of US-Turkish Relations in a Transatlantic Context." US Army War College Colloquium Report. Carlisle, PA: Strategic Studies Institute, April 2008. Accessed 16 October 2008. <http://www.strategicstudiesinstitute.army.mil>.
- "Bush Seeks Congress Approval for US-Turkey Nuclear Deal." *Today's Zaman*, 25 January 2008. Accessed 14 October

BIBLIOGRAPHY

2008. <http://www.todayszaman.com/tz-web/detaylar.do?load=detay&link=132441>.
- Cagaptay, Soner. "European Union Reforms Diminish the Role of the Turkish Military: Ankara Knocking on Brussels' Door." *Policy Watch* no. 781. Washington Institute for Near East Policy, 12 August 2003. Accessed 27 January 2009. http://www.ciaonet.org/pbei/winep/policy_2003/2003_781.html.
- Campbell, Kurt M., Robert J. Einhorn, and Mitchell B. Reiss, eds. *The Nuclear Tipping Point: Why States Reconsider Their Nuclear Choices*. Washington, DC: Brookings Institute Press, 2004.
- Cooley, Alexander. *Base Politics*. Ithaca, NY: Cornell University Press, 2008.
- Danilovic, Vesna. "The Sources of Threat Credibility in Extended Deterrence." *Journal of Conflict Resolution* 45, no. 3 (June 2001): 341-69.
- Department of Defense (DOD). *National Defense Strategy*. Washington, DC: OSD, June 2008.
- . *National Security Strategy*. Washington, DC: Office of the Secretary of Defense (OSD), 1991. Accessed 12 January 2009. <http://www.fas.org/man/docs/918015-nss.htm>.
- . *Report of the Secretary of Defense Task Force on DoD Nuclear Weapons Management Phase I: The Air Force's Nuclear Mission*. Washington, DC: OSD, September 2008.
- Dunn, Lewis A. et al. *Foreign Perspectives on US Nuclear Policy and Posture*. Defense Threat Reduction Agency Report DTRA01-03-D-0017. Washington, DC: Science Applications International Corporation, 12 December 2006.
- European Commission. *United States Barriers to Trade and Investment: Report for 2007*. Brussels, Belgium: European Commission, Directorate General for Trade, April 2008.
- F-35 Joint Fighter Program Office. "The F-35 Lightning II." Accessed 11 February 2009. http://www.jsf.mil/program/prog_intl.htm.
- Gaddis, John Lewis. *The Long Peace: Inquiries into the History of the Cold War*. New York: Oxford University Press, 1987.
- . *Strategies of Containment*. New York: Oxford University Press, 2005.

- . *We Now Know: Rethinking Cold War History*. New York: Oxford University Press, 1997.
- Gates, Robert. "Nuclear Weapons and Deterrence in the 21st Century, Carnegie Endowment for International Peace." Address transcript. Carnegie Endowment for International Peace, Washington, DC: 28 October 2008.
- Gill, Bates, ed. *SIPRI Yearbook 2008: Armaments, Disarmament and International Security*. Oxford, UK: Oxford University Press, 2008.
- Glaser, Charles L. "Nuclear Policy without an Adversary." *International Security* 16, no. 4 (Spring 1992): 34–78.
- Graham, Bob, and Jim Talent. *World at Risk: The Report of the Commission on the Prevention of WMD Proliferation and Terrorism*. New York: Vintage Books, December 2008.
- Greenpeace. "Nuclear Weapons in Europe: Survey Results in Six European Countries." Strategic Communications (STRATCOM) Report. Toronto, Canada, 25 May 2006. Accessed 27 January 2009. <http://www.greenpeace.org/raw/content/international/press/reports/nuclear-weapons-in-europe-survey.pdf>.
- Grimmett, Richard F. "US Arms Sales: Agreements with and Deliveries to Major Clients, 1998–2005." Congressional Research Service (CRS) Report for Congress. Washington, DC: CRS, 15 December 2006.
- Gursoy, Begum. "Gov't Signals Second Nuclear Power Plant." *Turkish Daily News*, 4 November 2008. Accessed 4 November 2008. <http://www.turkishdailynews.com.tr/article.php?enewsid=119169>.
- . "Obama Discusses Armenia, Mideast, Afghanistan with Turkish Officials." *Hurriyet.com*, 17 February 2009. Accessed 17 February 2009. http://www.hurriyet.com.tr/english/world/11018427_p.asp.
- . "Turkey's PM Erdogan Seeks Leap Forward in EU Entry Bid in 2009." *Hurriyet.com*, 19 January 2009. http://www.hurriyet.com.tr/english/world/10805897_p.asp.
- . "Turkey Sees Looming Armenian Resolution in U.S. as a Risk Factor," *Hurriyet.com*, 3 March 2009. http://www.hurriyet.com.tr/english/world/11123054_p.asp.
- . "U.S. Brands PKK's Iranian Wing, PEJAK, a Terrorist Organization." *Hurriyet.com*, 5 February 2009. Accessed 5 Feb-

BIBLIOGRAPHY

- ruary 2009. http://www.hurriyet.com.tr/english/domestic/10929716_p.asp.
- Huth, Paul, and Bruce Russett. "What Makes Deterrence Work? Case Studies from 1900 to 1980." *World Politics* 36, no. 4 (July 1984): 496–526.
- Institute for Defense Analyses (IDA). "Extended Deterrence and Assurance in the Emerging Global Security Environment, Case Study: Europe." Conference. IDA, Alexandria, VA, 6 February 2009.
- International Atomic Energy Agency (IAEA). "Nuclear Research Reactors in the World." IAEA Research Reactor Data Base. Accessed 29 January 2009. <http://www.iaea.org/worldatom/rrdb/>.
- Kalyoncu, Mehmet. "How to Handle Turkey's Legitimate Nuclear Aspirations (Turkey with Nuclear Weapons?)." *Free Republic*, 24 November 2005. Accessed 14 October 2008. <http://freerepublic.com/focus/f-news/1527797/posts>.
- . "Why, When and How Turkey Becomes a Nuclear Power." *Today's Zaman*, 19 September 2008. Accessed 3 October 2008. <http://www.todayszaman.com/tz-web/detaylar.do?load=detay&link=153561>.
- Karabat, Ayse. "Turkey Inches Forward in Quest for Nuclear Power." *Today's Zaman*, 28 September 2008. Accessed 14 October 2008. <http://todayszaman.com/tz-web/detaylar.do?load=detay&link=154522>.
- Kasaba, Resat. *The Cambridge History of Turkey*. Vol. 4, *Turkey in the Modern World*. Cambridge, UK: Cambridge University Press, 2008.
- Kibaroglu, Mustafa. "Isn't It Time to Say Farewell to Nukes in Turkey?" *European Security* 14, no. 4 (December 2005): 443–57.
- . "Turkey's Quest for Peaceful Nuclear Power." *Nonproliferation Review* (Spring/Summer 1997): 33–44.
- Kinzer, Stephen. "US Must Share Power in the New World Order, Says Turkey's Controversial President." *Guardian*, 16 August 2008. Accessed 3 October 2008. <http://www.guardian.co.uk/world/2008/aug/16/turkey.usforeignpolicy>.
- Larrabee, F. Stephen. *Turkey as a US Security Partner*. RAND Report. Santa Monica, CA: RAND Corporation, 2008.

- Larsen, Jeffrey A. *The Future of U.S. Non-Strategic Nuclear Weapons and Implication for NATO: Drifting toward the Foreseeable Future*. 2005–6 NATO Manfred Wörner Fellowship Report. Brussels, Belgium: NATO Public Policy Division, 31 October 2006.
- Lavoy, Peter R. “Nuclear Proliferation over the Next Decade: Causes, Warning Signs, and Policy Responses.” *Nonproliferation Review* 13, no. 3 (November 2006): 432–54.
- Lesser, Ian O. *Beyond Suspicion: Rethinking US-Turkish Relations*. Washington, DC: Woodrow Wilson International Center for Scholars, 2007.
- Martin, David H. *Nuclear Threat in the Eastern Mediterranean: The Case against Turkey’s Akkuyu Nuclear Plant*. Nuclear Awareness Project Report. Ontario, Canada: Nuclear Awareness Project, June 2000.
- . “The Threat of Nuclear Weapons Proliferation from Turkey.” Campaign for Nuclear Phaseout, June 1998. Accessed 14 October 2008. <http://www.cnp.ca/issues/turkey-nuclear-background.html>.
- McDonough, David S. *Nuclear Superiority*. Adelphi Paper 383. Oxford, UK: International Institute for Strategic Studies, 2006.
- Migdalovitz, Carol. *Turkey: Selected Foreign Policy Issues and US Views*. CRS Report for Congress. Washington, DC: CRS, 29 August 2008.
- Milburn, Thomas W. “What Constitutes Effective Deterrence?” *Journal of Conflict Resolution* 3, no. 2 (June 1959): 138–45.
- Nash, Philip. *The Other Missiles of October: Eisenhower, Kennedy, and the Jupiters 1957–1963*. Chapel Hill, NC: University of North Carolina Press, 1997.
- National Security Strategy*. Washington, DC: Office of the President, March 2006.
- “News Transcript, Secretary Gates Press Conference with Turkey’s Minister of Defense.” Washington, DC, 28 February 2008. Accessed 20 October 2008. <http://www.defenselink.mil/transcripts/transcript.aspx?transcreptid=4162>.
- North Atlantic Treaty Organization (NATO). “NATO’s Nuclear Forces,” June 2004. Accessed 2 January 2009. <http://www.nato.int/issues/nuclear/index.html>.

BIBLIOGRAPHY

- Nuclear Energy Agency. "Nuclear Legislation in OECD Countries: Turkey." Accessed 17 November 2008. <http://www.nea.fr/html/law/legislation/turkey.pdf>.
- Nuclear Threat Initiative (NTI). "Review Questions Security over U.S. Nukes in Europe." NTI, 19 June 2008. Accessed 22 January 2009. http://www.nti.org/d_newswire/issues/2008_6_19.html#F3714677.
- "Number of U.S. Air Force Personnel at Air Base in Turkey Reduced." *Defenselink*, 27 March 1997. Accessed 21 January 2009. <http://www.defenselink.mil/releases/release.aspx?releaseid=1195>.
- Office of the Deputy Undersecretary of Defense (Installations and Environment). "Base Structure Report Fiscal Year 2008 Baseline: A Summary of DoD's Real Property Inventory." Accessed 22 January 2009. <http://www.acq.osd.mil/ie/download/bsr/BSR2008Baseline.pdf>.
- Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics. "The Defense Science Board Permanent Task Force on Nuclear Weapon Surety: Report on the Unauthorized Movement of Nuclear Weapons." Washington, DC: Defense Science Board, February 2008 (Revised April 2008).
- Office of the United States Trade Representative. "Turkey." World Trade Organization. Accessed 11 February 2009. http://www.ustr.gov/assets/Document_Library/Reports_Publications/2008/2008_NTE_Report/asset_upload_file_971_14612.pdf.
- Organisation for Economic Co-operation and Development (OECD) Nuclear Energy Agency. "Turkey." OECD Nuclear Energy Agency Report. Paris, France: Nuclear Energy Agency. Accessed 28 November 2008. <http://www.nea.fr/html/general/profiles/turkey.html>.
- Reaching Critical Will. "Model Nuclear Inventory-2007: Turkey." Accessed 19 January 2009. <http://www.reachingcriticalwill.org/about/pubs/Inventory07/Turkey.pdf>.
- RIA Novosti. "Turkey to Scrap Tender for Nuclear Power Plant—Paper." *rian.ru*, 21 January 2009. Accessed 29 January 2009. <http://en.rian.ru/world/20090121/119732039.html>.
- Roberts, Brad. "Extended Deterrence in the Emerging Global Security Environment: Case Study Turkey." Minutes of

- Workshop Summary. Institute for Defense Analyses, Washington, DC, 27 August 2007.
- , Alexis Blunt, and Rebecca Hersman. “Trends in Proliferation.” Conference, Institute for Defense Analyses. Henry L. Stimson Center, Washington, DC, 14 January 2009.
- Rosen, Stephen P. “After Proliferation: What to Do If More States Go Nuclear.” *Foreign Affairs* 85, no. 5 (September/October 2006): 9–14.
- Sagan, Scott D. “Why Do States Build Nuclear Weapons? Three Models in Search of a Bomb.” *International Security* 21, no. 3 (Winter 1996/1997): 54–86.
- Salmoni, Barak A. “Strategic Partners or Estranged Allies: Turkey, the United States, and Operation Iraqi Freedom.” *Strategic Insights* 2, no. 7 (July 2003). Accessed 16 October 2008. <http://www.ccc.nps.navy.mil/si/july03/middleEast.asp>.
- “Saudi Arabia, Turkey Seen as Possibly Joining in a Nuclear Arms Race.” *Turkish Daily News*, 4 April 2008. Accessed 2 October 2008. <http://www.turkishdailynews.com.tr/article.php?enewsid=100815>.
- Schleifer, Yigal. “Turkey Votes to Lift Head-Scarf Ban, but Battle Continues.” *Christian Science Monitor*, 11 February 2008. Accessed 5 February 2008. <http://www.csmonitor.com/2008/0211/p07s02-wome.html>.
- Schmitt, Eric. “Bush’s Arm Plan; Cheney Orders Bombers Off Alert, Starting Sharp Nuclear Pullback.” *New York Times*, 29 September 1991. Accessed 12 January 2009. <http://query.nytimes.com/gst/fullpage.html?res=9E0CE7DE0930E42CAA484CC1BF6F9D&sec=&spon=&pagewanted=all>.
- Signorino, Curtis S., and Ahmer Tarar. “A Unified Theory of Extended Immediate Deterrence.” *American Journal of Political Science* 50, no. 3 (July 2006): 586–605.
- Solingen, Etel. *Nuclear Logics: Contrasting Paths in East Asia and the Middle East*. Princeton, NJ: Princeton University Press, 2007.
- “Turkey Signs Memorandum of Understanding for F-35 Jets.” *Today’s Zaman*, 26 January 2007. Accessed 29 January 2009. <http://www.todayszaman.com/tz-web/detaylar.do?load=detay&link=101138&bolum=106>.

BIBLIOGRAPHY

- Turkish General Staff. "Weapons of Mass Destruction (WMD)." Accessed 29 January 2009. http://www.tsk.mil.tr/eng/diger_konular/kittleimhasilahlari_p.htm.
- Unfavorable Views of Jews and Muslims on the Increase in Europe*. Pew Global Attitudes Project. Washington, DC: Pew Research Center, 17 September 2008.
- "United States and Turkey Sign Memorandum of Understanding." *DefenseLink News Transcript*, 11 July 2002. <http://www.defenselink.mil/transcript/transcript.aspx?transcriptid=3547>.
- USAF Deterrence Conference. Washington, DC, 16 January 2009.
- US Central Intelligence Agency. "Turkey." *The World Factbook*. Accessed 1 October 2008. <https://www.cia.gov/library/publications/the-world-factbook/goes/tu.html>.
- US Department of Commerce. "Existing Free Trade Agreements." Accessed 19 January 2009. <http://www.tradeagreements.gov/ExistingFTAs/index.htm>.
- . "HS Total All Merchandise—Exports to Turkey in Thousands (\$ USD)." Accessed 19 January 2009. <http://tse.export.gov/NTDChartDisplay.aspx?UniqueURL=gevk5j55oqe3a4mvj2qjsuug-2009-1-19-13-36-42>.
- US Department of Defense, Security Cooperation Agency. "Historical Facts Book." Accessed 19 January 2009. <http://www.dsca.mil/programs/biz-ops/factsbook/FactsBook07.pdf>.
- US Department of Energy and DOD. *National Security and Nuclear Weapons in the 21st Century*. Washington, DC: Office of the Secretary of Energy and OSD, September 2008.
- US Department of State. "Background Note: Turkey." Accessed 19 January 2009. <http://www.state.gov/r/pa/ei/bgn/3432.htm>.
- . *US-Turkey Agreement for Peaceful Nuclear Cooperation (123 Agreement)*. Washington, DC: Embassy of the United States, 2 June 2008. Accessed 18 February 2008. http://turkey.usembassy.gov/statement_060208.html.
- US House. *Affirmation of the United States Record on the Armenian Genocide Resolution*. 110th Cong., 1st sess., 2007. H. R. 106, sec. 2. Accessed 17 February 2009. <http://frwebgate>

- .access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:hr106ih.txt.pdf.
- US Institute of Peace. "Congressional Commission on the Strategic Posture of the US Begins Work." US Institute of Peace, 11 July 2008. Accessed 17 December 2008. <http://www.usip.org/newsroom/news/congressional-commission-strategic-posture-us-begins-work.html>.
- US Senate Committee on Foreign Relations. *Chain Reaction: Avoiding a Nuclear Arms Race in the Middle East*. 110th Cong., 2nd sess., February 2008.
- Vick, Karl. "Energy, Iran Spur Turkey's Revival of Nuclear Plans." *Washington Post*, 7 March 2006. Accessed 1 October 2008. <http://www.washingtonpost.com/wp-dyn/content/article/2006/03/06/AR2006030601513>.
- Weede, Erich. "Extended Deterrence by Superpower Alliance." *Journal of Conflict Resolution* 27, no. 2 (June 1983): 231–54.
- White House. "President Bush and Prime Minister Tayyip Erdogan Discuss Global War on Terror." Washington, DC, 5 November 2007. Accessed 19 January 2009. <http://www.whitehouse.gov/news/releases/2007/11/20071105-3.html>.
- Wolf, Amy G. *Nuclear Weapons in US National Security Policy: Past, Present, and Prospects*. Washington, DC: CRS, 29 October 2007.

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