

**DEFENSE TRANSFORMATION:
TO WHAT, FOR WHAT?**

Kevin Reynolds

November 2006

This publication is a work of the U.S. Government as defined in Title 17, United States Code, section 101. As such, it is in the public domain, and under the provisions of Title 17, United States Code, Section 105, it may not be copyrighted.

Visit our website for other free publication downloads
<http://www.StrategicStudiesInstitute.army.mil/>

[To rate this publication click here.](#)

The views expressed in this report are those of the author and do not necessarily reflect the official policy or position of the Department of the Army, the Department of Defense, or the U.S. Government. This report is cleared for public release; distribution is unlimited.

Comments pertaining to this report are invited and should be forwarded to: Director, Strategic Studies Institute, U.S. Army War College, 122 Forbes Ave, Carlisle, PA 17013-5244.

All Strategic Studies Institute (SSI) publications are available on the SSI homepage for electronic dissemination. Hard copies of this report also may be ordered from our homepage. SSI's homepage address is: *www.StrategicStudiesInstitute.army.mil*.

The Strategic Studies Institute publishes a monthly e-mail newsletter to update the national security community on the research of our analysts, recent and forthcoming publications, and upcoming conferences sponsored by the Institute. Each newsletter also provides a strategic commentary by one of our research analysts. If you are interested in receiving this newsletter, please subscribe on our homepage at *www.StrategicStudiesInstitute.army.mil/newsletter/*.


ISBN 1-58487-249-7

FOREWORD

The transformation of America's armed forces and defense establishment has been one of the key overarching objectives of President George W. Bush's administration. Measuring the value of high-technology weapons systems and their demonstrated effectiveness in the opening stages of both Operations ENDURING FREEDOM and IRAQI FREEDOM, Secretary of Defense Donald Rumsfeld has increased the pace of defense transformation. But beyond enhancing the lethality of U.S. forces on the conventional battlefield, where is defense transformation headed?

In this monograph, Colonel Kevin Reynolds asks the question, "What form is transformation taking and what end(s) are the armed forces transforming to obtain?" He argues that U.S. foreign and national security policies should drive the pace and direction of defense transformation, but finds that all too often the military's weapons systems preferences determine the shape and form of the armed services transformation and their future capability sets. Due to the lengthy Research, Development, Testing, and Evaluation (RDT&E) time to acquire technologically advanced weapons systems, up to and beyond 20 years in many instances, future administrations will inherit weapons systems and force structures that, although recently fielded, were imagined several administrations previously and whose capability to support current policy may now be limited. Colonel Reynolds concludes by arguing that the military should acquire a broad range of technologies now in order to present as yet unknown future political leaders with a broader range

of military capabilities with which to pursue future U.S. policy preferences.


DOUGLAS C. LOVELACE, JR.
Director
Strategic Studies Institute

BIOGRAPHICAL SKETCH OF THE AUTHOR

KEVIN P. REYNOLDS is currently assigned to the Department of Distance Education (DDE), U.S. Army War College as a professor and course author. Prior to his present assignment, he served as the Director of First Year Studies within DDE. Commissioned as an Infantry Officer in 1973 from Officer Candidate School, Fort Benning, Georgia, Colonel Reynolds has commanded infantry units from platoon through battalion. Additionally, he has served as an operations officer at the battalion, division, corps, and army levels to include serving as the Chief of Plans, Third U.S. Army Forward Command Post during Operations DESERT SHIELD and DESERT STORM; and has served as an Observer Controller at the National Training Center and in the Battle Command Training Program. Colonel Reynolds is a graduate of the U.S. Army Command and General Staff College and the U.S. Army War College. He holds a Ph.D. in Political Science from Temple University, an MA in International Relations from St. Mary's University-San Antonio, and a BA in Philosophy from the University of Illinois-Chicago.

SUMMARY

The U.S. armed forces are transforming at a rapid rate while simultaneously fighting a Global War on Terror (GWOT). Changing tactics, techniques, procedures, and even organizations when faced with a dangerous and adaptive enemy is nothing unusual. Almost all successful armed forces have had to master change in the face of adversity. However, the changes that U.S. armed forces are adopting began long before the events of September 11, 2001. To begin to understand the scope of defense transformation and its impact on the future policy of the United States, the GWOT and the operations that define it must be viewed from the wider context of U.S. foreign and national security policy. Policymakers must recognize that the defense transformation decisions they make now are the ones with which as yet unidentified future political leaders will have to live.

Ideally, policy should drive the direction and form of defense transformation. However, defense transformation is not necessarily proceeding in this fashion. Rather, the military is pursuing a transformation plan based on its weapons systems technological preferences. Although when developed and fielded these weapons systems preferences almost assuredly will provide U.S. supremacy in state-centric warfare, their utility for lesser conflicts is suspect. Due to the long lead times associated with weapons system development, future political leaders may have their policy options constrained by a force structure that, although recently fielded, was imagined over 15 to 20 years previously for a reality that may no longer exist when the weapons become operational. The potential

to have a military force inadequately equipped and structured to support future policy has occurred largely because of three factors: first, the military, not policymakers, are the primary determinants of which weapons systems to acquire and develop; second, policy formulation planning horizons are much shorter than those of weapons systems acquisition; last, the military, at the urging of the civilian leadership within the Department of Defense (DoD) is pursuing a transformation plan based primarily on the somewhat narrow theoretical constructs of Network Centric Warfare (NCW).

The military, in determining what weapons systems are available to choose from, heavily influences the choices of the decisionmakers within DoD. De jure the Secretary of Defense decides what weapons will be funded for development; however, de facto the uniformed military steers the course of weapons systems procurement. Although the armed services would not be willing to relinquish this position, it is not a role they created, either. Rather, the exponential growth of technology in general and weapons systems technology in particular, coupled with the increasing complexity of warfare since World War II, have compelled the nation's civilian leadership to defer to the military's expertise in determining which weapons and force structures to acquire. Simply stated, neither the executive nor the legislative branches of government have the time or the inclination to master the arcane concepts, processes, and dialect of weapons systems development. Seldom do members of the executive branch or Congress challenge the military's weapons systems preferences, and when they do, it is in the aggregate, i.e., does the military really need that number of systems vice do they need the system at all. In rare

instances, the Secretary of Defense or the Congress will cancel a particular weapons development program, but this normally occurs only after the program has been in development for 15-20 years, its developmental costs have far exceeded its projected funding, and other weapons systems with similar capabilities have obviated the need for it. Congress is more concerned with the military's stewardship of its budget and not whether the future military capabilities the armed forces are developing will be those that future political leaders will need to promote U.S. policy.

The transformation decisionmaking conundrum is compounded by foreign and national security policy development lagging behind weapons systems procurement and force structure development. This phenomenon, referred to in this monograph as "policy lag," results from the differences in the planning horizons, budgeting cycles, and predictability forecasts between foreign policy/national security strategy development on the one hand and weapons systems/force structure development on the other. Foreign and national security policy planning rarely extends more than 4 to 5 years, whereas weapons system planning is seldom shorter than 12 years, with the norm being closer to 15 years. Additionally, policy is much harder to budget for since it depends on factors in the humanitarian world that are not quantifiable or measured easily. Conversely, weapons system procurement is easy to quantify, measure, and hence budget for. Weapons are material objects and subject to laws of science, while human beings, leaders, populations, and nation-states are not. Moreover, the congressional committees that authorize and appropriate funds for the development of weapons systems are discrete defense committees within

Congress that are dedicated to military issues. The rest of government must navigate through nondepartment specific authorization and appropriations committees. Last, the results of foreign and national security policy planning are much harder to predict even in the short term (4 to 6 years), let alone in the long term. However, the development of weapons systems is very systematic and foreseeable. Although not all inclusive, the differences in planning horizons, budgeting cycles, and predictability are the chief factors that account for policy development lagging behind weapons systems development. Policy lag almost always results in the military acquiring tomorrow the weapons systems and force structure it needs today.

Last, the military and civilian leaderships within DoD are pursuing a transformation plan that is based on a unitary theoretical operational construct: NCW. Combat operations in both Afghanistan and Iraq in 2001 and 2003, respectively, appeared to have justified NCW's proponents' belief in this form of warfare. But subsequent operations in both countries against insurgents, along with other low intensity combat undertakings, have called into question the utility of NCW as a panacea for America's future military operations. Wholesale adoption of the weapons systems and the force structure required to execute NCW could leave the United States prepared to fight the most dangerous but least likely threats and unprepared to fight the least dangerous but most likely threats.

To mitigate the effects that the factors enumerated above have on defense transformation, the senior civilian and military leadership should: ensure that the congressional committees coordinate their actions so as to synchronize foreign/national security policy objectives with weapons systems/force structure

decisions; reform the Defense Acquisition System's bureaucratic structure and procedures in order to reduce acquisition timelines significantly; acquire a broader range of technologies that will expand the U.S. military's future capability sets; develop a more diversified force structure capable of responding to the full range of the most likely challenges the United States will face; and, apportion the service budgets in accordance with the relative share of the missions they will receive in the future so they may acquire the technologies and force structure they need to obtain and promote the nation's interests.

DEFENSE TRANSFORMATION: TO WHAT, FOR WHAT?

The military is one of several tools America's elected leadership has to promote, further, or obtain the nation's interests. In order not to constrain the policy options open to the civilian leadership, the military should possess a capability set that will enhance or enable the pursuit of a broad range of foreign policy and national security strategy scenarios. As a result, defense transformation should occur with the requirements of national security policy and strategy in mind. However, defense transformation is not proceeding in this fashion. Rather, the military is pursuing a transformation plan based on a group of weapons systems technologies which will ensure its supremacy in state-centric warfare, but whose utility outside of major force-on-force conflict is questionable at best. The military's weapons systems technological preferences, not policy, are driving the pace and form of the military's transformation and hence the future military capabilities that will be available to the nation's leadership. Due to the long lead times associated with weapon systems development, future political leaders may have their policy options constrained by a force structure that, although recently fielded, was imagined 15 to 20 years previously for a reality that may never have eventuated.

The potential to have a military force inadequately equipped and structured to support future policy has occurred largely because of three factors. First, the military, not policymakers, primarily determines not only which weapon systems technologies to develop, but also which ones will even be considered for

development. Second, foreign and national security policy development lags behind weapon systems procurement and force structure development, instead of driving them. This phenomenon, referred to here as “policy lag,” results from the differences in the planning horizons, budgeting cycles, and predictability forecasts between foreign policy/national security strategy development on the one hand and weapons systems/force structure development on the other. Policy lag usually results in the military acquiring tomorrow the weapons systems and force structure it needs today.¹ Last, enamored with its recent success during the conventional combat phases of Operations ENDURING FREEDOM and IRAQI FREEDOM (OEF and OIF, respectively) the military, at the urging of the civilian leadership within the DoD, is pursuing a transformation plan based primarily on the concepts and weapons systems required to implement network centric warfare (NCW).² Pursuing a discrete set of weapons systems technologies may hinder the military’s ability to respond to other than state-on-state warfare scenarios, thus limiting the civilian leadership’s policy options. As a result, the military may become self-limiting by acquiring primarily those technologies it needs to defeat a similarly equipped threat and neglect the possibilities offered by alternative technologies. The current transformation approach could leave the United States preparing to fight the least likely but most dangerous conflicts vice prepared for the most likely but least dangerous conflicts that it will face.

This monograph explores each of these factors that contribute to the incongruence between the transformational capabilities that the military is acquiring and their potential inability to support future policy options adequately when they are fielded. The monograph

closes by arguing that, since the future is extremely difficult to predict, the military should pursue a broad range of technologies that will both enhance and expand its future capability profile in order to better serve policy.

WEAPONS SYSTEMS DECISIONMAKING

In principle, the selection of major weapons systems should be the result of a decisionmaking process at the national level that begins with the identification of U.S. national interests, goals, and objectives in both the near and the long term. Next, planners should develop the national military strategy or military policy that combines with other elements of national power (economic, political, and sociological/informational) to form the nation's grand strategy. Nested within the grand strategy should be decisions on force structure and doctrine, and the identification and acquisition of the means or resources to implement the strategy. In his book *Weapons Don't Make War*, Dr. Colin Gray states: "If it is policy to deter attack upon distant friends, strategy must specify what is to be deterred, and how and with what instruments deterrence is to be achieved. If the means for deterrence will not be available for several years, then policymakers must decide whether to risk a bluff or redefine policy."³ But the process described above, though desirable in theory, is a practice not nearly so orderly, coherent, and fully realized as depicted. It is much more amorphous, with numerous dyadic relationships that allow for multipartite negotiations at various levels. The process is more circular and iterative than it is linear and progressive.⁴ This section will explore who makes the weapons systems and transformation decisions and why. Next, it will

examine how those decisions result in military force structure and the constraint(s) these acquired military capabilities may have on future foreign policy. It concludes with a case study involving the acquisition of the B-1 bomber that illustrates how past weapons systems decisions affect future policy options.

All too often, especially since the beginnings of exponential technological development during World War II, weapons systems decisions have influenced heavily both the national military strategy and the military's force structure. Thus, in part, weapons systems decisions determine what the nation's political leadership should do (the strategy its civilian leaders should pursue) and what they cannot do (the capabilities and limitations of the force structure the military adopts to optimize the technology).⁵ In fact, given that most weapons systems have a 12-15 year development period, current weapons systems and force structure decisions often limit the policy options of future administrations that inherit a structure whose capability may not meet future policy needs.⁶ In 1986, Gordon Craig and Felix Gilbert, contributing authors to the original and subsequent editions of *Makers of Modern Strategy*, expressed essentially the same concern:

The actions that will be taken in future crises promise, indeed, to be predetermined and automatic in nature. One can argue plausibly that the autonomy of the political leadership begins to shrink from the moment that it authorizes the expenditure of national resources on this or that kind of weapons research or the production of this or that kind of bomber, missile, or submarine. Because of the lead time required for the realization of such projects, the decision made today inevitably determines or circumscribes policy at a later date, thus pre-judging situations that have not been foreseen and

limiting one's capabilities for contingencies that have not yet arisen.⁷

Weapon system decisions and the force structure they drive are fundamentally political decisions, given the impact they have on near and short-term policy. Leaving these decisions to the military represents a de facto abdication of important aspects of foreign policy formulation to the military.

Congress and the President often play the services off against one another in the battle over funds and programs, but they support the military's technologically-driven weapons systems preferences. The military's weapons systems selections are almost never challenged. Judith Reppy and Franklin A. Long, in the introduction to their anthology, *The Genesis of New Weapons: Decision Making for Military R&D*, quote Edwin Deagle as saying:

The central political feature of the weapon system acquisition process is that its control inevitably resides mainly in the hands of the services. No one else in the system had the information and the financial and staff resources, . . . Moreover, no one can match the unique claim to control of the military requirement process that the wearing of a uniform conveys. Thus, the struggle for civilian influence over the acquisition process will always be uphill. And, given the differences and purposes among the various political constituencies, which surround the Pentagon, civilian involvement will inevitably be diffuse, fragmented, and pluralistic.⁸

Both the executive and legislative branches of government have hesitated to challenge the military's weapons systems and force structure preferences. Given the scope and breadth of the nation's needs, neither the President nor any member of Congress

has the time or inclination to master the technological and operational complexity of modern military operations. Instead, the U.S. civilian leadership relies on the military's expertise to determine what weapon systems to develop and procure; hence, the pattern and shape of defense transformation and, by extension, the military's capabilities in support of future foreign and nation security policy. Although this trend began during the lead-up to World War II, it was the onset of the Cold War that tightened the military's grip on the acquisition and transformation process.

During the Cold War, there was a constant tension between spending for defense and spending for social programs. For most of the Cold War, presidents strove to keep the defense budget within limits. With the domestic agenda holding primacy, in the absence of a crisis, foreign aid and defense desiderata were not always fully funded. Additionally, the program timelines seldom extended beyond the near term, i.e., to the end of the president's elected term.⁹ Moreover, most presidents lacked the expertise and the time to delve into the arcane world of threat estimates, weapons technology, military budgets, force structure, and operational employment of military forces; hence, they relied on the military for that expertise.¹⁰ Even a military professional turned politician like General Dwight D. Eisenhower considered the development of the nation's conventional force capability a secondary issue. Focused on the domestic agenda, Eisenhower chose to rely on nuclear weapons and budget ceilings to shape R&D, weapons acquisition, strategy, and force structure.¹¹

Congress labored under similar constraints. It seldom had the expertise to challenge military acquisitions, force structure, or strategy recommendations.¹²

Instead, Congress focused on ensuring that the military followed prescribed contracting procedures; avoided waste, fraud, or abuse; and distributed major defense contracts to as many districts as possible.¹³ Congressmen did not, nor could they, review military weapons acquisition decisions, strategy, and force structure within an overarching strategic context.¹⁴ In *The Decisionmaking Role of Congress*, Reppy and Long wrote:

Just as important, the military utility of new [weapon] systems should be balanced against the effect they may have on international stability and future security in a world where other countries can and do react to U.S. technological initiatives. Unfortunately, Congress does not analyze these larger issues. . . . Relying, as they do, mainly on Pentagon witnesses, the armed services committees rarely hear a rounded analysis of the United States' international position, strengths, and weaknesses, and the members tend to lose sight of the broader context of national security.¹⁵

Likewise, Congress's committee structure virtually precludes a systematic, coordinated, and thorough review of weapons acquisition.

The various committees and subcommittees of Congress that dealt with the armed forces, foreign policy, and technology focused on specific issues. They approached each issue narrowly and in a fragmented manner.¹⁶ For example, among the Senate Armed Services Committee's several subcommittees was one dealing with research, development, testing, and evaluation (RDT&E), and another that dealt with appropriations.¹⁷ However, they did not necessarily coordinate their approach.¹⁸ Hence, a weapon system could be approved for testing and development, only to have its procurement dollars undercut. Moreover,

these subcommittees did not interface with the Senate Foreign Relations Committee. Therefore, the weapons system/foreign policy/national security strategy linkage was not strong.¹⁹ Finally, committee review often boiled down to constituency-related issues, such as spending, that aided an individual member's district.²⁰ Taken together, these factors militated against the development of a coherent set of national priorities, which the political leadership could have used to guide the weapon acquisition process. The constraints of the political structure enumerated above promoted the military's autonomy in weapon acquisition decisions, strategy development, and force structure during the Cold War, which has continued to this day.

MILITARY DECISIONMAKING, FORCE STRUCTURE, AND POLICY

The relative autonomy that the military has in selecting which weapons systems to develop affects national policy in the long term through the development of future force structure. According to Joint Publication 1-02, *Department of Defense Dictionary of Military and Associated Terms* (April 2001), force structure is the "numbers, size, and composition of the units that comprise U.S. defense forces: e.g., divisions, ships, air wings."²¹ This includes the numbers and types of weapons systems the forces have in their inventory. Instead of being driven by strategy, weapon acquisition decisions tend to be technology-driven.²² The RDT&E process on average consumes between 10 and 15 years, with some systems taking less time (aircraft carriers, 6-8 years) and more technologically advanced systems taking much longer (B-1 bomber, 23 years).²³ When weapons systems become operational,

they are placed into an organizational architecture designed to maximize their capabilities and within a doctrinal context that governs their employment. The resultant force structure has inherent capabilities and limitations.

The weapons-systems decisions the military makes now affect future foreign and national security policies when those weapons systems are fielded in some 15 years. Contributing to the influence of current acquisition decisions on future policy is what could be called "policy lag." Other than in very broad terms, rarely does America's elected leadership outline a comprehensive foreign policy that extends beyond the incumbent's term.²⁴ A number of factors account for this: the pluralism inherent to the political system, the primacy of the domestic agenda, the power of the bureaucracy, the presidential life cycle and his approval rating, the influence of the news media and other political actors, the sharing of powers within a federal system, and the tendency of ad hoc crisis management to supplant long-term strategy.²⁵ Even though presidents are the chief agents for the conduct of American foreign and national security policy, their power is constrained by the factors just mentioned. Thus U.S. foreign policy tends to be disjointed and characterized by a series of political compromises.²⁶

The military, on the other hand, does not labor under any such constraints. For example, the Air Force does not have to sell the nation on what bomber or fighter to procure. They may have to lobby Congress for money to get the numbers of a particular weapon system they need; still, the decision to acquire it remains de facto internal to the Air Force.²⁷ Due to the nature of the development and acquisition cycle, military R&D and acquisition planning almost always

extends 15 to 20 years, while foreign policy planning rarely extends beyond the administration's current term. As mentioned previously, the military's expertise and autonomy in the weapons systems development process during the Cold War rarely was challenged. Consequently, political leaders saw their policy options circumscribed by the decisions the military had made during previous administrations.²⁸ As the Cold War illustrates, future presidents can change force structure; however, the political price of doing so is normally prohibitive.²⁹ With regard to the B-2 bomber, for example, over a 7-year period the sunk costs were \$8.5 billion in R&D and \$16.4 billion in procurement, producing a total of nearly \$25 billion spent on the first 15 aircraft alone.³⁰ With such a huge previous investment, future presidents will think twice about abandoning the weapon.

Discarding one weapons system for another affects the readiness of the force, because it normally requires training and restructuring. Still another cost is that a major reorganization of the armed forces normally involves winners and losers within the political process. Benefit redistribution is fraught with political liability and jeopardizes the president's agenda.³¹ Each new president inherits a military force structure that, with minor exceptions, was created several administrations previously. This phenomenon was previously identified as "policy lag."³² While presidents often tinker with military force structure by adding to or taking from it incrementally, for the most part they tend to make do with the force structure they inherit.³³

The development of the B-1 illustrates how problematic it is to expect the military's current weapons systems decisions for acquisitions 20 years in the future to actually support the foreign and national

security policies of the nation's future political leaders. When the B-1 bomber finally was fielded, policy had changed and the weapon system was obsolete. The conceptual development of the B-1 bomber began in 1961, with the B-70 bomber as part of the Air Force's Advanced Manned Strategic Aircraft program (AMSA). This program was designed to meet the perceived need by the Air Force to acquire a bomber capable of penetrating Soviet air space undetected at low or high level. Begun under the John F. Kennedy administration, the B-1's development continued through the Lyndon Johnson, Richard Nixon, Jimmy Carter, and Ronald Reagan administrations.³⁴ The B-1 finally entered the Air Force's inventory in 1986.³⁵ Over the course of the B-1's development, America's foreign policy orientation changed four times. Flexible response gave way to Nixon's policy of détente, then Carter's accommodation under a theory of complex interdependency, and, finally, Reagan's policy of global confrontation with the Soviet Union.³⁶ In fact, in 1977 the Carter administration cancelled the B-1 after over \$22.9 billion had been spent on its research and development.³⁷ But, like the mythical phoenix, the B-1 rose from its own ashes during the early years of the Reagan presidency, and by the mid-1980s, it entered the Air Force's inventory.

When Reagan became president, the United States began a massive rearmament. The Air Force revived the B-1 program, although 4 years had been lost on its development, and by 1982-83, 3 years before the B-1's fielding, its utility was questioned in light of the B-2 stealth bomber, which the Air Force had been developing in secret and concurrently with the B-1.³⁸ Moreover, by the time the Air Force began fielding the B-1, the Cold War had begun to thaw as Soviet

Premier Mikhail Gorbachev announced a policy of *glasnost* (openness) and *perestroika* (restructuring), and the Reagan administration began to cooperate with the Soviet Union on further limiting strategic weapons and promoting nuclear disarmament.³⁹ By the time the last B-1 bomber wing was operational, the Cold War had ended and the B-2 bomber had replaced it on grounds of technological superiority. The story of its acquisition is as much a testament to the military's acknowledged expertise, autonomy, and the strength of its political alliances as it is an indictment of the lack of coordination between weapon system development and national security strategy formulation.⁴⁰ "The importance of organizational preferences was striking especially in the case of the B-1 program. The Air Force's commitment to the B-1 triumphed over Robert McNamara's outright opposition to it, David Packard's attempt to shape it, and, ultimately, Jimmy Carter's effort to cancel it."⁴¹

The 100 B-1's procured by the Air Force cost the taxpayer over 28 billion dollars after 1981, with more than 78 percent of the program's cost appropriated before the first prototype was flown successfully.⁴² The Air Force certified that the B-1 would be built for no more than \$28.3 billion as a condition for getting congressional approval for its resurrection. As an additional measure for quelling political opposition, the Air Force improvised a new mission for the plane: "At the beginning of 1981, the Air Force plans called for B-1s to be converted to carry cruise missiles once the Stealths were ready; thus creating a synergistic effect. Air Force officers admitted privately that the new synergism had more to do with politically justifying the B-1B than with attacking the Soviet Union."⁴³ As it turned out, the entire fleet of B-1s had to be retrofitted

at an additional cost of \$3 billion. Given the \$22.9 billion R&D cost prior to its cancellation in 1977, its post-1980 cost of \$28.3 billion, and the additional \$3 billion more for retrofit, the total cost of the program over 27 years was \$54.2 billion. Critics of the program called the B-1 “a flying Edsel” and “a dismal failure.” They could rightly ask what other programs the Air Force could have better spent the money on.⁴⁴

In 1988, Nick Kotz wrote: “The B-1’s development has been marred by political indecisiveness, bureaucratic obsessions, Air Force overreaching, parochialism, partisan demagoguery, and an utter lack of consensus on defense priorities and procurement strategies.”⁴⁵ By 1994, DoD no longer considered the B-1B a strategic weapon, which had been the sole purpose for its creation. It was now classified as a conventional weapon, having been replaced by the B-2 and the venerable B-52H.⁴⁶

While it is unfair to blame either the military or America’s political leadership for not anticipating the end of the Cold War, it is fair to question their pursuit of a weapons program that by 1981 was redundant, if not irrelevant, as a strategic deterrent. America’s strategic deterrent resided primarily in its array of Intercontinental Ballistic Missiles (ICBMs), Intermediate Range Ballistic Missiles (IRBMs), Submarine-Launched Ballistic Missiles (SLBMs), cruise missile technology, and only secondarily in its manned bomber force.⁴⁷ Moreover, because the military steadily upgraded the capabilities of its B-52 force over the years, it could have continued to bridge (as it does today) the perceived technological gap produced by the lengthy development of the B-1 bomber. The end of the Cold War was unknowable, but the production and fielding of the bomber was predictable, as was the

cost benefit analysis of producing the B-1 in light of existing bombers and missiles, future bombers (the B-2), and the strategic deterrent capability called for by the national security strategy.

The B-1 remains in the Air Force's active inventory as part of the Cold War's legacy force.⁴⁸ It has been converted to accomplish missions that it was not designed for and for which a less costly alternative would have sufficed.⁴⁹ The Reagan, George H. W. Bush, Bill Clinton, and George W. Bush administrations inherited this weapon system and the force structure built to employ it. The aircraft's life expectancy is 50-to-70 years, so the B-1 could be around for another 40 plus years.⁵⁰ The B-1 is currently configured as a cruise missile and smart bomb platform, which can operate at extended standoff distances.⁵¹ Its acquisition cost, based on post-1980 figures, was \$280 million per plane. The older B-52 can fulfill the same mission, with slightly less payload. Its acquisition cost in 1998 constant dollars was \$32 million per plane. Given the huge budget outlays to procure the B-1 and the additional costs to maintain, man, and fly (in September 1987, it cost \$21,000 an hour to operate one B-1); the Air Force is unlikely to risk further censure by abandoning it.⁵² Instead, the B-1 promises to be an aircraft in search of a mission. Moreover, it will continue to affect policy options if only because its development and operating cost have consumed money, and will continue to do so, that could otherwise be applied to the development and acquisition of more advanced technologies. Similarly, strategies that call for the use of military force, especially airpower, may be constrained by the presence of this weapon system in the inventory: it may not be suited to the policy and military strategy the administration would like to execute, but it is available.

The decision to develop and acquire the B-1 represented a choice that the military (Air Force) made from among other alternatives (for example, upgrading the B-52, developing advanced fighters, procuring of more B-2s, or acquiring additional strategic lift such as the C-5A, C-141, and C-17) predicated on a worldview no longer valid when the plane became operational 27 years later.⁵³ Moreover, the military made the weapons systems choices that affected future foreign policy, not the elected civilian leadership.⁵⁴ As a result of this asynchrony between policy and weapons systems development, or what is referred to here as policy lag, the B-1 essentially became obsolete in the final stages of its fielding.⁵⁵

Proponents of the B-1 maintain that its development played a useful role in the SALT and later START negotiations with the Soviet Union as a bargaining chip to encourage the Soviets to reduce their strategic weapons. Three factors undermine this claim. First, the preponderance of America's strategic nuclear weapons capability resided in its ICBMs, IRBMs, and SLBMs. These strategic systems, constituting the main threat to the Union of Soviet Socialist Republic's (USSR) existence, were the ones the Soviets wanted reduced. Second, the oft-vaunted ability of the B-1 to penetrate the sophisticated Soviet air defenses was always theoretical and problematic. Once an enemy learns of a capability, the technological advantage of the weapon system lasts only as long as it takes the enemy to develop a countermeasure. Last, given the prodigious financial and political resources the Air Force expended to procure the B-1, it is difficult to imagine it willingly relinquishing the weapon system absent quid pro quo in its other weapons programs. Air Force prestige and identity were bound up intimately with the B-1 bomber.

B-1 adherents also played up the versatility of the bomber. Even as the B-1's strategic role diminished, it could still perform conventional missions based on its considerable standoff capability, or so it was claimed. This argument also is flawed. First, the B-1 was developed and sold to Congress and the American people as a strategic weapon, one that would provide the United States with a significant military advantage. The United States had plenty of less costly alternatives, like the B-52, for conventional missions. Moreover, the threats America faced in the post-Cold War era did not require the capabilities of the technologically advanced B-1 to defeat these threats because they were not associated with sophisticated air defense systems. Last, claiming that the standoff capability of the B-1 minimizes risk to the crews is equally contentious. The standoff capability of the B-1 has nothing to do with the aircraft itself; rather, it results from sophisticated weapons munitions on board it. Those missiles and bombs can be launched with equal effectiveness and standoff distance from a dirigible, and for a fraction of the cost.

As the case of the B-1 illustrates, the foreign policy options of America's leadership are constrained (financially and operationally) by the military's decision to acquire specific Cold War weapons systems. In some instances, it is not the weapons systems themselves that are in question as much as the number of such systems in the inventory and the force structure built around them. For example, does the United States in the post-Cold War era need almost 1,200 (including 464 in the National Guard) AH-64 *Apache Longbow* attack helicopters, weapons systems that were designed in the early 1970s to destroy massed Soviet armored formations that no longer exist?⁵⁶ Does the nation need 11 nuclear-powered aircraft carriers and

their associated battle groups when the sea lanes are not threatened?⁵⁷ What weapon system technologies should the military develop and what force structure should the military have, given the threats the nation faces, or the capabilities it feels it needs, and the policy it wants to implement both at home and abroad? These questions are not new; they have been raised before and undoubtedly will surface again. Part of the answer lies in an examination of the apparent disconnects between weapons development and force structure decisions, on the one hand, and foreign policy and national security strategy decisions, on the other.

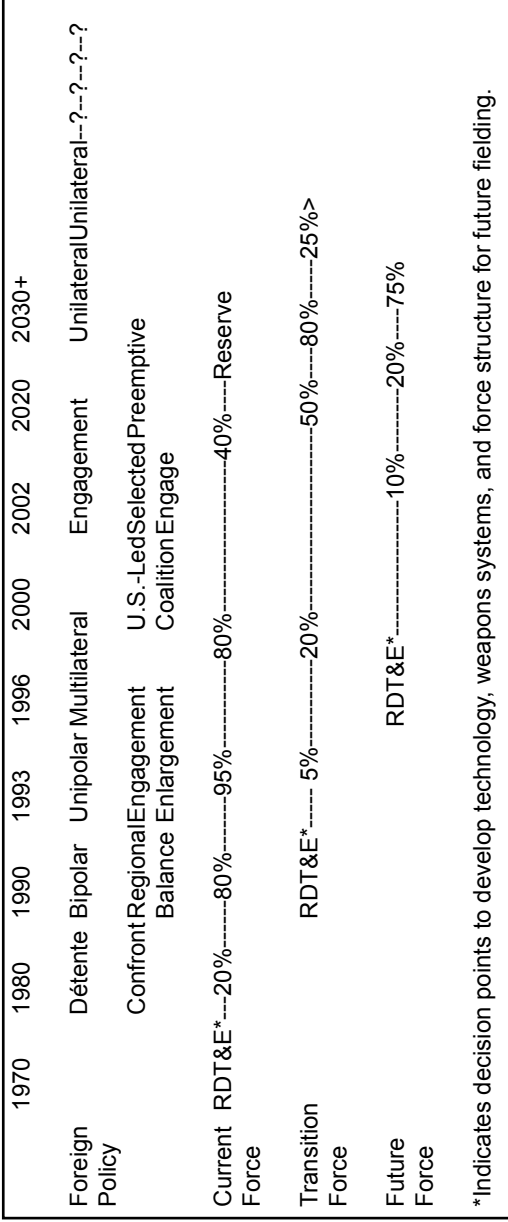
While linking weapon system development, acquisition, and future force structure to policy was difficult during the Cold War, it became even more of a challenge in the post-Cold War era when there is not a clearly defined threat on which to focus. Since 1989 and the end of the Cold War, there have been four changes in national security strategy.⁵⁸ With respect to America's basic foreign policy stance, the United States shed its previous one and adopted a new one in 1990, 1993, 1996, 2000, and 2002 (see Figure 1 below). The tenor of these foreign policy changes has in part depended on and been conditioned by the weapons systems and force structure the political leadership inherited from the Cold War. Even though the armed forces are presently changing/transforming, the decisions made on what capabilities to acquire and how to organize and employ those capabilities remain primarily with the military.⁵⁹ Moreover, due to the nature of RDT&E and acquisition system, these decisions drive the development of military capabilities that are largely independent of policy.⁶⁰

Figure 1 illustrates the potential disconnect between weapons systems development and force

structure on the one hand, and foreign policy on the other. It compares changes in foreign policy to the force structure at the national leadership's disposal should policy decisions call for the use of force.

Weapons systems and their encapsulating force structure do not remain static. Changing technology dictates that part of the military's force structure will be in almost constant transition. Presently, the military has three force structures (although it acknowledges only two, the current and the future force). The first is the current force. The current force is a residual Cold War-era force designed to defeat a Soviet-based threat. It constitutes most of the military's present force structure. The second category, the transition force, consists of a percentage of the force that is modernizing with prototypes of future force equipment, but which is not fully trained or ready. The transition force is a bridge between the current force and the force structure that the military is building toward, called the future force.⁶¹ Emerging technology drives the future force's development.

While the terminology used in this figure – current, transition, and future force – is most germane to the Army, it describes the process that all the services use. The Air Force, for example, had the B-52 (current), the B-1 (transition), and the B-2 (future) operational at the same time. But the most important insight to derive from the figure is the relationship among weapons systems decisions, the type of force in place or projected to be in place, and the potential unsuitability of that force with respect to shifts in foreign policy. For example, the Cold War current force that was developed and acquired to defeat the Soviet threat in central Europe is still in existence today and is projected to remain in the active components until 2015, longer in the reserve components.



Sources: The White House, *National Security Strategy of the United States* for the years 1988 through 2000; The 1998 Annual Report on The Army After Next Project, *Knowledge and Speed: Battle Force and the U.S. Army of 2025*; Department of the Army: *United States Army Transformation Campaign Plan*, dated April 2001; Department of the Air Force, *Global Engagement: A Vision for the 21st Century Air Force*.

Figure 1. Foreign Policy and Weapons Acquisition/Force Structure Development.

As of this writing, the nation is involved in the GWOT that involves military action in a host of countries. Secretary of Defense Donald Rumsfeld is pressuring the services to transform, to think about possible futures, and to acquire military technology that will give the nation a decisive advantage “across the full spectrum” of warfare.⁶² As the current war on terror illustrates, the Cold War legacy force does not provide the right fit, but it is available and the Bush administration has had to adjust its policy options accordingly.⁶³ There have been significant increases in the defense budget to acquire the technology and capabilities the military needs today. However, as Figure 1 illustrates, the technology and force structure the military has on the drawing boards today will not translate into actual capabilities in any meaningful way until 2020 and beyond. Will the current foreign and national security policies in force today still be valid 15 to 20 years into the future? If recent history is any guide, the answer is no. The military is researching and developing weapons technologies that it needs now, but which, when fielded, may not have the right mix of capabilities that as yet unanticipated future policy options may require. Put differently, the military is developing and acquiring the future’s legacy force.

ACCOUNTING FOR POLICY LAG

While a number of factors contribute to policy lag, three are particularly important; namely, the planning horizon involved and the number of players in the two processes; the budget process they operate within; and the predictability of the outcomes of each process. Understanding how weapons systems decisions precede foreign policy decisions by lengthy intervals

is important to understanding the role that military transformation plays in shaping the nation's future foreign policy and national security strategy.

Planning Horizons.

Foreign policy and national security strategy tend to have short planning horizons when compared to weapon system and force structure development. First, policy decisions are governed by the structure of the federal government and its political process, whereas weapon system and force structure decisions tend to be relatively isolated from this process. Second, foreign policy and national security strategy formulation tend to be White House-centered, while their implementation is decentralized. Weapon system and force structure planning and execution decisions revolve around the military's preferences. Last, foreign policy and national security decisions are visible and subject to censure by the electorate, while weapons systems decisions are seldom subjected to public scrutiny. The discussion that follows elaborates on these distinctions.

The structure of America's political system works against the development of long-range foreign and national security policy. Policymakers themselves are subject to wholesale change every 6 to 8 years. Congressional elections occur every 2 years, presidential elections every 4 years, and senatorial elections every 6 years. Although the chances are slim that the entire elected leadership of the country would change in any given 8-year period, leadership changes do occur quite frequently, and with them changes in foreign policy.⁶⁴ Figure 1 reflects a 13-year post-Cold War period involving three presidents and six nuanced orientations in national security policy. Responsibility for the formulation and execution of foreign and national

security policy is shared among the various branches of government, but rests especially the executive and legislative branches. For example, while the president can initiate a treaty, the Senate has to ratify it before it is formally binding on the nation. Likewise, the president can lead the nation into a war, but he cannot declare war – that requires an act of Congress.⁶⁵ The individual states play a minor role in the development of foreign policy. They offer tax incentives to lure major foreign investment, and they exchange trade delegations with other nations.⁶⁶ Within the states, major cities such as New York, Los Angeles, Chicago, and Boston negotiate with foreign nations and establish bilateral trade and cultural events. The nature of the political process that governs the development of foreign and national security policy is even more complicating.⁶⁷ Commenting on the impact of the federal bureaucracy on foreign policy, Henry Kissinger wrote:

The American foreign policy bureaucracy is for the most part staffed by individuals who have dedicated themselves to what is, in American society, a rather unorthodox career so that they may promulgate and implement their views of a better world. Their opinions, moreover, are honed by a system in which policy emerges from bureaucratic struggles, which, as Secretary of State George Shultz later pointed out, are never finally settled. Segmented into a series of individual, and at time isolated, initiatives geared to highly specific problems, American foreign policy is rarely approached from the point of view of an overall concept. *Ad hoc* departmental approaches have more—and more passionate—spokesmen than does an overall strategy, which often has no spokesman at all.⁶⁸

Other writers have commented on the short-term orientation of American foreign policy, as well. Bruce Russett states that foreign policy measures are

governed largely by domestic policy, “because they gratify friends and disarm adversaries at home, not because they necessarily seem sensible in some abstract principle of the national interests abroad. Furthermore, the political horizon shaping those decisions is typically a short one, not a vision for the long haul.”⁶⁹ Additionally, changes in foreign and national security policy tend to be incremental and thus support a short-term vision. As Herbert Simon stated in 1957, political decisionmaking is not truly rational, since it is impossible to know and process all the information and variables that impact on a given issue. Thus, in Simon’s view, political decisionmaking occurs in an environment of “bounded rationality,” with decisionmaking based on the best but partial information available at the time. Simon referred to this decisionmaking as “satisficing”; that is, picking the course of action that will meet the requirements. Expanding on Simon’s concept, Charles Lindblom postulated that policy decisions are made by marginal analysis in which policies are compared to one another and agreement is made on means rather than on ends. This “muddling through” phenomenon, according to Lindblom, largely accounts for the incremental nature of policy changes, as only small departures from existing policies are acceptable in the face of uncertainties and unclear goals.⁷⁰

Though numerous actors participate in the foreign policy process, the process remains White House-centered.⁷¹ But, as explained above, the president is constrained in the initiation of foreign and national security policy by the structure of the government and the nature of its operation. Even within the executive branch, the president’s ability to conduct long-term planning is constrained by the agencies he has to work with. In the post-Cold War era, the State Department

has proven largely unproductive in developing long-range plans and viable policy. This is due in part to its structure as well as to the culture of the organization.⁷² Most of the State Department's efforts are spent on putting out fires.⁷³ The National Security Council (NSC) staff does not focus on long-term planning, either. "The NSC staff is small compared to other governmental organizations and incredibly overworked. The staff responds to the needs of the national security advisor and the president who are primarily preoccupied with responding to immediate events and day-to-day governing. Consequently, there is little time, interest, or reward involved in long-term planning."⁷⁴

Additionally, a president's foreign policy agenda is governed by what scholars refer to as the presidential life cycle, or that period of time when congressional lines have not hardened, and the president can work foreign policy, national security, and domestic agenda issues in a more bipartisan manner. This period can last for as little as 3 to 4 months or, in exceptional cases, extend for as long as a year.⁷⁵ Given the short duration of the bipartisan phase of the presidential life cycle, a president seeking reelection will feel pressed to implement those policies that will have a positive effect on his chances at the polls. Long-term policies whose effects are difficult to measure do little to promote a president's reelection or his party's political agenda. Bruce Russett made the case in 1990 that presidents often implement foreign policy measures for purely partisan purposes:

A president may impose a grain embargo less to influence the Soviet Union than to impress voters at home with his toughness against a militarily active foreign adversary; a subsequent president may repeal the embargo far less because it has achieved its stated foreign policy purpose

than because he needs the domestic political support of growers and shippers of grain, and of the members of Congress from their states.⁷⁶

Russett goes on to claim that presidents use the armed forces in much the same manner. A show of force, if used properly, can rally public opinion and the Congress to the side of the president during a crisis and assist him in furthering his domestic agenda in its aftermath.⁷⁷ Moreover, a president's policies, both foreign and domestic, are opened to scrutiny by Congress, the news media, and the public.⁷⁸ Additionally, his party's chances at the polls are affected by his policies and their approval by the public. Collectively, these factors contribute to the short-term focus of American foreign policy.

The weapon systems and force structure development process does not labor under the same constraints that the foreign policy process does. First, the number of actors in the process is comparatively limited. They consist of the president; the White House staff including the NSC and the Office of Science and Technology; Office of the Secretary of Defense; Defense Science Board; Joints Chiefs of Staff; the three military departments (technically the Marine Corps is subordinate to the Department of the Navy); the Combatant Commanders (formerly known as Commanders-in-Chiefs [CINCs]); defense contractors; the research and development community consisting of government, private, and government-sponsored university researchers; and select members of Congress serving on committees dealing with weapons systems RDT&E and acquisition.⁷⁹ Although the number of actors may seem large at first glance, it is small compared to the numbers who play in the foreign policy process.

Moreover, with the exception of the few elected or appointed actors such as members of Congress and the Secretary of Defense, most of the participants in the weapons systems and force structure development process are immune from electoral politics. Not having to answer to the electorate, they can focus on the long-term aspects of weapons systems development and the bona fide merits or demerits of the systems proposed.

The weapons community mentioned above, often referred to as the “military-industrial complex,” is focused on relatively narrow issues such as the design and development of new weapons systems.⁸⁰ This circumscribed approach facilitates long-term planning, as the actors involved do not have to worry about the interests of those external to the process. The details of weapons systems R&D tend to be highly technical and arcane, which means players outside of the issue area seldom question them. Based on the recommendations of the military services, Congress annually appropriates funds for R&D, which, in turn, are applied to specific weapon programs development. Over the systems’ developmental life span (10-15 years depending on the system), the cost sunk in R&D and prototype testing can become substantial, so much so that these costs often argue against canceling the system, even when its utility is in doubt. The development of the B-1 and the B-2 are cases in point. Additionally, individual members of Congress are quick to recognize the job and growth benefits that prolonged weapons systems development and acquisition bring to their districts: “It is not uncommon to find the Congress insisting that ‘the nation needs’ a particular weapons system that the president, the secretary of defense, and the head of the armed services that would use the system all insist they do not need or want.”⁸¹

Furthermore, the military's RDT&E, acquisition, and force structure planning process is Pentagon-centered and not subject to the same public scrutiny that the foreign policy process is. The military determines what weapon system technologies to develop and then recommends from among them which ones DoD should acquire, with relatively little or no outside interference.⁸² This is not to say that Congress and the news media give the military a free ride. Former Senator William Proxmire initiated the "Golden Fleece Award" to highlight waste, fraud, and abuse on the part of the government to the public and to the media. Yet, uncovering 600 dollar hammers and 1,200 dollar toilet seats, while sensational and indicative of over-billing by defense contractors on the one hand and poor contract supervision by the military on the other, does little to reconcile national security strategy development with weapon systems development.⁸³ Moreover, it does not affect the military's RDT&E, acquisition, or force structure development process in any substantive way. The decisions on what weapons systems to develop, and acquire, and how to structure America's armed forces to use them remain with the military.⁸⁴ "In the United States, weapons are not purchased by the secretary of defense for all the armed services, but by the individual services themselves."⁸⁵

Taken together, the relatively small number of actors (admittedly all actors are not equal), their insulation from the electoral process, the technical and arcane nature of weapon system development, the distribution of research funds and accumulation of sunk costs over a period of years, the economic benefits of long-term development to congressmen from recipient districts, and the closed nature of the decisionmaking process, all lend themselves to a long-term planning horizon in the weapons systems development process.

Another factor contributing to the difference in the nature of the planning process between foreign policy and weapons system policy is the nature of the budget cycle they operate on, a subject for the next section.

Budgeting Process.

Most government agencies, the State Department included, operate on a budget cycle that covers 3 years. In the current year they are executing one budget, presenting next year's budget to the president and Congress for approval and appropriations, and formulating the budget for the year after that. Most governmental agencies have to navigate their way through the congressional budgetary system in order to secure the monies they need for their programs. This involves an authorization process in which they justify to one congressional committee the need for the program; and to a different congressional committee as part of an appropriations process in which they justify the cost of the programs they want to implement.⁸⁶ Often, the authorization and appropriations processes overlap. The congressional committees seldom coordinate with one another, and it is not unusual to have members of Congress on the authorization committee approve a program, only to have members on the appropriations committee, due to partisan issues, refuse to fund it. At any point in this process, the program is subject to bargaining, compromise, and the necessity for coalition-building.⁸⁷ While agencies may plan for programs beyond 3 years, the earliest they can get them authorized is 2 years in advance. Anything beyond that is subject to the winds of political change and the impact of interest groups clamoring for inclusion among those receiving

the benefits. Consequently, the budget cycle and the political factors that affect it do not reward long-term planning within most government agencies.⁸⁸

Within DoD, however, the budget planning system is much more systematic and long-term oriented.⁸⁹ The services plan for the far term (25 years), the mid-term (16 years), and the near term (6 years).⁹⁰ The services go through the same congressional authorization and appropriations committees' process, except that their committees are dedicated to defense and the armed services. Like the committees that deal with the rest of government, those that deal with defense have the same coordination and synchronization problems. However, the military has three advantages in the budgeting process which facilitate long-term planning for RDT&E, acquisition, and force structure decisions. First, the military's expertise is seldom challenged. Congress may quibble over how many of a certain type of weapon the military wants, but not on whether the military needs it. Recent decisions on procurement of a new nuclear carrier for the Navy, a new armed reconnaissance helicopter for the Army, and a new advance fighter for the Air Force indicate the services' unchallenged discretion in the weapon systems development process, given that the threat these three systems were designed to defeat no longer exists.⁹¹ Second, the participants in the weapon systems authorization and appropriations process are relatively closed groups that share the same interests. Consequently, dissent rarely occurs among those called to testify before Congress. Moreover, the chairmen of the various armed services committees, if not all the members, are from districts and states that have been favorably blessed by defense spending. Finally, the jargon the weapon systems/force structure advocates speak and the process (Program Planning

Budgeting System, or PPBS) they use to identify, justify, and acquire their preferred weapons systems are complicated, tedious, and arcane. Taken together, these three advantages of the military services facilitate their weapon system RDT&E, acquisition, and force structure long-term planning.

The services present their budget plans to Congress specifying what weapons systems they intend to develop and the long-term plan to research, test, and acquire them. Along with this plan, the military submits the estimated cost of the system amortized over the length of the RDT&E, acquisition, and fielding period. Unlike civilian governmental agencies whose appropriations cover 1 year, military appropriations habitually cover 2 years.⁹² It is not unusual for Congress to fund most of the life-cycle R&D costs in the first several years of a weapons development. In the case of the B-1 mentioned earlier, Congress approved 78 percent of its costs before the first aircraft was flown.⁹³ Similarly, between 1984 and 2002, Congress appropriated/funded over \$5.9 billion for R&D on a new *Comanche* armed scout helicopter for the Army.⁹⁴ Eighteen years in the making, the program was cancelled in 2004 before the military received its first operational model. The B-1's acquisition and that of the *Comanche* helicopter are just two of many cases illustrating the strength of the military services in realizing their weapon systems preferences in the budgetary process and the ability of the military to sustain long-term planning for RDT&E, acquisition, and force structure development. However, this drawn-out process has certain benefits. Defense spending brings with it economic benefits to the legislators and their districts.

While the benefits that members of Congress accrue for their constituents from foreign policy often are

intangible and impossible to measure, those derived from weapon systems and force structure development are more concrete. Employment is one of the key benefits a congressional leader can bring to his district or state. Defense spending plays a major role in employment within the United States. Every \$1 billion in defense expenditures creates between 25,000 and 55,000 jobs, depending on whether the calculation includes indirect employment effects.⁹⁵ In 1990, DoD spent over \$300 billion per year; employed over four million people (60 percent of all full-time government employees); accounted for 30 percent of all Federal expenditures; and had over 900 bases, facilities, and properties.⁹⁶ In the year 2000, the personnel figures were lower, but the dollar amount was not. DoD employed just fewer than three million personnel (2,952,000) and had a budget of \$291 billion, of which \$163.7 billion, or more than half, were spent on RDT&E and procurement, which can be equated directly to jobs.⁹⁷ There is a strong correlation between the defense payroll or weapons spending in a state and congressional voting practices. Some members of Congress, expecting their district or state to receive substantial contract awards, request that the contract award announcement be timed to coincide as closely as possible to the congressman's campaign schedule.⁹⁸ Although not every congressman courts the military and defense contracts, those who sit on the various armed service committees tend to come from districts/states that have a concentration of defense contractors.⁹⁹

The magnitude of defense spending in the United States and its very tangible benefits provide legislators with strong incentives to support weapons systems development, especially if the development and acquisition will occur over an extended period. This

benefit is magnified if the weapons system will become part of a force structure that is based in the legislator's state/district. Besides direct compensation to the various states for salaries and wages, DoD provides defense grants to state and local governments, retired military pay, and procurement and research grants. All told, defense spending in 2002 accounted for 16.2 percent of all federal spending. Excluding programs mandated by law, the discretionary budget, defense expenditures in 2002 accounted for almost 61 percent of the federal budget.¹⁰⁰ Given the amount of dollars that flow out of DoD for weapons systems and forces structure, it is not surprising to find strong legislative support for weapons systems with extended development and fielding times, those systems that will remain in the inventory for some time.

Predictability.

The final factor contributing to the lag of foreign and national security policy behind the military's long-term weapons systems development, acquisition, and force structure programs deals with programs that are tangible and predictable as opposed to those that are not. Foreign policy often addresses issues in the humanitarian world. It is more difficult for the foreign policy community to articulate and justify the commitment of resources to a particular humanitarian program when its outcomes in the near term, let alone the far term, are uncertain and difficult to predict and measure. For example, U.S. intervention in Bosnia to prevent ethnic cleansing, establish peace, and promote democracy continues to be a drain on the nation's economic and military resources (albeit to a lesser extent now). While public and congressional support for the

Bosnian intervention still exists, it becomes increasingly difficult to justify in terms of national interests and to the electorate as the years go by. Will ethnic tensions erupt when the U.S.-led coalition departs? How do we know that it will not, and what measurement tool do we use? When will democracy take hold in Bosnia? If so, what type of democracy? What aspects of civil society must be in place for democracy to prosper? No one can answer these questions with any certainty; there are too many murky variables to predict an outcome.

Foreign policy deals with states and nations, composed of human beings representing various cultures and civilizations. A policy directed toward a state affects its people and, unlike inanimate objects, people often respond in unpredictable ways. Consider the pre-September 11, 2001 (9/11) policy toward North Korea. U.S. policy had been aimed at encouraging North Korea to forsake a nuclear program capable of producing weapons-grade plutonium in favor of a nuclear energy program under the auspices of the International Atomic Energy Agency. In return for participating in this program, the United States encouraged its allies to open a trade dialogue with the recalcitrant communist state in order to promote regional stability.¹⁰¹ This policy, initiated by President Bill Clinton in 1994, changed almost overnight when President George W. Bush denounced North Korea as a member of the “Axis of Evil” in the immediate aftermath of 9/11. North Korea reacted to this accusation in a belligerent manner. Now, instead of limiting nuclear weapons, North Korea is more active and open in pursuing its own nuclear weapons program along with the capability to target the United States and its allies.¹⁰² Also, the North Koreans might export the nuclear weapons technology they acquire,

if not the weapons themselves, to rogue states and terrorist groups.¹⁰³ Consequently, a U.S. policy based on deterring nuclear proliferation has changed to one based on preempting nuclear proliferation through the use of force if necessary and recently has reverted to multiparty negotiations. These policy swings apply beyond Korea to a growing number of potentially hostile states capable of acquiring these weapons and their delivery systems.¹⁰⁴

What the Bosnia and North Korea examples illustrate is how often foreign policy can change either with the advent of a new administration having a different world view or with a single seismic event. The number of independent variables a foreign policy planner has to deal with is daunting, and many are difficult to assess. Moreover, the legislative branch, with its narrower focus, contributes to the constant flux in U.S. foreign and national security policy. Because these factors involve human beings who react in often unpredictable ways, they argue for a short-term focus in the foreign and national security planning process. The weapon systems and force structure development process is less turbulent and more predictable since it deals in the realm of the science, where objects are more tractable.¹⁰⁵

Weapon systems and force structure development operate in the realm of science, physics, and mathematics. A weapon system may have people in the loop when it is operating, but the system proper, whether it is a rifle, missile, aircraft, or ship, is composed of elements subject to physically engineered controls. Even those systems that feature artificial intelligence, the so-called “smart” and “brilliant” weapons systems, are composed of man-made material with a programmed range of responses.¹⁰⁶ In brief, the development

process uses the scientific method. Weapon developers can control the environment and the independent variables associated with the systems operation, and the procedures and test results are reproducible, given the variables they control. Moreover, weapon system development follows a formalized procedure consisting of several fixed steps: identifying the operational requirement; validating its need; full-scale development; performance testing; operational testing; and fielding and operations.¹⁰⁷

Additionally, the military has institutionalized the same procedure in its organizational structure. In an effort to obtain economy and weapon system interoperability across the services, the Joint Staff established the Joint Requirements Oversight Council (JROC) and the Joint Capabilities Integration and Development System (JCIDS) program. These two measures enabled the Joint Staff to accomplish the first two steps in the weapon development procedure, namely, the identification of a requirement and its validation.¹⁰⁸ Weapons systems identified and validated through this process are funded for further development and worked into future force structure requirements. Though not perfect, the process, methods, and organization allow the military to acquire weapons systems and develop force structure in a systematic, cost-justifiable, and deliberate manner. Moreover, the weapon system capabilities vis-à-vis the threat they are designed to defeat are predictable, a big advantage in the policy struggle at the national level. Taken together, the factors described above allow the military to forecast its weapon system and force structure development well into the future with a high degree of probability that it will come to fruition. In addition to the military having almost exclusive

jurisdiction over weapons systems decisions and the differences in planning horizons between national security strategy/foreign policy and weapons systems procurement, a third factor that is skewing U.S. defense transformation is the military's and DoD's almost exclusive focus on network centric warfare.

NETWORK CENTRIC WARFARE AND THE FUTURE OF DEFENSE TRANSFORMATION

Enamored with the potentially decisive advantage that information dominance and precision munitions offered in conventional warfare, the military used the 1990s to develop the material underpinnings of what would become network centric warfare (NCW). Throughout the first decade of the post-Cold War era, the military maintained its major weapons systems preferences. The Navy continued to procure new aircraft carriers; the Air Force, new bombers and fighter-bombers; and the Army, new attack helicopters. While resembling their Cold War counterparts in appearance, these weapons systems had significantly enhanced capabilities. Many of these systems featured radar-defeating technology (stealth) and carried a new and advanced family of precision munitions. Additionally, they were linked to an array of overhead intelligence/target gathering platforms that were interconnected by secure computers, which provided various users at different command levels a common view of the battlespace.¹⁰⁹ American superiority in emerging information/intelligence gathering and precision strike technology allowed America's leaders to detect threats, identify targets, and quickly strike them. If attacked, the accuracy and power of the munitions virtually ensured the target's destruction. The military codified

this type of warfare in the term NCW.¹¹⁰ According to NCW's authors:

We define NCW as an information superiority-enabled concept of operations that generates increased combat power by networking sensors, decisionmakers, and shooters to achieve shared awareness, increased speed of command, higher tempo of operations, greater lethality, increased survivability, and a degree of self-synchronization. In essence, NCW translates information superiority into combat power by effectively linking knowledgeable entities in the battlespace.¹¹¹

NCW encapsulates four capabilities that the military has pursued for over 25 years, and whose recent development technology has accelerated. The first is information dominance. All militaries seek to gain intelligence on their potential enemies in order to determine their size, equipment, capabilities, and intentions. Simultaneously, they have attempted to deny the enemy information on themselves. Knowledge is power, and its acquisition or lack thereof vis-à-vis the enemy often determines victory or defeat in combat. America's dominance in space-based and aerial high-resolution intelligence systems provides it with an unmatched information acquisition capability. Second, the military continuously has sought to increase the accuracy of the weapons systems it employs. One round—one hit—one kill is a goal the military has sought for some time.¹¹² Precision munitions not only ensure enemy targets are destroyed, but also they minimize collateral damage (the damage done to noncombatants).¹¹³ In theory, precision munitions are more economical and efficient, thus freeing weapons systems to strike multiple enemy targets simultaneously, and reducing the overall number of weapons

systems in the force structure. For example, during Operation DESERT STORM, only 9 percent of the munitions used were “smart” or precision munitions.¹¹⁴ Consequently, the Air Force allocated 10 or more aircraft to each target. Twelve years later during Operation IRAQI FREEDOM, precision munitions accounted for over 70 percent of the bombs dropped, and the Air Force was able to allocate just two aircraft per target.¹¹⁵ Although the military’s overall force structure shrank during the first decade of the post-Cold War era due to the advent of enhanced precision weapons, the military’s overall capability, lethality, and effectiveness increased.

Third, the military emphasized speed in the conduct of its operations. Besides being able to move, shoot, and communicate faster than the enemy, the armed forces had to think and decide faster than their opponents, too. During the Cold War, the military invested in weapons systems that were faster, more maneuverable, more mechanically reliable, and more survivable than anything the Soviet Union could field. However, the drive for technological superiority did not stop with the end of the Cold War. Instead, scientific advances in computer and space-based systems propelled weapon system development forward. Speed of operations encompasses more than fast equipment, it describes how the United States plans to pursue its military campaigns. The military intends to use the enhanced capabilities of its weapons, intelligence, and command and control systems to conduct operations simultaneously and continuously against an enemy’s political, economic, military, and social-psychological-informational centers of power.¹¹⁶ Information dominance and the ability to share it in real time at all levels from the White House to the

battalion level provide leaders with a common view of the battlespace. This capability allows leaders to employ their weapons systems to achieve synergism in time, space, purpose, and effect.¹¹⁷ Together, enhanced weapons systems combined with precision munitions, information dominance, and the ability to decide and act rapidly provide the United States with a decisive edge over any potential enemy attempting to challenge it symmetrically.¹¹⁸

Additionally, the military has continued to emphasize the importance of air-and-space-based weapons systems in its strategic and operational approach to warfare. Airpower has several attractive features. First, it can self-deploy to a theater of operations and operate from nearby bases in the region, or in the case of naval aviation, operate from an aircraft carrier. B-2 bombers, with aerial refueling en-route and return, can launch their attacks from the continental United States, thus obviating the need for overseas bases. Second, air power can be used almost immediately after political leaders decide that a military response is necessary. Third, air power, supported by space-and-ground-based intelligence systems capable of providing digitally transmitted target data to aircraft weapons systems in real time, provides political leaders and senior military commanders with a much-enhanced target discriminating capability.¹¹⁹ Instead of leveling an entire section of a residential or industrial area to destroy a target, the aircraft equipped with Joint Direct Attack Munitions (JDAMS) can land a bomb within feet of the aim point. Additionally, formerly difficult targets are now vulnerable. Consequently, air power's precision capabilities minimize civilian casualties and suffering.¹²⁰ Last, extended-range precision munitions allow aircraft to deliver their attack outside

of an enemy's air defense capability. Add to this a stealth capability, and the Air Force has the ability to remain undetected as well. The cumulative effects of long-range precision munitions, high-resolution overhead target acquisition, and radar defeating technologies provide the Air Force with a "stand off" advantage (the ability to hit the enemy without being hit in return), and minimize the probability of U.S. casualties.¹²¹ During the Clinton administration, air power and cruise missiles (launched from ships and planes) were the primary response to terrorist threats and attacks against U.S. interests.¹²² When the terrorist attacks occurred on 9/11, the military lacked a specific plan for operations in Afghanistan. However, the capabilities inherent in the military's technology and force structure enabled President Bush to commence combat operations in Afghanistan on October 7, 2001, less than a month later.

Within days of the commencement of military operations, American airpower employing a variety of air- and sea-launched precision munitions eliminated the Taliban's air force, air defense system, and key communications systems.¹²³ Simultaneously, Afghan opposition forces supported by U.S. special operations force (SOF) teams and close air support launched a ground offensive against the Taliban and al-Qa'ida forces. The military used air power and precision munitions to isolate the enemy on the battlefield, prevent him from reinforcing his positions, deny him information on U.S. and allied forces, and ultimately to destroy him.¹²⁴ In December 2001, with the battlefield isolated and the Northern alliance pressing the Taliban and al-Qa'ida fighters, the United States began deploying U.S. Marines (later Army forces) from the carrier battle groups located in the Indian Ocean to secure

key airheads and lodgment areas in Afghanistan.¹²⁵ In addition to direct combat operations, the United States distributed thousands of tons of medical and food supplies to the Afghan people. These humanitarian operations were part of a psychological operations campaign to convince the people that U.S. combat operations were targeted against the Taliban and al-Qa'ida forces, and not them.¹²⁶ The military conducted its operations with dazzling speed. American aircraft operated around the clock. In the space of 2 years, the targeting cycle for *Tomahawk* land attack missiles (TLAMs or cruise missiles) had been reduced from 101 minutes during operations in Kosovo to 19 minutes in Operation ENDURING FREEDOM (Afghanistan).¹²⁷ U.S. forces moved about the country by air to close rapidly with identified enemy forces. In less than 6 months, the Taliban had been removed from power, and the al-Qa'ida network in Afghanistan had been largely destroyed.¹²⁸

The military's success in Afghanistan demonstrated its technological superiority and the influence it had on the nation's foreign policy. The campaign was fought differently than previous conflicts. Operations featured surrogate ground forces, U.S. airpower, information dominance, and precision munitions.¹²⁹ The unique mix and synchronization of these elements during the fighting encouraged some observers to categorize the Afghan operations as a "New American Way of War."¹³⁰ President Bush clearly was impressed by the military's weapons systems and operational prowess. In a December 2001 speech at the Citadel, President Bush declared,

Afghanistan has been a proving ground for this new approach. These past 2 months have shown that an innovative doctrine and high-tech weaponry can shape

and then dominate an unconventional conflict. . . . The conflict in Afghanistan has taught us more about the future of our military than a decade of blue ribbon panels and think-tank symposiums. . . . When all of our military can continuously locate and track moving targets—with surveillance from space—warfare will be truly revolutionized.¹³¹

Critics of the Bush administration's conduct of the war in Afghanistan argue that the President and his team have relied too heavily on the military's high-tech capabilities to attain political objectives that might have been better served by other instruments of power.¹³² Frederick Kagan in "War and Aftermath" claims that President Bush's vision of war

. . . focuses on destroying the enemy's armed forces and his ability to command them and control them. It does not focus on the problem of achieving political objectives. The advocates of a "New American Way of War," Secretary of Defense Donald Rumsfeld and Bush chief among them, have attempted to simplify war into a targeting drill. They see the enemy as a target set and believe that when all or most of the targets have been hit, he [the enemy] will inevitably surrender and American goals will be achieved.¹³³

What type of war did America enter into in Afghanistan and what political objectives governed U.S. military action? Answering this question is an essential step to establishing a sound strategy and identifying the means (resources) to employ. That the means should influence the ends is axiomatic. However, in Afghanistan, it appears that military action became an end in itself. War, some observers say, is about killing people and breaking things. This trite statement is wrong. Combat operations are about killing people and breaking things; however, war is an act of policy

and entails much more than military operations.¹³⁴ Clausewitz states that each war has its own nature, and it is wise to know the nature of the war you are about to enter before undertaking it.¹³⁵ Even with the most high-tech military in the world, the U.S. military was unable to kill or capture Osama bin Laden and many of his lieutenants (a strong tacitly implied mission in Bush's decision to invade Afghanistan). Moreover, Afghanistan still is not stable. President Karzai's central government has almost no extractive capability outside of Kabul, and its political legitimacy depends heavily on the continued presence of U.S. military forces.¹³⁶ Currently, the Taliban is staging a resurgence in the countryside, and fighting continues against pockets of Taliban and al-Qa'ida resistance.¹³⁷ In light of these developments, it is reasonable to question whether U.S. leaders ever considered the nature of the war they led America into, or if they simply relied on the military's technological capabilities as a substitute for cogent foreign policy objectives. The decision to topple Hussein's regime just after combat operations began in Afghanistan further supports the claim asserted here that the military's high-tech weapons systems and capabilities heavily influence America's approach to national security and foreign policy.¹³⁸ Moreover, given that defense transformation is occurring with little or no regard to policy, it is likely that this trend will continue.

The decision to invade Iraq on March 19, 2003, and the reasons for that decision are complex, controversial, and hotly debated as of this writing. What is not being debated is the revalidation of America's military supremacy. The U.S.-led invasion featured Special Forces, omnipresent airpower, precision munitions delivered from the air and sea, four Army division

equivalents, and a space-based computer-driven intelligence/targeting system that provided all the U.S. forces with the same near real-time picture of the battlespace.¹³⁹ Using advanced weapons systems and bold operational maneuver, U.S. and British forces conquered Iraq in just over 6 weeks. As with Afghanistan, the U.S. Air Force and Navy quickly destroyed what remained of the Iraqi Air Force and its air defense system. Simultaneously, a U.S. Army mechanized infantry division and a Marine infantry division raced toward Baghdad on either side of the Euphrates River, while a British mechanized division seized the critical port city of Basra and its nearby oil fields.¹⁴⁰ The Air Force supported each of these ground thrusts with vast amounts of close air support armed with precision munitions such as JDAMS and *Paveway* bombs.¹⁴¹ Although, the Iraqi armed forces were a shadow of their pre-Operation DESERT STORM selves, they still outnumbered the American forces in ground troops by a factor of almost four to one.¹⁴² Iraqi resistance was stiff at times, and bypassed pockets of Iraqi soldiers and Fedayeen interfered with U.S. lines of supply, causing temporary supply delays. Nevertheless, the combination of high-tech weapons systems delivering precision munitions, airpower, information dominance, and the speed of U.S. operations overwhelmed and defeated the Iraqi armed forces.¹⁴³

As brilliant as the American victory was, peace enforcement and the reconstruction of Iraq are proving much harder.¹⁴⁴ Weapons of mass destruction have never been found, and a definitive link between Saddam Hussein, Osama bin Laden, and the events of 9/11 has not been established.¹⁴⁵ However, Operation IRAQI FREEDOM provided the world, and especially

the Arab states, with an awesome display of American military power.¹⁴⁶ Unquestionably, the military's high-tech weapons systems, information systems, and the capabilities they represent were a major influence on Bush's decision to topple Hussein. In a speech at United Defense Industries' Santa Clara, California, plant on May 2, 2003, Bush talked to the importance of weapon technology. Using Nazi Germany as an example, he said that previously "Military power was used to end a regime by breaking a nation." However, weapons technology had progressed exponentially since then, such that during Operation IRAQI FREEDOM, the United States targeted the Hussein regime and not the civilian population.¹⁴⁷ The swiftness of the attack sent a strong ominous signal to other states in the region that harbor terrorists.¹⁴⁸ However, as events in the Middle East and Iraq have shown, military action, no matter how deftly conducted, is a poor substitute for a comprehensive foreign policy and grand strategy.¹⁴⁹

Having developed a foreign policy that relies heavily on America's military capabilities, President Bush has hinted that Iraq may not be the last state to undergo regime change at the hands of the U.S. military.¹⁵⁰ To ensure the United States has the means to execute President Bush's foreign policy, Bush and Rumsfeld accelerated the military's transformation program they had begun upon entering office. In Rumsfeld's view, U.S. forces were structured to fight the Soviet Union, a threat that no longer existed. From his perspective, the armed services were hidebound, too heavy to deploy rapidly, still individual service centric and not joint centric, and wedded to outdated operational concepts.¹⁵¹ Although the NCW-based transformation of the services has just begun, U.S. operations in Afghanistan and Iraq are steps in the

right direction and appear to validate the direction that Bush and Rumsfeld see military operations heading. In the future, speed, air power, precision munitions, and rapidly processed (and shared) information will be the hallmarks of U.S. operations.¹⁵² As mentioned previously, NCW is the concept that articulates how the United States will fight future conflicts. To implement that concept, all the services must shed the vestiges of the past. The Army will have to discard much of its heavy armor in favor of weapons systems that are deployable rapidly by air, have greater lethality and range (over the horizon) than the vehicles they replace, and that rely on speed and near-perfect intelligence of the enemy for protection instead of heavy steel. The Air Force will have to leverage space-based weapons systems and unmanned aerial vehicles (UAVs) at the expense of manned aircraft. And for its part, the Navy must move away from operations based on carrier battlegroups and look, instead, to surface action groups and arsenal ships.¹⁵³ “All the services are working hard to implement the technical concepts of Network-Centric Warfare in their systems [acquisitions], and even to retrofit older systems with the new technology.”¹⁵⁴

At issue is not whether the military should transform or acquire new technologies—it must. Rather, the question is what long-term foreign and national security policies should the military be transforming to support and what types of technologies will provide the military the capabilities that these policies require? The weapon technology and force structure that are the bedrock of NCW are key variables that have enabled the Bush administration to implement its unilateral foreign policy and preventive war national security strategy, and have been instrumental in promoting regime change. The Bush administration is

so enamored with technology that Secretary Rumsfeld is pushing the military to transform faster in order to implement NCW faster.¹⁵⁵

Although Rumsfeld and DoD are attempting to shorten the acquisition cycle, most complex weapons systems still require 10-plus years to develop and field.¹⁵⁶ This begs the questions: "In 2015 to 2020, when these systems are fielded, will America's foreign policy still be centered on unilateralism, preventive war, preemption, and regime change; if not, will these weapons systems and force structure be adequate for whatever policy is in place or will they limit future policy options?" These questions are especially relevant in light of the technological limitations and operational difficulties that American operations in Afghanistan and Iraq have exposed.

As successful as military technology and force structure have been in furthering Bush's foreign policy to date, NCW is not without its shortcomings.¹⁵⁷ A smaller, faster, more lethal, and high-tech force operating with total battlespace awareness may be good at toppling state-centric regimes, but it has yet to prove very successful in building legitimate replacement governments, fighting an insurgency, or in establishing democratic and market reforms within them.¹⁵⁸ Nor has this unmatched military force, despite its information dominance, proven capable of toppling the more amorphous terrorist regimes. Secretary Rumsfeld feels that the military must transform even faster if it is to win the war on terror.¹⁵⁹ But as events in Afghanistan have shown, when a disciplined, determined, well-trained opponent expertly uses the terrain and his relatively low-tech weapons systems, NCW does not work quite as its proponents purport. Al-Qa'ida fighters in the Bai Beche and Tora Bora battles

were not cowed by American airpower.¹⁶⁰ Most often, they repelled initial American and Northern Alliance attacks and were defeated only when American and Northern Alliance forces used traditional infantry-based fire and maneuver to close with the al-Qa'ida fighters to kill or capture them in their positions.¹⁶¹ Likewise, despite its overwhelming technological superiority and crushing victory in the combat phase of Operation IRAQI FREEDOM, American forces have been unable to prevent or defeat the guerrilla insurgency that has emerged in Iraq.¹⁶²

However, these are not the lessons the military and many of the civilian leaders in DoD are heeding from operations in Afghanistan and Iraq. Focused on the direct combat part of war, they are set on acquiring weapon technologies that will be instrumental in transforming the armed forces into a smaller, more lethal, more strategically agile and, thus they argue, a more capable force.¹⁶³ Yet, empirical evidence indicates that most of America's conflicts have been and will continue to lie in the shadow land between peace and war.¹⁶⁴ To support America's foreign policy objectives, the military must be capable of executing the high-tech tasks of NCW, as well as the equally demanding and important low-tech tasks such as peacekeeping, occupation, and nation-building.¹⁶⁵ With its reduced force levels, the Army is straining under the occupation and nation-building missions it has received, while attempting to maintain an equitable rotation policy in and out of combat zones, sustain the combat readiness of its forces for the next contingency mission, and, at the same time, transform itself.¹⁶⁶ Without a doubt, the military should pursue new technologies and transformation programs aggressively. But those technological and transformation choices should be

informed by future policy direction and the military capabilities it requires.¹⁶⁷ Instead, the U.S. military and DoD appear to be developing a force which will have unmatched capabilities for conventional direct combat, i.e., killing people, breaking things, and toppling regimes; but which will be generally ill-suited for low intensity conflict scenarios such as peacekeeping, peace enforcement, and nation-building missions.¹⁶⁸

CONCLUSION

Ideally, the linkages between foreign policy, grand strategy, weapon systems acquisition, and force structure should be more formalized and synchronized. Greater congressional oversight of the military's decisionmaking concerning the weapons systems development and procurement programs, coupled with established procedures within and among the various congressional committees that address foreign policy, national security, and the military, would help reduce the apparent inconsistencies both between and within presidential administrations. Unfortunately, except in times of grave national emergency, the structure of the federal government and the pluralism inherent in it militate against this type of bi-partisan effort. That is not to say that "policy lag" cannot be reduced; it can, but at the margins. The effort must focus initially on reforming the laborious Defense Acquisition System (DAS) and the bureaucracy that administers it. To his credit, Secretary Rumsfeld has been trying to do exactly that; however, he has met with only limited success.¹⁶⁹ The nature of the bureaucracy, the number of stakeholders in the process (interest groups, political actions committees, the RDT&E community, etc.), and the political fallout all make

defense acquisition reform difficult, especially when the military is engaged in active combat operations. Nevertheless, the Secretary of Defense and the military must streamline the acquisition process and eliminate/reduce the bureaucratic procedures and “political pork” associated with fielding new equipment and weapons systems.

Technologically-driven transformation has been and will remain a trademark of the U.S. military. Although most of the rhetoric associated with Defense Transformation seems to be closely linked to Secretary Rumsfeld and the Bush administration, in reality it is an on going process that developed exponentially during World War II and was accelerated by the events of the Cold War. Since the end of the Cold War, the military’s reliance on technologically-advanced weapons systems has become even more pronounced, so much so that America’s approach to warfighting is defined by such technologically arcane terms as “network centric warfare” and “effects based operations.” The weapons systems, force structure, and concepts that undergird the theory of NCW represent only one set of military capabilities available to the nation. However, the military and DoD are not considering other technologies and force structure options seriously.

Initially, combat operations in the GWOT further underscored the military’s affinity for high-tech weapons systems and DoD’s network centric approach to warfighting. Although not without difficulties, the application of America’s technological prowess during combat operations in Afghanistan and Iraq was stunning.¹⁷⁰ Currently, all branches of the military are increasing the acquisition of advanced technologies as they transform to a smaller NCW capable force. Additionally, the Bush administration is pursuing a

very aggressive and largely unilateral foreign policy that relies heavily on the promises of NCW and the technological capabilities of the military.¹⁷¹ But will these same military capabilities serve the future policy needs of the nation or inhibit them?

The military's increased reliance on weapon system technology and DoD's embrace of NCW have implications for American foreign policy. Unless reconciled, the differences in the planning horizons between weapons systems acquisition and foreign policy will continue to promote policy lag and present future leaders with inherited weapons systems and force structure. Thus, the military's weapons systems preferences will continue to affect future policy options. However, the military's weapons systems and force structure (hence, its capabilities) have not always been suited for the missions it has received. Consequently, the military's ability to attain the policy objectives assigned it has been questionable. The failure of the military's high-technology forces to obtain policy objectives fully in Somalia, Haiti, Kosovo, and most recently in Afghanistan and Iraq underscore this claim. This trend will most likely continue. Because it takes 12-15 years (or more) to develop and field a weapon system, national leaders will continue to have their policy options affected by weapon system acquisitions the military made a decade or more previously.

Contributing to the civilian leadership's preference for the use of military force is the armed services responsiveness and adaptability. The speed with which information moves, the amount of it, and the interaction between peoples and societies that technology and globalization promote leave little time for national leaders to develop a measured response for pressing international situations. The media, world

leaders, Congress, and American citizens clamor for an immediate response from the nation's leadership.¹⁷² The military provides the president with a unique capability. Whether used to deliver relief supplies or bombs, the military can respond almost immediately. Although the military's weapons and force structure may not be ideally suited for a particular situation, its high-tech capabilities seem to make military action a matter of first choice instead of last for the nation's leadership.¹⁷³

In the post-Cold War era, the military's technologically-driven combat capabilities, coupled with the absence of a peer competitor, have been instrumental in promoting a unilateral U.S. foreign policy that relies heavily on military power to preempt potential threats to U.S. interests.¹⁷⁴ The military's weapons systems provide unmatched direct combat capabilities that it can project almost anywhere in the world. Moreover, with its emphasis on precision munitions, speed of operations, information dominance, and aerial/space systems, the military can single out individual military, economic, and political entities for destruction, while simultaneously minimizing the risk of U.S. casualties and collateral damage.¹⁷⁵ This capability allowed the Bush administration to topple regimes in both Afghanistan and Iraq. Additionally, the administration has been able to use the military's capabilities to intimidate/persuade other states (e.g., Libya and Syria) with links to terrorist organizations to cooperate more fully in GWOT.¹⁷⁶

Yet, as enabling as the military's technological capabilities are in one sense, in another they are debilitating. In many instances, the military can best serve policy in ways other than direct combat. Humanitarian relief, peacekeeping, peace enforcement,

counterinsurgency, insurgency, and foreign military training (all under the rubric of Military Operations Other Than War [MOOTW]) are operations that require technological systems and force structures different from those needed for high intensity conventional combat. High-tech U.S. combat forces can accomplish both the direct combat and the MOOTW missions, but not simultaneously. MOOTW missions require specialized training. Prolonged employment of high-tech forces in MOOTW missions degrades the combat readiness of the high-tech forces involved. A more robust and technologically diversified force structure with the capability to perform both high and low intensity missions simultaneously would help. However, the military, with the full endorsement of the Bush administration, is transforming into a smaller, faster, more information dominant, and combat capable force.¹⁷⁷ Although this force structure may be superbly equipped for interstate conflict, in the future the majority of the missions that the U.S. military most likely will perform will be MOOTW missions.¹⁷⁸ Military operations in Somalia, Kosovo, Afghanistan, and Iraq have shown both the capabilities and limitations of high-technology weapons systems in pursuit of policy objectives.¹⁷⁹

In pursuing a relatively narrow set of technologies such as those encompassed by NCW, DoD is excluding other weapons systems and force structure choices, which may be more relevant to the types of future conflicts the United States is likely to be involved in. If the United States is going to prevail in a GWOT, or the “Long War” as it is currently referred to, it most likely will be involved in more Iraq and Afghanistan type scenarios.¹⁸⁰ To sustain the war against a global insurgency will likely require an increase in ground

forces (Army and Marine), as well as the procurement of technologies that will support these forces as they engage in combat operations in urban and close terrain. However, NCW theory and implementing technologies (and the Army's implementation of it with the Future Combat System [FCS]) are predicated on state-centric and symmetrical warfare, with political entities whose warfighting capabilities resemble those of the United States, albeit less technologically advanced. NCW has not lived up to its billing in Iraq and Afghanistan against insurgents who apply asymmetrical and relatively low-technology devices against U.S. forces with increasing effectiveness. The military and DoD are only now acknowledging that they may be pursuing the wrong technological suite, but have yet to come to grips with the overall force structure dilemma and acquiring the forces capable of sustaining the necessary operational tempo to prevail in the "Long War."¹⁸¹

In order to mitigate the difficulties of aligning the military's weapons systems and force structure acquisitions with national strategy and policy objectives, the military must acquire capabilities which allow it to fight effectively across the full spectrum of conflict. This does not mean the military should prepare for all contingencies equally. Rather, it should weigh its capabilities in light of future policies and prioritize the tasks it most likely will have to accomplish. For example, the military's future force structure may include a relatively small number of very high-tech and high-cost combat units designed primarily for state-centric warfare (the most dangerous, but least likely contingency), and a large number of relatively low-tech and medium-cost combat and combat support units designed for humanitarian and low intensity warfare (the least dangerous, but most likely contingency).

Steven Metz and Raymond Millen caution against embracing a single operational concept:

If the United States reaches a point where all that it can undertake are rapid decisive operations relying heavily on standoff strikes, it will be like a 16th century armored knight or mid-20th century battleship—extremely adept at a type of combat that has declining strategic relevance. Winning 21st century armed conflicts will require more than servicing targets. American military strategy should thus seek rapid decisive operations but also retain the ability to prevail in protracted, complex, ambiguous, and asymmetric warfare. To do this requires the versatility of landpower.¹⁸²

During the conventional phase of combat in Afghanistan and Iraq, network centric warfare showed great promise; but in subsequent phases, the technology and operational concepts have been of little utility in fighting insurgencies and terrorist movements. To support the nation's policies effectively, the military must continue to pursue a wide range of emerging technologies and not become so enamored with a single technological concept that it forsakes other capabilities.

RECOMMENDATIONS

To ensure that the U.S. military is transforming into a force capable of responding to the full range of challenges it will encounter and that it will be able provide tomorrow's political leaders with a broad range of military capabilities/responses, national leaders should consider implementing the following:

- Improve the coordination/synchronization between and among the congressional committees that oversee the defense budget, major weapons systems acquisition, service force structure (end-

strength) and those committees charged with overseeing U.S. foreign policy. Admittedly, this recommendation will be a long-term challenge for several administrations; but in light of the current bitter partisan divide over the war in Iraq and Afghanistan, it is an undertaking that must begin.

- Transform/reform the Defense Acquisition System. Assuming that the technological base for a new weapon system is set, there is no reason why a weapon system should take 15 to 20 years to develop, let alone 29 years as in the case of the B-1B bomber. Initial reform actions should focus on bureaucratic reduction/elimination in order to reduce fielding time. Subsequent reform measures should strive to reduce/limit the influence of lobbyist and congressional pork-barrel maneuvering.
- Defense transformation should seek to expand the military's future capability set by:
 - Acquiring a broad range of technologies capable of supporting limited conflict scenarios (most likely, but least dangerous) as well as major conflict scenarios (least likely, but most dangerous).
 - Developing a more diversified force structure.

The future potential conflicts the United States will be involved in are not “one size fits all”; why should the armed services' force structures be that way? For example, do all Army units need to be fully NCW capable and deployable within 96 to 120 hours? Is it possible that the U.S. Army needs only a portion of its deployable

forces organized and equipped this way, while the remainder of the forces are organized and equipped for different contingencies—yet are interoperable at key levels with the fully NCW capable forces?

- Reallocate the services' defense budget shares in accordance with current and anticipated future realities that the nation and its armed forces are facing/will face. The U.S. Army and Marine Corps are bearing the brunt of the GWOT, or the "Long War" as it is being called; yet that fact is not reflected in their defense budget shares. The Army in FY 05 received 24.9 percent of the defense budget, while the Navy and Air Force received well in excess of 29 percent each and DoD retained 16 percent for DoD-wide programs such as missile defense. FY 06 was much the same, with the Army receiving only 23.4 percent; the Navy, 29.8 percent; the Air Force, 30.3 percent; and DoD programs, 16.8 percent.¹⁸³ What the services are buying (or not buying as the case may be) should be scrutinized carefully in light of their present and future missions, not just in the "Long War" but also with a view toward future conflict scenarios. The Army and the Marine Corps will be hard-pressed to sustain their present operational tempo, maintain/replace their current equipment, and develop and acquire the equipment they need to transform and expand their capability set without receiving a larger share of the defense budget. It seems only logical that the designated main effort (Army and Marine Corps) should be financially weighed accordingly.

ENDNOTES

1. Marvin Leibstone, "The U.S. Defense Establishment's Struggle to Transform & Modernize, *NATO's Nations and Partners for Peace*, Uithoorn: Vol. 49, Issue 4, pp. 10-11.

2. U.S. Department of Defense, *Transformation Planning Guidance*, Washington, DC: U.S. Government Printing Office, 2003, pp. 10-11; U.S. Department of Defense, *Military Transformation: A Strategic Approach*, Washington, DC: U.S. Government Printing Office, 2003, pp. 3, 23, 16.

3. Colin S. Gray, *Weapons Don't Make War: Policy, Strategy, and Military Technology*, Lawrence, KS: University Press of Kansas, 1993, pp. 66-81. Gray addresses the linkage between national policy, national strategy (military strategy), and the weapon acquisition process. Policy guidance, Gray maintains, is often not clear due to interplay between domestic and foreign policy in a pluralistic and democratic society such as the United States. See also Ethan Barnaby Kapstein, *The Political Economy of National Security*, Columbia, SC: University of South Carolina Press, 1992, pp. 116-128. Kapstein provides an account of actors in the weapon acquisition process and their preferences.

4. Amos A. Jordan, William J. Taylor Jr., and Michael J. Mazarr, *American National Security*, 5th ed., Baltimore: The Johns Hopkins University Press, 1999, pp. 217-233; Franklin A. Long and Judith Reppy, eds., *The Genesis of New Weapons: Decision Making for Military R&D*, New York, Oxford, Toronto, Sydney, Frankfurt, and Paris: Pergamon Press, 1980, p. 10.

5. Jordan, Taylor, and Mazarr, *American National Security*, pp. 327-328.

6. Michael E. Brown, "Flying Blind: The Politics of the U.S. Strategic Bomber Program," *To Reach the High Frontier: A History of U.S. Launch Vehicles*, Robert J. Art and Robert Jervis, eds., Ithaca and London: Cornell University Press, 1992, pp. 27-28; Jordan, Taylor, and Mazarr, *American National Security*, p. 326; Kapstein, *The Political Economy of National Security*, p. 122.

7. Gordon A. Craig and Felix Gilbert, "Reflection on Strategy in the Present and Future," *Makers of Modern Strategy: From Machiavelli to the Nuclear Age.*, Peter Paret, ed., Princeton, NJ: Princeton University Press, 1986, pp. 865.

8. Long and Reppy, *The Genesis of New Weapons*, p. 15.

9. Samuel P. Huntington, *The Common Defense: Strategic Programs in National Politics*, New York: Columbia University Press, 1961, pp. 218-221; Richard H. Immerman and Robert R. Bowie, *Waging Peace: How Eisenhower Shaped and Enduring Cold War Strategy*, New York and Oxford: Oxford University Press, 1998, p. 9.

10. Jordan, Taylor, and Mazarr, *American National Security*, pp. 71, 116-21, 200; Adam Yarmolinsky, "The President, the Congress and Arms Control," *The Military Industrial Complex: A Reassessment*, Sam C. Sarkesian, ed., Beverly Hills and London: Sage Publications, 1972, pp. 295-297.

11. Aaron L. Friedberg, *In the Shadow of the Garrison State: America's AntiStatism and Its Cold War Grand Strategy*, Princeton, NJ: Princeton University Press, 2000, pp. 130-131; Huntington, *The Common Defense*, pp. 223, 228-29; Jordan, Taylor, and Mazarr, *American National Security*, pp. 185, 200. Huntington's work offers the once popular view that Eisenhower was not involved in the details of strategy. Immerman and Bowie and later Friedberg state that Eisenhower might not have been involved in the intimate details of strategy development or weapons procurement, but he was very involved in assessing the strategic consequences of strategies and weapons systems and building a national security strategy and military force structure for the long term.

12. Jordan, Taylor, and Mazarr, *American National Security*, pp. 124-125; Yarmolinsky, "The President, the Congress and Arms Control," pp. 296-297.

13. Long and Reppy, *The Genesis of New Weapons*, pp. 184-185.

14. Jordan, Taylor, and Mazarr, *American National Security*, p. 127.

15. Long and Reppy, *The Genesis of New Weapons*, p. 183.

16. Elias Huzar, *The Purse and the Sword: Control of the Army by Congress through Military Appropriations, 1933-1950*, Ithaca, NY: Cornell University Press, 1950, p. 400.

17. Long and Reppy, *The Genesis of New Weapons*, pp. 186-190.

18. Huzar, *The Purse and the Sword*, pp. 399-401.

19. Jordan, Taylor, and Mazarr, *American National Security*, p. 126.

20. *Ibid.*, p. 127.

21. Joint Chiefs of Staff (JCS), *The Department of Defense Dictionary of Military and Associated Terms*, Washington, DC: U.S. Government Printing Office, 2001, p. 265.

22. Jordan, Taylor, and Mazarr, *American National Security*, pp. 330-331.

23. John Birkler, et. al., *The U.S. Aircraft Carrier Industrial Base: Force Structure, Cost, Schedule, and Technology Issues for CVN 77*, Santa Monica, CA: Rand, 1998, p. 52; Brown, *Flying Blind*, pp. 238-245; Nick Koltz, *Wild Blue Yonder: Money, Politics, and the B-1 Bomber*, New York: Pantheon Books, A Division of Random House, Inc., 1988.

24. Some would argue that NSC 68 is an example of an overarching National Security Strategy that guided U.S. weapons systems acquisition throughout the Cold War. However, NSC 68 can be viewed best as a policy that prescribed "containment" of the Soviet Union as the primary goal of U.S. policy. In fact, that goal allowed for various presidents to employ their unique strategies. See John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy*, Oxford and New York: Oxford University Press, 1982, for a more detailed account of the various strategies the United States adopted during the course of the Cold War.

25. Jerel A. Rosati, *The Politics of United States Foreign Policy*, Orlando, FL: Harcourt Brace Jovanovich College Publishers, 1993, pp. 30-46.

26. Bruce Russett, *Controlling the Sword: The Democratic Governance of National Security*, Cambridge and London: Harvard University Press, 1990, pp. 7-12; Robert M. Stein and Kenneth N. Bickers, *Perpetuating the Pork Barrel: Policy Subsystems and American Democracy*, Cambridge, New York, and Melbourne: Cambridge University Press, 1995, pp. 141-145.

27. Jordan, Taylor, and Mazarr, *American National Security*, p. 331; Kapstein, *The Political Economy of National Security*, p. 117; William E. Kovacic, "The Sorcerer's Apprentice: Public Regulation of the Weapons Acquisition Process," *Arms, Politics and the Economy: Historical and Contemporary Perspectives*, Robert Higgs, ed., Independent Studies in Political Economy, New York and London: Holmes & Meier Publishers, Inc., 1990, p. 69.

28. Jordan, Taylor, and Mazarr, *American National Security*, pp. 227, 330-331.

29. A major change in the force structure, writ large, of the U.S. Armed Forces would entail the canceling of programs already in the acquisition cycle, the closure of bases, the opening of another base, procurement of new weapons systems, etc. Ultimately, an effort of this magnitude would involve a gross redistribution of benefits across scores of congressional districts and, short of a national emergency of grave proportions, would be resisted and hotly debated. For fuller discussion of similarly related issues, see Robert M. Stein and Kenneth M. Bickers, *Perpetuating the Pork Barrel: Policy Subsystems and American Democracy*, Cambridge and New York: Cambridge University Press, 1995; and Paul Brace and Barbara Hinckley, *Follow the Leader: Opinion Polls and the Modern Presidents*, New York: Basic Books, 1993.

30. U.S. Congress, Congressional Research Service, *Weapon Systems Data*, Washington, DC: Congressional Research Service, 2002, *passim*; Jordan, Taylor, and Mazarr, *American National Security*, p. 329.

31. John Coleman, *Party Decline in America: Policy, Politics, and the Fiscal State*, Princeton, NJ: Princeton University Press, 1996; Ira Katznelson, Theda Skocpol, *Social Policy in the United States, Princeton Studies in American Politics: Historical, International, and Comparative Perspectives*, Princeton, New Jersey: Princeton University Press, 1996, pp. 12-18, 20; Theodore Lowi, "American Business, Public Policy, Case Studies and Political Theory," *World Politics*, Vol. 56, 1964, pp. 688-715.

32. In another sense, weapons systems can be said to lag behind policy. For example, foreign policy options may require a force structure with certain capabilities that weapons systems in the inventory cannot provide. Research and development begins now when they are needed, but due to the time involved in their development, they are not fielded for 10 to 15 years. Foreign policy may have changed several times in the period between concept development and fielding, and these weapons systems may not support a future administration's policy needs.

33. This is not to imply that national leaders do not undertake innovative changes for the military establishment—they do. However, the programs they initiate most likely will come to fruition several administrations in the future. For example, Secretary of Defense Donald Rumsfeld often has bemoaned the fact that he is fighting in Iraq and Afghanistan with a force structure that was equipped and organized to fight the Cold War,

with most of the weapons systems in the inventory having been imagined over 25 years ago.

34. Koltz, *Wild Blue Yonder*, pp. 59-65.

35. Brown, *Flying Blind*, pp. 44, 88, 236-238.

36. Jerel A. Rosati, *The Politics of United States Foreign Policy*, Orlando, FL: Harcourt Brace Jovanovich College Publishers, 1993, p. 17.

37. Brown, *Flying Blind*, p. 264.

38. *Ibid.*, pp. 294-298; Jordan, Taylor, and Mazarr, *American National Security*, pp. 84-85; Ethan Barnaby Kapstein, *The Political Economy of National Security*, Columbia, SC: University of South Carolina Press, 1992, *passim*.

39. Henry Kissinger, *Diplomacy*, New York: Simon & Schuster, 1994, pp. 796-797.

40. Koltz, *Wild Blue Yonder*, pp. 180-199.

41. Brown, *Flying Blind*, pp. 265-267.

42. *Ibid.*, pp. 281-282.

43. Koltz, *Wild Blue Yonder*, p. 217.

44. Brown, *Flying Blind*, p. 292.

45. Koltz, *Wild Blue Yonder*, p. 249.

46. Les Aspin, *Annual Report to the President and the Congress*, Washington, DC: Department of Defense, 1994, pp. 147-149.

47. John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy*, New York: Oxford University Press, 1982, pp. 349-350; Jordan, Taylor, and Mazarr, *American National Security*, pp. 78-81; Kapstein, *The Political Economy of National Security*, *passim*.

48. Eric K Shinseki, *United States Army Transformation Campaign Plan*, Washington, DC: United States Army, 2001. The Army defines the legacy force as the force that evolved from the Cold War and was in existence at the time transformation began.

49. Mark D. Mandeles, *The Development of the B-52 and Jet Propulsion: A Case Study in Organizational Innovation*, Maxwell Air Force Base, AL: Air University Press, 1998, p. 291-293.

50. *Ibid.*, p. 291; Shinseki, *United States Army Transformation Campaign Plan*; Dan L. Crippen, *Budget Operations for National*

Defense, Washington, DC: Congress of the United States, 2000, p. 26.

51. William S. Cohen, *Report of Secretary of Defense to the President and Congress-2000*, Washington, DC: Department of Defense, 2000, p. 55.

52. Koltz, *Wild Blue Yonder*, p. 227.

53. Brown, *Flying Blind*, pp. 331-337.

54. Kapstein, *The Political Economy of National Security*, p. 117.

55. The total dollar amount consisted of the \$28.3 billion post-1981 cost and the additional \$3 billion in modifications incurred immediately after fielding.

56. Cohen, "Report of Secretary of Defense to the President and Congress-2000," p. 65; Wolf Kutter, *et. al.*, *Army Budget Fiscal Year 2000: An Analysis*, Arlington, VA: Association of the United States Army: Institute of Land Warfare, 1999, pp. 48, 50, 67, 79; Shinseki, *United States Army Transformation Campaign Plan*.

57. Crippen, "Budget Operations for National Defense," pp. 15-16; *Navy Carrier Battle Groups: The Structure and Affordability of the Future Force*, Washington, DC: U.S. Government Accounting Office, 1993, pp. 49-63; Shinseki, *United States Army Transformation Campaign Plan*.

58. George Bush, *National Security Strategy of the United States: 1991-1992*, Washington, DC: Brassey's (U.S.) Inc., A Division of Maxwell Macmillan, Inc., 1991; Rosati, *The Politics of United States Foreign Policy*, pp. 17-18. See also the National Security Strategies published annually from 1993 to 2002.

59. Jordan, Taylor, and Mazarr, *American National Security*, p. 327.

60. Long and Reppy, *The Genesis of New Weapons*, p. 15.

61. The Army recently has discarded the use of the terms legacy, interim, and objective force. They now refer to Army force structure as being part of either the "Current Force" or the "Future Force." However, a part of the force is neither current nor future which I refer to in this paper as transition. Some of the equipment has been around for a while (current), some of it is meant to bridge the gap between old and new (transition), and some equipment and force structure are what the Army wants to have but has not been fully developed yet (future). This paper will continue to use the three categories since they more closely represent reality.

62. The Army's answer to this challenge is the interim and objective forces; however, they will not be fielded for 8 to 15 years, respectively.

63. Bob Woodward, *Bush at War*, New York: Simon & Schuster, 2002, pp. 42-44.

64. Rosati, *The Politics of United States Foreign Policy*, pp. 407-410.

65. Jordan, Taylor, and Mazarr, *American National Security*, p. 124. However, the formal declaration of war seems to be a mere formality seldom sought. Presidents do commit the nation to armed conflict (war) without asking for Congress's explicit approval. Although Congress can threaten to withhold funding, past instances indicate that it is highly unlikely that they actually would risk the lives of U.S. service members by withholding funds.

66. Rosati, *The Politics of United States Foreign Policy*, pp. 340-346.

67. *Ibid.*, p. 3.

68. Kissinger, *Diplomacy*, pp. 717-718.

69. Bruce Russett, *Controlling the Sword: The Democratic Governance of National Security*, Cambridge, MA and London: Harvard University Press, 1990, p. 7.

70. James H. Dixon, et. al., *National Security Policy Formulation: Institutions, Processes, and Issues*, Washington, DC: U.S. Government Printing Office, 1984, p. 141.

71. Rosati, *The Politics of United States Foreign Policy*, p. 27.

72. *Ibid.*, pp. 130-132.

73. Jordan, Taylor, and Mazarr, *American National Security*, pp. 108-109.

74. Rosati, *The Politics of United States Foreign Policy*, p. 84. Also, the foreign policy development process is inherently interagency and thus revolves around "turf battles," political compromises, and bureaucratic politics that constitute a pluralistic system.

75. *Ibid.*, p. 45.

76. Russett, *Controlling the Sword*, p. 11.

77. *Ibid.*, pp. 38-40.

78. Jordan, Taylor, and Mazarr, *American National Security*, p. 97; Rosati, *The Politics of United States Foreign Policy*, pp. 37-38.

79. Jordan, Taylor, and Mazarr, *American National Security*, pp. 316-333.

80. *Ibid.*, p. 329.

81. *Ibid.*

82. Long and Reppy, *The Genesis of New Weapons*, pp. 16, 182.

83. Kapstein, *The Political Economy of National Security*, pp. 58-60.

84. Jordan, Taylor and Mazarr, *American National Security*, pp. 327-328; Alexander Kossiakoff, "Conception of New Defense Systems and the Role of Government R&D Centers," *The Genesis of New Weapons: Decision Making for Military R&D*, Franklin A. Long and Judith Reppy, eds., New York: Pergamon Press, 1980.

85. Kapstein, *The Political Economy of National Security*, p. 17.

86. Rosati, *The Politics of United States Foreign Policy*, pp. 317-320.

87. *Ibid.*, p. 316.

88. Dixon, *National Security Policy Formulation*, pp. 168-169.

89. Jordan, Taylor, and Mazarr, *American National Security*, p. 212.

90. U.S. Army, "Army Planning Programming Budgeting Execution System (PPBS)—an Executive Primer," in *Course 5: DoD-Organization, Planning, and Strategy – Lesson 3*, James Pierce, ed., Carlisle, PA: U.S. Government Printing Office, 1999, p. 27.

91. *Program Acquisition Costs by Weapon System*, Washington, DC: Department of Defense, 2003, pp. 1-104. Although the *Comanche* Helicopter program was cancelled by the Secretary of Defense, the funds associated with the program were transferred into the *Apache* Attack Helicopter upgrade program. Also, the Air Force's F-22 has come under scrutiny, but only as it duplicates the capabilities of the Joint Strike Fighter, another fighter the Air Force is developing.

92. Military appropriations are funded 1 year at a time; however, they are normally authorized several years out, with funding levels adjusted due to inflation each year. The B-1B, mentioned earlier, was a case in point.

93. Koltz, *Wild Blue Yonder*, p. 216.
94. U.S. Congress, Congressional Research Service, 2002.
95. Kenneth R. Mayer, "Elections, Business Cycles, and the Timing of Defense Contract Awards in the United States," *The Political Economy of Military Spending in the United States*, Alex Mintz, ed., London and New York: Routledge Publishers, Inc., 1992, p. 17.
96. Rosati, *The Politics of United States Foreign Policy*, p. 137.
97. Cohen, *Report of Secretary of Defense to the President and Congress-2000*, pp. B-1-2, C-1.
98. Mayer, *Elections, Business Cycles, and the Timing of Defense Contract Awards in the United States*, p. 27.
99. James M. Lindsay, "Congress and the Defense Budget: Parochialism or Policy?" *Arms, Politics and the Economy*, Robert Higgs, ed., New York and London: Holmes & Meier Publishers, Inc., 1990, p. 177.
100. U.S. Department of Commerce, *Federal Expenditures by State for Fiscal Year 2002*, Washington, DC: Federal Government, 2002, tables 1-6, p. 10; U.S. Congress, Joint Economic Committee, *Economic Indicators: January 2006*, Washington, DC: U.S. Government Printing Office, 2006, p. 33.
101. William J. Clinton, *A National Security Strategy of Engagement and Enlargement*, Washington, DC: The White House, 1995, p. 28.
102. "Closing Pandora's Box," *The Economist*, January 4, 2003, pp. 29-31.
103. Steven A. Cambrone, "Ballistic and Cruise Missile Threats," . . . to *Insure Domestic Tranquility, Provide for the Common Defense*, Max G. Manwaring, ed., Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2000, pp. 85-86.
104. Clinton, *National Security Strategy of the United States, 2000*, p. 49; George W. Bush, *The National Security Strategy of the United States*, Washington, DC: The White House, 2002, pp. 5-6, 14.
105. In another sense, the weapons system development and acquisition process can be viewed as less flexible and rigid than the national security policy system, hence not as supportive of the policy process as it should be.

106. If a weapon system fails, i.e., does not hit its target, goes astray, etc., it is normally because of a flaw in its equipment or programming. Statistically, given the testing involved in weapons R&D, the mean time between failures can be determined, and a failure rate for the weapon system predicted.

107. Robert Perry, "American Styles of Military R&D," *The Genesis of New Weapons: Decision Making for Military R&D*, Franklin A. Long and Judith Reppy, eds., New York: Pergamon Press, 1980, pp. 94-96; Kapstein, *The Political Economy of National Security*, pp. 118-120.

108. The Joint Chiefs of Staff, *The Joint Warfighting Capabilities Assessment; Chairman of the Joint Chiefs of Staff Instruction - 3137.01a*, Washington, DC: Department of Defense, 1999, pp. 1-37.

109. Frederick W Kagan, "War and Aftermath," *Policy Review*, 2003; Department of Defense, *Dictionary of Military and Associated Terms*, Washington, DC: U.S. Government Printing Office, 2001, p. 51. DoD defines battlespace as, "The environment, factors, and conditions that must be understood to apply combat power successfully, protect the force, or complete the mission. This includes the air, land, sea, space, and the included enemy and friendly forces; facilities; weather; terrain; the electromagnetic spectrum; and the information environment within the operational areas and areas of interest."

110. *Ibid.*, p. 3.

111. *Ibid.*, p. 4.

112. Bruce D. Berkowitz, *War in the Information Age*, Hoover Institute, 2002, cited April 15, 2004, available from www-hoover.stanford.edu/publications/digest/022/berkowitz.html.

113. Christopher M. Bourne, Robert J. Smullen, and Thomas J. Impellitteri, "Air Delivered Fires in Support of Maneuver," *Marine Corps Gazette*, Vol. 87, No. 4, 2003.

114. Michael E. O'Hanlon, "A Flawed Masterpiece," *Foreign Affairs*, Vol. 81, No. 3, 2002, p. 56.

115. *Operation Enduring Freedom*, Internet, GlobalSecurity.org, June 24, 2003, cited July 10, 2003, available from www.globalsecurity.org/military/ops/enduring-freedom.htm.

116. Rowan Scarborough, "'Decisive Force' Now Measured by Speed, Not Troop Numbers," *The Washington Times*, May 7, 2003,

cited October 9, 2003, available from www.nexis.com/research/search/documentDisplay?_docnum=19&_ansset=W-WD-.

117. Kim Burger, *et. al.*, "What Went Right?" *Janes Defence Weekly*, 2003, cited October 9, 2004, available from www4.janes.com/K2/docprint.jsp?KeDocKey=/content1/janesdata/mag/jdw/jdw04.

118. Nick Cook, *Effects-Based Air Operations – Cause and Effect*, Internet, *Jane's Defense Weekly*, June 18, 2003, cited October 9, 2003, available from www4.janes.com/K2/docprint.jsp?K2DocKey=/content1/janesdata/mags/jdw/jdw05.

119. Nick Cook, "The Air Campaign—Trends and Developments," Internet, *Jane's Defence Weekly*, March 26, 2003, cited October 9 2003, available from www4.janes.com/K2/doc.jsp?K2DocKey=/content1/janesdata/mags/jdw/jdw04189.h; John Diamond, "A Campaign to Control the Afghan Skies," October 8, 2003, Internet, *Chicago Tribune*, 2003, cited October 9 2003, available from www.nexis.com/research/search/documentDisplay?_docnum=6&_ansset=W-WW-; Michael Knights, "Air Power over Iraq," Internet, *Jane's Intelligence Review*, March 1, 2003, cited October 9, 2003, available from www4.janes.com/K2/docprint.jsp?K2DocKey=/content1/janesdata/mags/jir/jir00548; Russell D. Shaver, *et. al.*, "The Case for Airpower Modernization," Internet, *Air Force Magazine*, February 1994, cited April 11, 2004, available from www.nexis.com/research/search/documentDisplay?_docnum=3&_ansset=W-WA-A-WZ-.

120. *Operation Enduring Freedom*.

121. Kagan, "War and Aftermath," pp. 8-10.

122. Bob Woodward, *Bush at War*, New York: Simon & Schuster, 2002, p. 20.

123. *Ibid.*

124. Bourne, "Air Delivered Fires in Support of Maneuver"; Kagan, "War and Aftermath," p. 7.

125. O'Hanlon, "A Flawed Masterpiece," p. 51.

126. *Operation Enduring Freedom*.

127. *Ibid.*

128. O'Hanlon, "A Flawed Masterpiece," pp. 50-52; *Operation Enduring Freedom*.

129. Donald H. Rumsfeld, "Transforming the Military," *Foreign Affairs*, Vol. 81, No. 3, 2002, pp. 21-22.

130. Stephen Biddle, "Afghanistan and the Future of Warfare: Implications for Army and Defense Policy," Carlisle, PA: Strategic Studies Institute, U.S. Army War College, 2002, p. 2, [fn3]; Kagan, "War and Aftermath," p. 1.

131. Kagan, "War and Aftermath," p. 2.

132. *Ibid.*; O'Hanlon, "A Flawed Masterpiece," p. 48.

133. Kagan, "War and Aftermath," p. 1.

134. *Ibid.*, p. 6.

135. Carl Von Clausewitz, *On War*, Indexed Ed., Michael and Peter Paret Howard, eds. and trans., Princeton, NJ: Princeton University Press, 1976, pp. 88-89.

136. Kagan, "War and Aftermath," p. 2.

137. Reuters, "Taliban Resurgence Undermining UN Afghan Aid Work," Internet, *The New York Times*, 2003, cited October 25 2003, available from www.nytimes.com/reuters/international/international-afghan-un.html?pagewanted=.

138. Tim Ripley, "Planning for 'Iraqi Freedom'," Internet, *Jane's Intelligence Review*, July 1, 2003, cited October 9, 2003, available from www4.janes.com/K2/doc.jsp?K2DocKey=/content1/janesdata/mags/jir/jir00640.htm; Woodward, *Bush at War*, p. 49. President Bush and his advisors had at their disposal the most technologically advanced military in the world, one that if employed, promised to bring victory, quickly, with minimal casualties for the U.S. forces, and minimal collateral damage. It is difficult to imagine the Bush administration launching a preventive war against Iraq without having this capability.

139. Burger, *What Went Right?* cited in Martin Streetly, "Airborne Surveillance Assets Hit the Spot in Iraq," Internet, *Jane's Intelligence Review*, July 1, 2003, cited October 9, 2003, available from www.4janes.com/K2/doc.jsp?K2DocKey=/content1/janesdata/mags/jir/jir00641.htm.

140. Michael J. Waller, *High-Tech Tools of War*, News World Communications, Inc. Insight on the News, 2003, cited October 9, 2003, available from www.nexis.com/research/search/documentDisplay?-docnum=18&-ansset=W-WD-.

141. Burger, *What Went Right?*; Christian Lowe, "The New Art of War," Internet, *The Daily Standard*, April 3, 2003, cited October 9, 2003, available from www.nexis.com/research/search/

documentDisplay?_docnum=11&_ansset=W-WD-, Waller, *High-Tech Tools of War*.

142. Scarborough, "Decisive Force" Now Measured by Speed, Not Troop Numbers.

143. Burger, *What Went Right?*; Scarborough, "Decisive Force" Now Measured by Speed, Not Troop Numbers.

144. Kagan, "War and Aftermath," p. 6.

145. Kenneth M Pollack, "Next Stop Baghdad?" *Foreign Affairs*, Vol. 81, No. 2, 2002, p. 38.

146. George Friedman, "The Next Phase of the War," *The STRATFOR Weekly*, October 16, 2003.

147. Debra J. Saunders, "Victory Lap Interrupted," Final Edition, Internet, *The San Francisco Chronicle*, 2003, cited October 9, 2003, available from www.nexis.com/research/search/documentDisplay?_docnum=20&_ansset=W-WD-.

148. Friedman, "The Next Phase of the War."

149. Thomas L. Friedman, "Free Advice to G.O.P.," Internet, *The New York Times*, October 23, 2003, cited October 24, 2003, available from www.nytimes.com/2003/10/23/opinion/23FRIE.html?ex=1067996468&ei=1&en=c.

150. Kagan, "War and Aftermath," p. 6.

151. Woodward, *Bush at War*, pp. 22-23, 135, 320-321.

152. Scarborough, "Decisive Force" Now Measured by Speed, Not Troop Numbers.

153. Waller, *High-Tech Tools of War*.

154. Kagan, "War and Aftermath," p. 9.

155. Peter J. Boyer, "A Different War; Is the Army Becoming Irrelevant?"

156. Donald H. Rumsfeld, "Transformation Planning Guidance," Washington, DC: Department of Defense, 2003, pp. 6-7.

157. Kagan, "War and Aftermath," p. 15.

158. *Ibid.*, pp. 8, 11-13. Moreover, given the number of deployments and the length of the conflicts associated with them, it is questionable whether the NCW-driven force structure is sustainable, given the type of protracted struggles foreshadowed by the "Long War" against terrorism.

159. Donald H. Rumsfeld, Memorandum, October 16, 2003.
160. Biddle, "Afghanistan and the Future of Warfare: Implications for Army and Defense Policy," pp. vii-viii.
161. *Ibid.*, pp. 25, 27-29, 35.
162. Friedman, "The Next Phase of the War"; Friedman, *Free Advice to G.O.P.*; Michael R. Gordon, "Reality Check in Iraq: U.S. Faces a Long Stay," Internet, *The New York Times*, October 19, 2003, cited October 27, 2003, available from www.nytimes.com/2003/10/19/international/middleeast/19MILI.html?ei=5070&en.
163. Burger, *What Went Right?*
164. Max Boot, *The Savage Wars of Peace: Small Wars and the Rise of American Power*, New York: Basic Books, A Member of the Perseus Books Group, 2002.
165. O'Hanlon, "A Flawed Masterpiece," p. 9.
166. Kagan, "War and Aftermath"; Fred Kaplan, "He Saw It Coming; The Former Bushie Who Knew Iraq Would Go to Pot," *New York Times*, August 5, 2003; James Kitfield, "Army Troops, Budget Stretched to the Limit," *National Journal*, 2003.
167. Kagan, "War and Aftermath," pp. 17-18.
168. Burger, *What Went Right?*; Kagan, "War and Aftermath"; O'Hanlon, "A Flawed Masterpiece," p. 9.
169. Department of Defense, *Military Transformation: A Strategic Approach*, Washington, DC: Department of Defense, 2003, pp. 6-8.
170. Kagan, "War and Aftermath," p. 1; Scarborough, "Decisive Force" Now Measured by Speed, Not Troop Numbers.
171. Bush, *The National Security Strategy of the United States*, pp. 16, 29-30; Robert Jervis, "The Compulsive Empire," *Foreign Policy*, No. 137, 2003.
172. Paul Brace and Barbara Hinckley, *Follow the Leader: Opinion Polls and the Modern Presidents*, New York: Basic Books, A Division of HarperCollins Publishers, Inc., 1992, pp. 1-3, 45-47, 109-14.
173. Epstein, *Bush's 1st Strike Strategy Breaks Tradition*. See also Francis Fukuyama, "After Neoconservatism," *New York Times*, accessed February 21, 2006, available from www.nytimes.com/2006/02/19/magazine/neo.html?ei=5070&en=ff2e00bbb3d3df00.

174. M. Elaine Bunn, "Preemptive Action: When, How, and to What Effect?" *Strategic Forum*, July 2003; Nye, "U.S. Power and Strategy after Iraq," p. 65.

175. Burger, *What Went Right?*; Waller, *High-Tech Tools of War*.

176. Bunn, "Preemptive Action: When, How, and to What Effect?" pp. 6-8.

177. Kagan, "War and Aftermath," pp. 11-12, 18-19.

178. Boot, *The Savage Wars of Peace: Small Wars and the Rise of American Power*.

179. U.S. House of Representatives Armed Services Committee, *Operation Iraqi Freedom: Outside Perspectives*, October 21, 2003, pp. 1-14.

180. Peter A. Wilson, John Gordon IV, and David E. Johnson, "An Alternative Future Force: Building A Better Army," *Parameters*, Vol. XXXIII, No. 4, Winter 2003-04, p. 28; U.S. Department of Defense, *Quadrennial Defense Review: February 2006*, Washington, DC: U.S. Government Printing Office, 2006, p. 9.

181. Greg Grant, "U.S. Army Shifts R&D to Urban Combat Gear," *Defense News*, February 27, 2006, pp. 1, 8.

182. Steven Metz and Raymond Millen, *Future War/Future Battlespace: The Strategic Role of American Landpower*, Carlisle Barracks, PA: Strategic Studies Institute, U.S. Army War College, 2003, p. 21.

183. Frank A. DiStasio, Jr., *Fiscal Year 2006 Army Budget: An Analysis*, Arlington, VA: The Institute of Land Warfare, Association of the United States Army, 2005, p. 22.