



9/11 and the Meanings of Military Transformation

Project on Defense Alternatives

Carl Conetta

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Executive Summary

- ◆ During the 1990s the United States spent \$3.3 trillion on defense -- 86 percent as much as it spent during the 1980s. If September 11 teaches anything, it teaches that spending large sums on defense cannot itself guarantee security. Nonetheless, the September 11 attacks prompted a steep increase in the Pentagon budget. In 2003, the Pentagon will spend \$83 billion more than it did in 1998 -- a 28 percent increase, after inflation.
- ◆ A more relevant concern than the size of the defense budget is the failure during the 1990s to adapt the US military and intelligence establishments to new conditions and challenges. The failure continues still. This calls into question the direction of military transformation efforts.
- ◆ Military transformation can refer to various things: (1) it can mean adapting the military to a fundamentally new security environment; (2) it can refer to infrastructure and management reform, with the aim of streamlining the military and reducing overhead costs; and (3) it can mean integrating new information technology and, in accord with this, restructuring the armed forces to increase their effectiveness, efficiency, and flexibility.

- ◆ There was too little progress during the past decade along the first two avenues of transformation. Along the third avenue there was some progress, but it was narrow -- focusing principally on improving the US capacity for “standoff” precision bombardment.
- ◆ US security requirements during the Cold War were largely defined by the interstate confrontation involving two superpower blocs. By contrast, the defining feature of the post-Cold War environment has been the friction between the interstate system and large regions of acute instability in the world. New concerns have included failed states, communal violence, humanitarian crises, and the increased traffic in drugs and light weapons. Feeding on these things has been the new “transnational” terrorism, exemplified by the “Al Qaeda” network.
- ◆ America’s Cold War military was built to fight big, infrequent wars against nation-state foes fielding very large, capital-intensive armed forces. The post-Cold War era has posed a new requirement: the capacity to handle frequent, multiple, and varied smaller-scale contingencies of a complex sort: not just traditional combat missions, but also non-traditional missions, including stability and humanitarian operations.
- ◆ Despite the rise of new security concerns during the 1990s, most of America’s defense investment continued to focus on preparations for traditional, large-scale operations, exemplified by the two-war strategy. Thus, despite \$716 billion in procurement spending, the armed services suffered throughout the 1990s from shortages of various assets that were in high demand for new era operations. The Pentagon also failed to develop land forces that could quickly and reliably intervene to shape developments on the ground both during and after conflicts.
- ◆ The September 11 attack poses a choice for defense policy decision-makers: Should the US military maintain its present emphasis on modernizing traditional platforms and expanding its precision attack capabilities? Or should it put greater emphasis on being prepared to handle a wider variety of complex “new era” contingencies, including “stability” operations.

1. Introduction

It has become commonplace to say that the “world changed” fundamentally on 11 September 2001, when terrorists attacked the Pentagon and World Trade Center. Actually, it had changed 12 years earlier -- in 1989, when the Berlin Wall fell and the Cold War order began to crumble worldwide. With this, the types of threats that had shaped the US military since World War II began a precipitous decline -- and a different set of challenges rose to prominence. What preceded the 11 September attack was a decade-long failure to adapt the US military to new conditions. And the failure continues still.

During the Cold War, America’s military requirements were decided largely by the contest between the superpower blocs. Today, no interstate confrontation provides a comparable framework. Instead, what gives the present security environment its distinctive character is a tension between the state system and several zones of acute instability. Appreciating the implications of this change is key to assessing efforts at military transformation.

2. The world that was

Between 1947 and 1989, the superpower blocs poured approximately \$35 trillion (USD 2001) into their contest. It rested on two enormous military-industrial-scientific establishments, which in the 1980s employed 21 million people in the Soviet Union and United States. These establishments supported dense lines of military confrontation between the blocs in Asia and, especially, Europe (where more than 4 million high-readiness troops faced each other across the “central front”). They also supported proxies in the developing world, both governments and insurgents, producing armed forces there of unusual strength.

Arms transfers constituted one important type of support, North to South. The arms trade peaked during the 1980s, with the total value of transfers for the decade exceeding \$650 billion (USD 2002). By the close of the Cold War there were 64 dictatorial or authoritarian “garrison states” in the South that had been significantly dependent on the superpower blocs. [1] Also, between 1950 and 1989, there were 35 significant “Third World” insurgencies in which the superpowers (or their core allies) had aided rebel forces. [2]

A distinctive mark of the Cold War military system was the prevalence of two types of confrontation:

- ◆ Very large-scale stalemates or conflicts between well-supported capital-intensive militaries, possessing armadas of heavy mechanized ground forces, artillery and missile systems, and advanced combat aircraft; and,
- ◆ Intense, protracted civil wars between militarized central governments and large, fairly well-equipped, and persistent rebel forces.

The material basis for these types of confrontation receded as the Cold War ended and the military-industrial system evolved from a bipolar to unipolar configuration. Also important in undercutting the military strength of many developing nations were changes in the global economy beginning in the early-1980s. While several high-density confrontations persisted -- for instance, on the Korean peninsula -- most nations of concern rapidly lost the capacity to maintain large, capital-intensive armed forces in good fighting shape.

3. Measuring change

Between 1985 and 2001, world military expenditures declined by one-third. Former and potential adversaries of the United States accounted for most of the reduction in spending. As a group, their military spending declined 72 percent between 1985 and 2001 -- even though one member of this group, China, actually increased its spending during this period. [3] By contrast, US military spending declined by only 17 percent between these years. Total US spending during the 1990s was only 14 percent lower than the aggregate for the 1980s -- \$3.3 trillion versus \$3.8 trillion (2003 USD).

Because US and allied spending did not recede as much, on average, as the rest of the world's, the US and allied share of world spending increased -- from 31 percent to 39 percent for the United States, and 57 percent to 73 percent for the allied group as a whole. (America's share of world spending is likely to surpass 42 percent in 2003). Standing alone, the United States

moved from spending only 80 percent as much as the adversary group in 1985 to spending 250 percent as much in 2001.

Turning to the arms trade: it underwent a 65 percent contraction between 1985 and 2001. Arms imports by developing countries fell by three-quarters. During the last decade of the Cold War about 45 percent of the trade in major weapons was controlled by the Soviet Union, its Warsaw Pact allies, and China. Today the combined market share of China, Russia, and Russia's close allies is less than 23 percent by value. Whereas they once exported more than \$40 billion worth of major weapons each year, their average annual sales for the period 1997-2001 was only \$6.2 billion per year. By contrast, the United States and its allies exported \$20.4 billion annually during 1997-2001, accounting for 75 percent of the trade in major conventional armament. [4]

Today, US allies in Europe and elsewhere also account for most arms imports: 69 percent during the period 1992-1998 and 58 percent during the overlapping period 1997-2001. By contrast, less than 9 percent went to China and so-called "rogue states" during 1997-2001.

Just as the United States and its allies have come to dominate the arms trade, they also conduct most of the world's military research, development, and production. Today the United States accounts for almost 60 percent of all military R&D spending worldwide; America's allies account for another 25 percent. China and Russia together account for less than 12 percent. Regarding military production: the United States presently accounts for more than half of the worldwide total. Adding European NATO and Japan brings the military production share of the allies to almost 90 percent. Combined Russian and Chinese production of major arms constitutes less than six percent of world production. [5]

The post-Cold War changes in military trade and investment patterns paralleled developments in the political and economic spheres. Together they implied a sharp and progressive reduction in the number, magnitude, and intensity of traditional military threats to the West.

4. New era, new requirements

Among the important catalysts of instability in the post-Cold War era were (1) the increasing economic marginalization of many developing nations, which began in the 1980s, (2) the collapse of the Soviet empire and Yugoslavia, which added to the world system 23 newly independent states (including the former Warsaw Treaty states), and (3) the sudden termination or attenuation of bloc support for many former allies in the South.

Instability was manifest in an increased incidence of weak or "failed" states, civil and communal violence, refugee and other humanitarian crises, and criminal and black market activity, including an increased traffic in illicit drugs and light military weapons. Amplifying these problems were some residual effects of the Cold War, notably: the broad availability of military weapons and a surplus of demobilized military personnel and insurgents, who could not easily be re-integrated into civil society. Within this latter class a subset that was especially relevant to the events of 9-11 were the 12,000-15,000 "Arab" veterans of the wars in Afghanistan, most of whom came from Egypt, Algeria, Yemen, and Saudi Arabia. [6] These and other veterans of the Afghan wars formed the recruiting pool for Osama bin Laden's *Al Qaeda*.

Today, there are several broad zones of instability in the world: one encompassing southern Mexico, parts of Central America, and the Andean region of South America. A second, now in remission, comprises the "transitioning" states along the western border of Russia. A third

encompasses most of Africa south of the equator. The fourth is a sprawling archipelago that includes portions of southeast Europe, Africa north of the equator, the Middle East, and portions of central, south, southwest, and southeast Asia. (From a strategic perspective this fourth zone is distinguished by the presence of oil and the prevalence of Islam.)

Due to increased trade, migration, and the weakening of nation-state borders, the problems that beset the zones have a transnational character. This poses a global challenge whose magnitude is suggested by the fact that a majority of the world's nations are either encompassed, penetrated, or bordered by these zones. Indeed, as demonstrated on September 11, no place on earth is completely removed from their influence.

5. What is “Military Transformation”?

While the world changed rapidly and radically after 1990, America's armed forces did not -- apart from reducing in size. Rather than refashion its tool box to fit new conditions, the Pentagon mainstream has tended to view the new era in terms of the types of tools it had on hand at the Cold War's end. This, notwithstanding the fact that “transformation” has been a Pentagon watchword since the mid-1990s. But the term can have various meanings and serve different ends.

5.1 Transformation as adaptation

First, transformation can imply *adaptation* -- reshaping and reorienting the military to better deal with the new security environment. This, the United States largely failed to do during the 1990s.

America's Cold War armed forces were built to fight big, infrequent wars against large, nation-state foes. And the Cold War era bequeathed the United States a remarkable capacity to wage global nuclear wars, conventional naval wars, and big air-land wars involving heavy mechanized armies and powerful air forces on both sides. After 1989, however, the rising requirement was for a capacity to handle frequent and multiple smaller-scale contingencies of a complex sort: not just traditional combat missions, but also non-traditional missions, including stability and humanitarian operations.

Despite the increased prominence of smaller-scale contingencies during the 1990s, the lion's share of the military's time and resources was devoted to “traditional” activities and threats. The vaunted “two-war strategy” made claims on almost all of America's conventional assets; it dominated planning, training, and procurement. On average, less than four percent of America's conventional military capacity was deployed regularly in smaller-scale contingencies during the 1990s. (Counting rotation forces, less than one-sixth total were oriented toward such contingencies). Nonetheless, it was this set of activities that bore the blame for the military's readiness problems. Indeed, readiness was defined as being fully prepared to execute the two-war scenario according to schedule. By the decade's end, “operations other than war” -- especially peace, stability, and humanitarian operations -- were considered anathema.

During the 1990s, the force mix changed minimally, with the allocation of money and people among the services shifting only a few percent. Even today, preparations for conventional air-land wars absorb at least 70 percent of the Pentagon budget. By comparison, no more than ten percent of the budget serves counter-terrorism and homeland protection goals. This allocation of resources reflects the ongoing influence of the dominant military arms: aircraft carriers, piloted fighter aircraft, and heavy mechanized ground forces.

Poor adaptation is also evident in the Pentagon's failure to procure enough of the type of assets used most in post-Cold War contingencies. These so-called "high-demand, low-density" (HD/LD) assets have included electronic warfare and SEAD aircraft; reconnaissance, surveillance, and intelligence-gathering aircraft; airlift assets; A/O-10 attack/observation aircraft and AC-130 gunships; special operations, intelligence, communications, military police, and public affairs units as well as other types of specialized support units. To this list can be added the Army's lack of medium-weight units -- a problem it did not begin to rectify until the end of 1999.

The Pentagon's failure to substantially alter its mix of tools cannot be attributed principally to a shortage of funds. Among the \$3.3 trillion spent on defense during the 1990s was \$716 billion devoted to equipment purchases. Although this sum is 25 percent less than what was spent during the 1980s, it was meant to outfit a force one-third smaller than its Cold War predecessor. All told, between 1990 and 2001, the US armed forces bought 45 major surface combatants and submarines, more than 900 combat aircraft, and more than 2000 armored combat vehicles (while upgrading another 800).

5.2 Transformation as defense reform

A second possible meaning of transformation is *defense reform* -- with the aim of streamlining the Pentagon's infrastructure, improving its management practices, and reducing overhead costs. This type of change also foundered during the 1990s. Today our armed forces carry more than 20 percent excess base structure. In addition, maintenance depots, labs, testing facilities, schools, and hospitals all operate with significant excess capacity. Efforts to centralize or privatize support functions have proceeded at a delusory pace. Estimates of potential savings from a more dedicated program of infrastructure reform range from \$10 billion to more than \$20 billion a year.[7]

Achieving greater efficiency and making wise investment choices depends on DoD having a reliable accounting system which, despite years of criticism, it does not. Untraceable bookkeeping entries presently run at about \$1 trillion and problems of inventory control are epidemic. For instance, the General Accounting Office reported in 2002 that DoD had lost track of 1.2 million chemical-biological protective suits and that the Navy in 2001 had written off \$3 billion worth of goods as lost in transit. In September 2001 Defense Secretary Rumsfeld estimated that reforming the Pentagon's financial management system could reduce costs by \$15 billion to \$18 billion a year.[8]

5.3 Transformation as military-technical revolution

Finally, transformation can mean fully *adopting new information technology and restructuring the armed forces* in order to produce an "information age" military. Along these lines we might expect the evolution of smaller more independent tactical units, flattened command hierarchies, a greater emphasis on networks (rather than platforms), and a thinning of the boundaries between services. The aim would be to increase the effectiveness, efficiency, and flexibility of the armed forces. Success in this would allow them to do more, faster, with fewer resources, and less risk. Although there has been some progress in this area, it continues to trail far behind need and opportunity.

The service bureaucracies have tended to "dumb down" transformation, retaining their emphasis on buying big-ticket platforms, while minimizing organizational change. This narrows

transformation to a matter of “recapitalizing” fairly traditional unit structures along fairly customary lines.

Today, most major procurement items continue to reflect a design philosophy that is “pre-network” -- a philosophy that loads a relatively few platforms with capabilities that could be distributed. Of course, most of these programs have their origin in the 1980s, before it became common to think in terms of a networked military. Only a few of these legacy programs have been eliminated or substantially trimmed back since the Bush administration took office: all components of combat aircraft modernization are going forward as is procurement of the Comanche helicopter, CVNX aircraft carrier, and V-22 Osprey transport aircraft.

One area of demonstrable progress has been the services’ capacity for conducting long-range precision bombardment, which increased several fold during the 1990s. Although also rooted in Cold War programs, this capability exhibits the transformational qualities of being distributed (thus flexible and robust) and using information to substantially boost efficiency and effectiveness. But precision strike capabilities alone do not make for a transformed military -- no more than having a strong and accurate pitching arm is all there is to excellence in playing baseball.

The 2001 Afghanistan war revealed the limits of precision strike: Using 24,000 bombs, the United States was able to topple the Taliban within ten weeks -- but it could not corral *Al Qaeda* or control subsequent developments on the ground. Indeed, US victory in Afghanistan entailed handing most of the country back to warlords. This is not the type of victory that can stabilize weak states or protect us, in the long run, from the likes of bin Laden. But the problem is not simply one of achieving a more thorough and balanced information-technology revolution. There is a limit to the utility of integrating new technology as long as the US military fails to adapt its mix of capabilities to the present security environment. In other words: to be fully relevant, *transformation must encompass adaptation.*

6. Policy Choices and Tradeoffs

The three meanings of transformation are in no sense mutually exclusive. It would be more accurate to think of them as representing different dimensions or aspects of change. However, there are distinct choices within each of them and specific tradeoffs are associated with these.

Regarding the adaptation of the US military to the post-Cold War security environment: Altering the mix of military capabilities at the disposal of the nation implies a wager about the balance of threats during the next 15 or so years. Although the US military today is not particularly well-suited to addressing many “new era” challenges, it is better prepared to address the sudden re-emergence of a peer or “near peer” rival employing traditional forms of power. How one values this capability depends partly on how likely it seems that a peer competitor to the United States will emerge within the next 15 years. Today’s military is also very well-prepared to dispatch smaller traditional foes such as Iraq. Thus, altering the mix also implies a wager about whether these are rising or declining threats.

Regarding a technology-driven “revolution in military affairs”: Any revolutionary change is bound to be disruptive in the short term. By contrast, the current path -- procurement and modernization of traditional platforms and structures -- involves minimal transition costs and ensures institutional stability. For this benefit, it sacrifices the flexibility that a more

through-going change might bring -- and it wagers that no truly revolutionary military competitor will emerge within the next 25 or so years.

America's growing capability for long-range precision strike represents a partial or truncated RMA. It is very well-suited to coercive diplomacy and large-scale attrition warfare against nation-state foes. Another possible, partial RMA with wider application might focus on modularizing US military units and greatly improving the capacities for joint command, control, and communication. This could greatly improve force flexibility -- a benefit regardless of the type of challenge that America faces. Because this option would also produce a more "adaptable" military, it best addresses concerns about the uncertainty of the security environment.

Infrastructure and management reform efforts are also neutral with regard to threat. By relieving resource constraints, they would serve whatever type of military America chooses to build. However, they entail transition costs -- such as base cleanup -- that diminish near-term savings. Moreover, they directly challenge multiple parochial interests, making progress in this area difficult politically.

NOTES

1. Ruth Leger Sivard, *World Military and Social Expenditures 1989* (Washington DC: World Priorities, 1989), cited in George Lopez, "Why the generals wage war on the people," *Bulletin of the Atomic Scientists* (May 1990).

2. Only those insurgencies involving 1500 or more fatalities are counted as "significant." The estimate is based on the *Armed Conflict 1946-2001* database compiled by researchers at the International Peace Research Institute, Oslo, and the Department of Peace and Conflict Research, Uppsala University.

Sources on superpower involvement: Bercovitch and Jackson, *International Conflict : A Chronological Encyclopedia of Conflicts and Their Management 1945-1995* (Washington DC: Congressional Quarterly, 1997); Edward H. Judge and John W. Langdon, *A Hard and Bitter Peace: A Global History of the Cold War* (Englewood Cliffs NJ: Prentice Hall, 1996); J.P.D. Dunababin, *The Post-Imperial Age: The Great Powers and the Wider World: International Relations Since 1945. Volume 2. The Postwar World* (Boston: Addison-Wesley, 1994); John M Collins, *America's Small Wars: Lessons for the Future* (London: Brassey's, 1991); Jonathan Kwitny, *Endless Enemies The Makings of an Unfriendly World* (New York, Viking Penguin, 1984); and, Bruce Porter, *The USSR in Third World Conflicts* (Cambridge University Press, 1984).

3. Military spending statistics are derived from: International Institute for Strategic Studies, *The Military Balance 2001-2002; 2002-2003* (Oxford: IISS and Oxford University Press, 2000, 2002). The group of actual and potential US adversaries during the Cold War includes the Soviet Union, the other members of the Warsaw Treaty organization, China, North Korea, North Vietnam, Iran, Iraq, Syria, Libya, and Cuba. For the post-Cold War period the Soviet Union and member states of the Warsaw Treaty are replaced by Russia, Belarus, and Ukraine; all the other members of the Cold War adversary group are counted as potential post-Cold War rivals as well.

4. Estimates of the contraction in the arms trade are derived from: US Department of State, Bureau of Verification and Compliance, *World Military Expenditures and Arms Transfers 1998* (Washington DC: US State Department, 2000); and, US Arms Control and Disarmament Agency, *WMEAT 1995; 1991-1992* (Washington DC:, 1996; 1994). Other arms trade statistics are derived from: Stockholm International Peace Research Institute, *SIPRI Yearbook 1999, 2000, 2002: Armaments, Disarmament, and International Security* (Oxford: SIPRI and Oxford University Press, 1999, 2000, 2002).

5. Arms research and production statistics are derived from: Elisabeth Skons and Reinhilde Weidacher, "Arms Production," *SIPRI Yearbook 2000; 2002*; Deba R. Mohanty, "Defence Industries in a Changing World: Trends and Options", *Strategic Analysis: A Monthly Journal of the IDSA* (January 2000); and, Eric Arnett, "Military research and development", in *SIPRI Yearbook 1999; 2000*.

6. Richard Engel, "Inside Al-Qaeda: a window into the world of militant Islam and the Afghani alumni," *Jane's Intelligence Review* (September 2001); Yoram Schweitzer, "Middle-East Terrorism: The Afghan Alumni," *Military Balance in the Middle East 1999-2000*, Jaffee Center for Strategic Studies (Cambridge, Massachusetts: MIT Press, 2000); and, James Bruce, "Arab Veterans of the Afghan War," *Jane's Intelligence Review* (April 1995), p. 175.

7. Gary Martin, "Base closure savings total billions; Auditors add up GI shutdowns," *San Antonio Express-News*, 6 April 2002; William Owens and Stanley Weiss, "An Indefensible Military Budget," *New York Times*, 7 February 2002, p. 29; Mortimer Zuckerman, "The Price of Power: The Military Should Spend More on Forces and Less on Facilities," *US News and World Report*, 6 September 1999; Lt. Gen. Thomas McInerney, "Defense Reform: More Smoke Than Fire," *Strategic Review* (Fall 1998); and, Congressional Budget Office, "Paying for Military Readiness and Upkeep: Trends in Operation And Maintenance Spending" (Washington DC: CBO, Sept 1997);

8. General Accounting Office, *DoD Management: Examples of Inefficient And Ineffective Business Processes*, Statement of Gregory Kutz before the Subcommittee on National Security, Veterans Affairs, and International Relations, US House Committee on Government Reform, 25 June 2002 (Washington DC: GAO, June 2002); GAO, *DoD Financial Management Important Steps Underway But Reform Will Require a Long-term Commitment*, statement of Gregory Kutz before the Subcommittee on National Security, Veterans Affairs, and International Relations, US House Committee on Government Reform, 4 June 2002 (Washington DC: GAO, June 2002); Philip Dine, "Pentagon Is Struggling to Reform its Finances; Chief Financial Officer Says it Could Take 7 Years to Fix Military Accounting," *St. Louis Post-Dispatch*, 25 March 2002; GAO, *DoD Financial Management: Integrated Approach, Accountability, Transparency, and Incentives Are Keys to Effective Reform*, statement of Gregory Kutz before the Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, US House Committee on Government Reform, 20 March 2002 (Washington DC: GAO, March 2002); and, Jack Shanahan and Franklin C. Spinney, "Tighten Pentagon's Purse Strings Until It Passes an Audit," *Los Angeles Times*, 29 December 2000.

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