# Technology and Military Power

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After decades of investment in technology, the capabilities of the U.S. military are without equal. While the consensus is that no state has the military power to prevent the United States from achieving its military objectives, the country may not be prepared for the lesser crises that may dominate this century. The conflicts in Somalia, Haiti, Bosnia, Serbia, and other countries did not fit the mold established in the twentieth century. Indeed, while the Persian Gulf War illustrated the importance of high-technology weapons, conflicts in the last century could be quite different from the crises and war of the future. The rise of smaller scale conflicts exposes a potential problem for the United States military. While U.S. investment in advanced technologies virtually guarantees victory in major wars, those same technologies may not provide the proper tools of statecraft in smaller scale conflicts among ethnic, religious, or national groups within states.

A fundamental problem is the perception that the U.S. military was rundown in the 1990s by a combination of inadequate investment and frequent overseas deployments. Reports that the armed services are plagued by low morale and shortages of weapons and fuel for training, as well as the belief among political decision-makers that the military exists to be used, have raised concerns that the U.S. military needs to be re-capitalized. In other words, it is necessary to invest billions of dollars in order to rebuild the force.

Since the beginning of the Bush administration, Secretary of Defense Donald Rumsfeld has promoted a broad strategic review of U.S. defense strategy. Defense officials have called for radically rethinking the kind of military that the United States should possess and are already debating whether a significant increase in U.S. defense spending is necessary for the Pentagon to modernize its

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forces for this century.[1] While U.S. military forces are about one-third smaller than they were in the early 1990s, the demands on the force for overseas peacekeeping, humanitarian missions, and combat operations increased radically over the last decade. Thus, a strange picture emerges. On the one hand, the U.S. military is investing enormous, although dwindling resources in advanced technology weapons and systems, while on the other hand, those forces are being run down because the level of funding is not adequate for the commitments placed on the military by American society.

In the long term, U.S. military capabilities depend on maintaining technologies that are without equal to the breadth and depth of technologies being developed by other states. To evaluate the foundations of U.S. technological power and its implications for American security and international security in the twenty-first century, this article examines the critical defense technologies in which the United States has invested for decades. Given these investments in technology, the United States has achieved a level of military power that can be maintained for as long as it continues the investments. As policymakers acquire the technological tools that are commensurate with great military power, they are discovering that many technologies—notably directed energy, new weapons for targeting, and advanced computer and information technologies—are changing the nature of war, security, and diplomacy.[2] Indeed, these are the technologies that are most likely to affect U.S. military power and, hence, political power in this century.

The underlying question in this article is how technological progress may reshape military power. Not surprisingly, the United States faces complex choices such as which technologies should be developed, how other states might respond to those capabilities, and the consequences for international security if U.S. military capabilities continue to outpace those of other states.

## TECHNOLOGICAL FOUNDATIONS OF MILITARY POWER

Throughout American history, the technological foundation of U.S. military power essentially reflected the desire to use the nation's economic power to invest in technology in order to save American lives. During World War II, the United States harnessed only 30 percent of its immense technological, economic, and industrial power, yet by the end of the war was able to produce more weapons than Germany or Japan could destroy. At the height of aircraft production in World War II, the United States was producing more aircraft each year than the German or Japanese air forces could shoot down.

For generations, U.S. military strategy rested on developing military forces that were technologically superior to that of the adversary. This national style for military preparation was in full play during the Cold War, when the U.S. military deliberately produced smaller numbers of more technologically advanced

weapons than the Soviet Union. To succeed, the United States invested trillions of dollars in defense, thus vastly outspending the economically inefficient Soviet defense complex.

For decades, American policymakers and government officials have argued that the United States will be able to successfully defend the nation's interests with military forces that are without equal. In the *1997 Quadrennial Defense Review* the Department of Defense reaffirmed that "it is imperative that the United States maintain its military superiority..." During that same year, the National Defense Panel reported that if the United States does "not lead the technological revolution, we will be vulnerable to it."[3] Furthermore, according to the Senate Armed Services Committee Report, the priority is "to maintain a strong, stable investment in science and technology in order to develop superior technology that will permit the United States to maintain its current military advantages...and hedge against technological surprise."[4]

It is evident that the United States is the preeminent technological state so far in this century. By virtue of its significant resources in technology as well as the breadth and depth of its technologies, other states cannot compete militarily with the United States and are likely to fail when they try. There are two reasons for these likely failures. The first is that the span of technologies being developed by private firms, defense contractors, universities, and government laboratories in the United States exceeds that which is being developed by other states. The second reason is that the depth of technological knowledge existing in the public and private sectors of the United States is without precedent. With its gross national product of approximately nine trillion dollars, the United States uses its economic power to invest billions of dollars in military and commercial research and development programs.[5] While the absolute level of U.S. investment has declined as other economies have expanded in recent decades, the United States still remains the preeminent technological state.

These technology investments established the basis for U.S. military power during the last century that even great military powers cannot challenge. The best example is the Soviet Union, whose military machine was considered roughly equal to U.S. military power. However, the United States had greater economic power. As a result, Russia's efforts to compete with the level of investment in the United States have left it bankrupt, barely able to feed, clothe, and house its military, and unable to significantly invest in defense technologies.[6] For the foreseeable future, Russia's military forces are likely to remain moribund and unable to represent a serious threat to the United States. China, the other great military power, has an aggressive program to expand and modernize its military forces, and purchased submarines, aircraft, and other advanced military technologies from Russia during the 1990s. While these actions increased its military capabilities, it remains a regional military power that cannot seriously threaten the United States, which provides limited support to China's military.[7]

## CHALLENGES FROM EMERGING MILITARY PREEMINENCE

The technologies being developed for the U.S. military, particularly in the fields of directed energy, targeting, and command and control, are likely to widen the technological gap between the United States and other states. As the U.S. military invests in these technologies, its capabilities will remain significantly greater than that of other states. This is especially true for the "states of concern," such as Iran, Iraq, and North Korea, which have dominated U.S. military planning since the Persian Gulf War. Why, then, does the United States still invest in these technologies?

The fundamental reason is that investing, first, in directed energy technologies is designed to defend the United States and its military forces from ballistic missile attack. The emerging consensus is that Iran, Iraq, or North Korea could possess ballistic missiles within the first decade of this century.[8] In addition to missile defense, directed energy technologies are useful for detecting and destroying military targets in real time anywhere in the world. As the United States gains the ability to observe and attack targets at will, its investments in directed energy technologies will translate into the ability to use force with greater precision and lethality.

A second area of development is the targeting technologies that also will significantly expand U.S. military power. For example, if computer and sensor-controlled military vehicles, including cruise missiles, destroy targets as precisely as vehicles piloted by humans, there are profound questions about whether humans should be exposed in war. Future generations of U.S. cruise missiles will be able to destroy targets with the same degree of precision as piloted aircraft, especially as improvements in sensor and artificial intelligence technologies allow them to hit targets with accuracy measured in feet, search the battlefield for specific targets, destroy targets at a predetermined moment, and continue to search for more targets. It is inevitable that manned aircraft could become the technological equivalent of dinosaurs because their performance is limited by the ability of the human in the cockpit to withstand physical stresses.[9]

At the same time, U.S. military power is being enhanced by the development of non-lethal technologies that would allow it to fight without killing the people and destroying the buildings that defined the conduct of war for millennia. The ability to minimize human casualties has emerged as one of the guiding principles in the U.S. strategy for war in the new century. Furthermore, U.S. military power is being enhanced by the development of computer, communication, and information technologies. It is already the case that computers are making the life-and-death decisions in war that historically had been reserved for humans. Indeed, computer and fire control systems on Aegis cruisers coordinate the radars and missiles that track hundreds of targets. In the automatic mode, it

can fire missiles or guns to defend against enemy aircraft or cruise missiles. When the United States Air Force (USAF) deploys the Airborne Laser in the first decade of this century, its computers will determine when to fire the laser at missiles because humans cannot make those decisions quickly enough.

With developments in information technologies, the United States will be able to focus its attacks against computers and communication networks, rather than cities and military targets. Once mature, information war could become the modern equivalent of nuclear weapons, except that it disrupts societies without directly killing people or destroying buildings, communication, power, and banking systems.

## TECHNOLOGICAL CHOICES

For the United States to maintain its military power, it is imperative for officials in private industry and government to develop the right technologies and concepts for guiding their use. As the U.S. defense establishment invests the nation's scarce resources on technologies, the central question is whether to invest in modernizing military forces or maintaining the readiness of the military.[10] This is not an academic exercise. Indeed, investing in the right technologies could determine whether the United States maintains its technological advantage. The importance of this issue can be seen in the fact that the failure to develop ballistic missiles in the 1940s and 1950s would have seriously weakened U.S. military capabilities against the Soviet Union.

The choices made today by government and private sector officials will influence U.S. military capabilities for decades. Unfortunately there is no formula for determining which technologies should be developed. In order to maintain its technological edge, the U.S. defense establishment should consider several factors.

The first is the nature of the military threat to the United States. As a general principle, military threats tend to galvanize action within the U.S. technological community, as seen when the Soviet Union's active program for developing long-range ballistic missiles accelerated the U.S. missile program. On another occasion, Nazi Germany's efforts to develop the atomic bomb influenced President Roosevelt's decision to spend billions of dollars during World War II on the Manhattan Project. A further example was the decision to invest in missile defense technologies after the Persian Gulf War in light of Iraq's programs for developing ballistic missiles and weapons of mass destruction.[11] The general problem is that the United States does not currently face threats that create a significant motivation to accelerate the development of advanced technologies.

A second criterion is to invest in technologies that raise the possibility of creating significant technological advances. Since the development of the Global Positioning System (GPS) radically increased the accuracy of aircraft, ships, and

missiles, the U.S. military invested billions of dollars in equipping virtually all modern weapons with GPS-guidance systems. While the strategic significance of GPS was originally misunderstood by the military services, GPS satellites have vastly increased the military power of the United States and virtually all other states. Interestingly, by creating a completely unexpected commercial and military revolution, GPS has been one of the more important forces behind globalization.

The threat posed by ballistic missiles to the United States plays a prominent role in the public debate, and thus provides insights into how the defense establishment invests in technologies. As the debate about national missile defense intensified, Congress passed the 1999 National Missile Defense Act. Senior officials in the White House reportedly based their decision about whether to pursue missile defense on several factors, including its cost, the perception of a technological opportunity, the effects on other countries, and the urgency of the threat.[12] In addition to these criteria, domestic political factors play a significant role in decisions about developing technologies.

While these criteria appear intuitively correct, there is no guarantee that the private sector or U.S. government agencies will make the right technological choices. Nor is there any guarantee that other states will develop cruise missiles rather than ballistic missiles, and thus undermine efforts to develop missile defenses. Predictably, the technological community may not invest in the right technologies given the difficulties of choosing among competing technologies, especially during a time when the rate of technological progress is so rapid. The extent of progress in computer, sensor, and communication network technologies highlights the problems of determining which technologies the nation should invest in, since these choices involve billions of dollars. To illustrate this difficulty, the decision to develop ground-based or space-based lasers for missile defenses will cost hundreds of billions of dollars, but represents only one of thousands of programs being funded by the Department of Defense. Furthermore, the United States must accept that states may develop other technologies as a counter to U.S. research and development efforts.

## SELECTING MATURE TECHNOLOGIES

To maintain its military power, the U.S. defense establishment must continue to invest in technologies that are in various stages of development or maturity. When considering which defense technologies to invest in, it is helpful to divide them into three categories according to their stage of development.

The first level consists of technologies that are mature, meaning that they are likely to be immediately relevant for U.S. defense and foreign policy. Such technologies are well along in development, are ready or nearly ready for use in the arsenal, or will be integrated into U.S. military forces shortly. Some of the more mature

defense technologies include the airborne laser, cruise missiles, non-lethal technologies, unmanned aerial vehicles, the use of computers in making military decisions, and information war. While this is not a comprehensive list, it does identify some of the most critical technologies being pursued by the U.S. research and development community. To illustrate the importance of technologies that fall into this category, the airborne laser that will be deployed by the year 2005 will immediately create the ability to destroy ballistic missiles and thereby significantly improve U.S. military capabilities. At the same time, the development of cruise missiles, non-lethal technologies for minimizing human casualties among soldiers and civilians, and advanced communications and computers for planning and executing military "reachback" operations from the relative safety of the United States all represent relatively mature technologies.

The second level includes technologies that are promising but will not improve U.S. military capabilities for another decade or more. This category includes reusable launch vehicles, many of the potential applications for lasers such as space-based and ground-based lasers for missile defense and maritime operations, and high-powered microwave technologies. While these could radically increase military capabilities, the operational military forces will not see these weapons until the year 2010 or later.

The third level of technologies is comprised of those that show promise but will not be mature for decades. One example is the laser application that will permit the United States to conduct surveillance of the entire earth from space. An even more significant technological development will be the ability to totally integrate all sensors, weapons, and communications technologies into a seamless military system. However, this will not be possible for several decades.

There is no fundamental mystery to developing advanced technologies and ensuring their progress towards maturity. The reality is that the dollars invested in these programs provide a direct measure of their importance to the U.S. defense establishment. While the space-based laser (SBL) will not be technologically mature and operational for ten years or more, it is true that vastly increasing its funding will accelerate that schedule. In view of growing evidence that Iraq, Iran, and North Korea could possess long-range missiles with nuclear warheads, the U.S. Senate added $10 million to the SBL budget in 2000 and $100 million in 1998.[13] It is also worth noting that the SBL represents only one of many technologies that are being developed by the United States. This example provides one measure of the depth and breadth of U.S. defense technologies.

## RESPONSES TO U.S. MILITARY POWER

The U.S. military is so technologically advanced that other states cannot realistically prevent the United States from achieving its military objectives. While

a state might be able to inflict a temporary setback or tactical defeat, such as using nuclear weapons or cruise missiles against U.S. military forces, U.S. military power cannot be challenged directly. In view of this constraint, the best option for states that want to challenge the United States is to attack U.S. political will in order to deter American involvement.

The extent of U.S. military power, which is only partly based on technology, is forcing states to turn to what are known as "asymmetric" strategies in order to focus their technologies and weapons on U.S. vulnerabilities. A common asymmetric strategy is developing weapons that temporarily paralyze or disrupt U.S. military operations. In an illustration of such a strategy, Iraq could have attacked U.S. military bases in Saudi Arabia with ballistic missiles. Indeed, the objective of an asymmetric strategy is not to defeat the United States militarily, but to suggest to the American people that their vulnerabilities will make war quite painful and costly, even if the United States ultimately wins. This strategy has great allure for states that are unwilling to surrender to U.S. military power.

Despite U.S. investments in technology, asymmetric strategies represent a critical weakness in the U.S. strategy, which relies on advanced technology to win wars. While the high-technology strategy was successful during the twentieth century, there are signs that the technological option may not be as useful in future conflicts. During both World Wars and the Cold War, the U.S. military invested in technologies that were optimal for fighting against organized armies, navies, and air forces. However, it is unclear whether the emphasis on technology will be successful during this century when future conflicts may be the product of struggles between religious, ethnic, and national groups, rather than classic wars between modern states and organized military forces. To complicate its strategy for investing in technology, U.S. defense planning is based on being able to win another major theater war, such as the Persian Gulf, while prevailing in smaller-scale conflicts against less capable adversaries. Indeed, Secretary of Defense Rumsfeld's defense review is apparently moving toward the ability to fight one large war and several smaller contingencies. This represents a significant shift in U.S. defense planning.[14]

A strategic weakness of the U.S. defense program is its focus on developing the advanced technologies that are relevant to managing likely challenges to U.S. interests. Undoubtedly, the U.S. military gains enormous advantage from weapons with longer ranges as well as greater accuracy and lethality. However, what if these technological advances do not confer an advantage in future wars? The strategic opportunity for the United States is to develop technologies that are equally adept at winning major wars, lesser conflicts, and defeating asymmetric strategies. For example, it is likely that China would rely heavily on mines to interfere with U.S. naval operations in the Straits of Taiwan during a conflict with the United States, but the United States has not invested significant resources in developing technologies to counter mine warfare.

One problem for the U.S. military is that states are investing in technologies that could deter its involvement and prevent the use of its overwhelming superiority in conventional weapons. The strategy for these states is to undermine the U.S. political will to fight, rather than defeating the United States militarily. Often this strategy depends on threatening to kill Americans. Consider U.S. military intervention in Serbia in 1999, when U.S. political and military officials were sure they were willing to fight, but unsure how many U.S. soldiers they were willing to lose in the war. Historically, the Vietnam War has served as a foundation for strategies attacking the American political will. The legacy of this conflict was that the United States did not lose a major battle against North Vietnam but did not win the war.[15]

The major technological shift for the United States, to use the language of modern strategy, is to invest in a "denial" strategy to prevent states from deterring the United States. The failure to establish the technological foundation for this strategy could make U.S. military power vulnerable to states that deter the United States by undermining its will to fight through threats of casualties or entangling military quagmires. As states develop technologies that allow them to attack U.S. military power, the United States is responding with technologies that insulate the country from threats that undermine its will to fight. Two prominent examples are the development of defenses against ballistic missiles, known as missile defense, and cruise missile defenses, in which the United States is investing billions of dollars. If these technology programs allow the United States to prevent states from deterring it by threatening attack on the homeland or troops overseas, then the asymmetric strategy will fail because the United States will be capable of using its technological abilities to insulate itself from attack.

The broader observation is that the United States is engaged, wittingly or not, in a technological arms race with itself and others. For the United States to prevail, its technological base must be sufficiently advanced to counter the efforts of states that want to prevent Washington from being able to defeat other states in war. Since the United States has historically committed itself to ensuring that its military capabilities are without equal, the prospects for other states are not promising.

## CONCLUSION

The reason for employing technology in defense is to achieve the state's military objectives when its interests are threatened. However, military power matters little unless the United States is willing to use it. As events in Somalia, Haiti, Bosnia, and Serbia demonstrated, there are times when the United States lacks the political will to use its military power to prevail. At the times when U.S. policymakers have been unwilling to use American military power decisively, the

argument has been that U.S. military power was disproportionate to the crisis, U.S. intervention would unnecessarily kill innocent civilians, and would destroy the state that intervention was designed to save (such as Serbia). For these reasons, the United States must articulate a new strategy for guiding the use of military force in this century.

With the economic, military, and technological power of the United States, it is no wonder that states cannot match the depth and breadth of U.S. military power. The case of cruise missiles illustrates this point well. Cruise missiles are extremely precise weapons, but their effective use requires an immense infrastructure for collecting detailed information about potential targets, notably their exact location, elevation, physical layout, and vulnerabilities. Only the United States has the technological apparatus for collecting such information. In the absence of this information, cruise missiles are highly accurate but militarily ineffective weapons. If other states invest in advanced cruise missiles, but lack the technological capabilities to use these weapons effectively, they will waste their resources. While cruise missiles represent one example of U.S. military power, the critical point is that this technological edge will last only as long as the United States invests significant resources in defense.

The early twenty-first century is a time of extraordinary technological progress in many areas, including directed energy, targeting, and computer and information technologies. Since the human condition is such that people will always explore and investigate the technological options that arise, states are bound to explore defense technologies to the limits of their abilities. While many defense technologies that could influence U.S. military power are being developed by the United States, those discussed in this article are decisively changing the nature of war. Since all technological advancement has unintended risks, as illustrated by the risks associated with the development of nuclear weapons, it is essential for officials in the private and public sector to evaluate the risks and benefits of investing in technology with the objective of minimizing the chances of technological surprise.

Despite its great technological power, it is difficult to explain the failures that have plagued U.S. military operations in recent years. The high-technology military did not fare terribly well in Somalia, Haiti, or Serbia. In part, the United States was deterred from using its military power in a decisive fashion because it feared killing innocent civilians or destroying the countryside. Interestingly, the Serbian military shot down an F-117 stealth fighter on the fourth day of the NATO military operation.[16] What if the United States has designed its military to be so dependent on technology that it is irrelevant to the crises of this century? Alternatively, did the United States allow its defense spending to erode in the 1990s? Regardless of the answers to these questions, the prudent option is to invest U.S. economic resources in military capabilities that other states cannot

challenge. However, this strategy is likely to perpetuate competition between technologies and their counters, and thus fuel never-ending technological races.

While the United States has the economic wealth to win this race, an important characteristic of this strategy is the enormous resources that must be invested in modern weapons. The problem with the U.S. approach to military technology is that the high costs of weapons increasingly limit the country's ability to buy the number of weapons its military services say they need, even when one considers the significant increases in defense spending that are contemplated. Given that F-22 fighter aircraft will cost about $150 million each, B-2 bombers about $2 billion each, and aircraft carriers about $5 billion each, not including its aircraft and helicopters, significant increases in defense spending are not unrealistic.[17] The current plan to modernize U.S. fighter aircraft has a price tag of $400 billion. And the development of lasers for missile defense is likely to cost hundreds of billions of dollars. While the United States has great economic power and can afford to develop these weapons, it is worth reflecting on the fact that U.S. defense spending is twice what Russia, China, Iran, Syria, Iraq, Libya, North Korea, Serbia, Cuba, and Sudan spend on defense.[18]

In closing, technological power is no substitute for the political will to use that power wisely. Since the United States has an obligation to use its military power constructively for the purpose of promoting international peace and prosperity, the prudent strategy is to steadily invest in technologies that ensure the United States preserves its ability to defend the nation's vital interests in times of crisis. At the same time, technology is the foundation for the globalization of information that is sweeping the globe. In the end, the United States should resist the temptation to persuade itself that technological advantages in military security in this century are permanent. As with most advantages, those brought by technology can be the most fleeting of all. ■

## NOTES

1 "Defense Budget Boost to 4 Percent of GDP Would Pose Dramatic Shift," *Inside the Pentagon,* August 31, 2000, 3.

2 See Joseph E. Eash III, "Joint Vision 2010 Technology," *Joint Forces Quarterly,* Autumn/Winter 1999-2000, 43-46.

3 William C. Cohen, *Report of the Quadrennial Defense Review* (Washington, DC: Government Printing Office, May 1997), 14, which goes on to say that this "means harnessing new technologies to give U.S. forces greater military capabilities..." Also see *Transforming Defense: National Security in the 21st Century, Report of the National Defense Panel* (Arlington, VA: National Defense Panel, December 1997), 8; and *A National Security Strategy for a New Century* (Washington, DC: The White House, December 1999), 11, in which U.S. Armed Forces must be able "to deter and, if necessary, to fight and win conflicts in which our vital interests are threatened."

4 *Comments by Emerging Threats & Capabilities Subcommittee on Joint Experimentation and Science & Technology,* Defense Authorization Act (FY01), 105th Congress.

5 *The Military Balance, 1999-2000* (London: Oxford University Press for the International Institute for Strategic Studies, 1999), 20.

6 Ibid., 105.

7 See "Trip by Chinese to Military Site Raises Concern," *Washington Times,* August 25, 2000, 1, for reports that "Chinese military officials were briefed yesterday on how the United States develops joint training for its forces at a sensitive U.S. military facility in southern Virginia."

8 John Donnelly, "ICBM Threat by U.S. By Next Year, General Predicts," *Defense Week,* March 1, 1999, 16. See the Executive Summary of *The Report of the Commission to Assess the Ballistic Missile Threat to the United States* (Washington, D.C.: 1998); and "The Rumsfeld Report," *Bulletin of the Atomic Scientists,* 1998.

9 See "High-Tech Suits Help Pilots Avoid Gravity's Perils," *The New York Times,* August 22, 2000, D1, which notes that "today's military aircraft accelerate so quickly and turn so rapidly that they meet or exceed the physical limits of their pilots."

10 "Clinton to Boost the Defense Budget for Fiscal 2002, Blunting Bush Attack," *Wall Street Journal,* August 22, 2000, A1. See John Hillen, "Defense's Death Spiral: The Increasing Irrelevance of More Spending," *Foreign Affairs* (July/August 1999).

11 See *Conduct of the Persian Gulf War: Final Report to Congress* (Washington, D.C.: Department of Defense, 1992).

12 See "U.S. Study Reopens Division Over Nuclear Missile Threat," *The New York Times,* July 5, 2000, A1-A6, which discusses the factors that reportedly influenced President Clinton's deliberations on whether to develop national missile defenses.

13 "Appropriators Boost FY01 Space-Based Laser Funding by $10 Million," *Inside the Air Force,* July 21, 2000, 10-11. The purpose of this additional funding is to accelerate the SBL demonstration, known as the IFX.

14 See Thomas Ricks, "Rumsfeld Outlines Defense Overhaul," *The Washington Post,* March 23, 2001, A1.

15 Guenter Lewy, *America in Vietnam* (London: Oxford University Press, 1978).

16 "U.S. Rescues Pilot as NATO Widens Attack; Stealth Fighter Down in Serbia; Reports of Atrocities Mounting," *The Washington Post,* March 28, 1999, A1.

17 "Defense Budget Boost to 4 Percent of GDP Would Pose Dramatic Shift," *Inside the Pentagon,* August 31, 2000, 3.

18 Ibid.