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"European Security and the Revolution in Military Affairs"

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Abstract

This report deals with the revolution in military affairs (RMA) and the post-Cold War challenges to European security as separate yet related issues. It discusses the implications of RMA technologies for the size and quality of the contemporary defense capabilities gap between the United States and its European NATO allies. It sets the European reception of the RMA in the context of the radically changed security environment of post-Cold War Europe and the perceived need of the European NATO states to achieve a high degree of defense self-reliance in an era of comparatively modest defense budgets. It measures European performance in NATO's *Operation Allied Force* and discusses the future of European force development and defense procurement, partly in light of that performance but also from the perspective of the post-Cold War Petersberg Tasks to which NATO has been formally committed for the better part of a decade. Lastly, it discusses the way in which European defense capabilities can be enhanced through Anglo-French entente and selective participation in the RMA.

Executive Summary

The existence or not of a contemporary Revolution in Military Affairs (RMA) constitutes an academic debate among defense intellectuals inside and outside government. Staking out a position on this issue is not the primary concern of this study. Rather, it is to establish that rapid innovation in defense and defense-related technologies has changed both the conduct of war and planning for future wars to an extent that the RMA has become a principal operative assumption in the efforts of all militaries to plan for the future. More to the point, the RMA is a central assumption in the defense and security planning of the United States, omnipresent in documents such as the 2001 *Quadrennial Defense Review* and *Joint Vision 2010*. The future of the NATO alliance is therefore inevitably, and potentially profoundly, influenced by the U.S. planning for global security challenges.

Such planning is additionally influenced by the fundamental change of security challenges in Europe, the erstwhile primary theater of the Cold War. This involves the completion of NATO's founding mission, the territorial defense of Western Europe from the Soviet Union on the one hand and the emergence regional crisis-management in the 1990s as a primary occupation of NATO on the other. While NATO has adjusted doctrine to fit the new European reality, the evidence from Europe and beyond testifies to a widening gyre of war and conflict globally, to which the military capabilities offered by the RMA offers an attractive, if incomplete, response.

At the same time, the concern among the European member-states of NATO for their collective reliance on the defense capabilities of the United States stands in grotesque contrast to Europe's importance in global trade and commerce. This dependency was underscored in the diplomatic and military efforts of the European Union (EU) and NATO to grapple with conflict arising from the political disintegration of Yugoslavia. Europe's relative weakness was a result both of the modest resources national governments commit to defense spending, the tentative condition of a collective European Security and Defense Policy (ESDP), and the limited extent to which European militaries have benefited from the RMA.

Some of Europe's defense liabilities would clearly be leavened by the acquisition of RMA technologies. Others, however, are more closely related to the fact that Europe finds itself in an altered security environment that places a premium on expeditionary capabilities: rapid response and flexible power projection. There is little evidence that Europe collectively is moving to correct these liabilities, except through the formal commitments and institutional adaptations of the EU. At a sub-EU level, however, changes have been made, though they testify more to potential than to achievement. In terms of military heft, expeditionary culture, and political commitment, cooperation between France and the United Kingdom represents both the best hope for selective European participation in the RMA and for an ESPD worthy of the name.

Although in the present fiscal environment Europe has no choice but to accept continued security dependence on the United States, European specialization in the commitments made toward meeting the Petersberg Tasks and selective participation in the RMA could improve Europe's security position and prestige substantially. Whether or not such a development were to promote more trans-Atlantic procurement partnerships, greater European self-reliance should be encouraged by the United States. It would of itself constitute no threat to the vitality of NATO.

The research for this report was conducted in Berlin, Cambridge, London, Montgomery-Alabama, and Washington DC, June 2000-March 2002.

I The Revolution in Military Affairs

Contemporary discussion of the future of NATO often begins and ends with extraordinary claims about the impact of the Revolution in Military Affairs (RMA) on the alliance's effectiveness and very cohesion. More specifically, the RMA is treated as a principal factor in the growing "capabilities gap" between the United States and its European allies. Among the more serviceable definitions of an RMA is that it occurs "when the application of new technologies into a significant number of military systems combines with innovative operational concepts and organizational adaptations in a way that fundamentally alters the character and conduct of conflict."[1] This definition remains controversial for scholars of military affairs, in so far as the claims of the word "fundamentally" are sweeping. As Director of the Office of Net Assessments in the Office of the United States Secretary of Defense, Andrew Marshall has described recent change in warfare, in combination with the promise of new technologies, in terms roughly analogous to this definition. He has encouraged the view that "such an RMA is now occurring and those who understand it and take advantage of it will enjoy a decisive advantage on future battlefields."[2] Because the European NATO states do not enjoy a purchase on new military technologies comparable to that of the United States, the difference in advanced capabilities opens up concerns about the interoperability of alliance forces and hence the degree to which NATO can function effectively as an alliance.

Advanced technologies are at the core of Washington's vision of the military future, the comparative weakness of its allies, and therefore of the widening trans-Atlantic capabilities gap. The RMA to which Marshall refers involves "the use of information technology to gain strategic advantage by networking one's forces, gaining complete knowledge of the battle, and striking from any range with near-perfect precision."[3] The use of dispersed yet integrated forces enables one to attack all enemy targets from all ranges while remaining comparatively more difficult for the enemy to engage effectively in response. As important as the possession of technologies is, it is the development of innovative doctrine, tactics, training, and organization for their use that gives the information revolution its potential as a military revolution.[4]

Indeed, the historical perspective on the evolution of modern war suggests that decisive advantage can turn out to be a strangely elusive goal when too much is expected from technology alone. Technology is a tool, the utility of which is dependent on a sober understanding of past conflict combined with an evidentiary-based analysis of the apparent potential and actual performance of new capabilities. To expect that technological or conceptual innovation will eliminate either the friction or fog of war

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[1] Andrew F, Krepinevich, Cavalry to Computer: The Pattern of Military Revolutions," *The National Interest*, No.37, 1994, p.30.

[2] Jeffrey McKitrick et.al. " The Revolution in Military Affairs," in Barry R. Schneider and Lawrence E. Grinter, Eds., *Battlefield of the Future: 21st Century Warfare Issues,* Air War College Studies in National Security, No.3, (Maxwell AFB, Alabama: Air University Press, 1998) p.65.

[3] David C. Gompert, Richard L. Kugler and Martin Libicki, *Mind the Gap: Promoting a Transatlantic Revolution in Military Affairs*, (Washington DC: National Defense University Press, 1999), p.3.

[4] Ibid.

could turn out to be the gravest of follies.[5] There is also a trans-Atlantic gap in enthusiasm for the notion that the combination of airpower, precision munitions, and information technology form the technological base of a contemporary RMA.

This disagreement is to some extent explained by the wide differential in technological assets between the United States and its European allies. But it is also influenced by a difference in strategic culture and the stress which the American way of war has placed historically on exploiting technological advantage to the fullest. "In and of itself, a quest for technical improvement is strategically innocent," Colin Gray notes critically, but if "the benefit of better military tools becomes an article of faith in the power of machines, great harm can be done."[6] Gray is representative of defense intellectuals who argue that there is a serious danger of article-of-faith errors in the U.S. military's zeal for the implications of new technologies. And Michael O'Hanlon maintains that although progress in electronics and computer systems is genuinely revolutionary, it is much slower in other areas equally important in the prosecution of war: propulsion systems, aerodynamics and hydrodynamics, the explosive power of conventional ordnance, and the strength of armor.[7] Among the military professionals most qualified to make experienced judgment there is also healthy skepticism about --- tinged with genuine curiosity about the potential of --- the RMA. In his study of NATO' s *Operation Allied Force* in Kosovo, General Wesley Clarke, refers on the one hand to the "brave talk" about a "the so-called Revolution in Military Affairs" and concedes on the other that the operation achieved "a military success at remarkably little cost in Allied lives and resources" despite the fact that its prosecution violated almost every basic principle of the conduct of war.[8]

II Technology and the Gyre of War

Gray argues that the twentieth century experience of war testifies that "military-technical enthusiasm is most appropriate when it is tied to some dominant weapon, or 'leading edge' strategy;" yet since the 1991 Persian Gulf War a dominant role has been claimed for airpower, the computer, space power, biological, toxin, and chemical arms (possibly in the hands of terrorists)" respectively.[9] The most compelling fact of war in our time, Gray maintains, is its "widening gyre," a growing complexity in the trade of war and the subjects requiring mastery for exploitation by the art of strategy.[10] Certainly, the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001 illustrate a widening diversity of destructive technique and underscore the new status of

[5] Williamson Murray, "Thinking About Revolutions in Military Affairs," *Joint Force Quarterly*, Summer, 1997, pp. 103-110.
[6] Colin S. Gray, "Weapons for Strategic Effect: How Important is Technology?" Unpublished paper, Center for Strategy and Technology, Air University, Maxwell AFB, Montgomery, Alabama, 2000-2001.
[7] Michael O'Hanlon, *Technological Change and the Future of War*, (Washington DC: Brookings, 2000), pp.26-30. P.194.
[8] Wesley K. Clarke, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat*, (New York: Public Affairs, 2001), p.124, pp.423-426.
[9] Colin S. Gray, *Modern Strategy*, (New York: Oxford University Press, 1999), pp.204-205.
[10] Ibid.

"asymmetric threats"[11] in international security. There is at the apex of the U.S. military --- and therefore in the leadership of the Atlantic Alliance --- an appreciation of this fact and a measured enthusiasm for the possibly revolutionary opportunities, and limitations, of emerging technologies in the hands of a modern military. In a recent article Secretary of Defense Donald Rumsfeld wrote that the campaign against Al Qaeda and Taliban forces in Afghanistan featured capabilities ranging from advanced to antique, from earth-penetrating and thermobaric weapons to pack-mule transport and special forces teams on horseback.[12]

Quite apart from the debate over the implications of new technologies with military applications, advanced and advancing capabilities are as integral a part of the *Quadrennial Defense Review* published by the Rumsfeld Pentagon in the autumn of 2001 as a decade's experience of conflict in the post-Cold War world. It is fair to say that the *QDR*'s vision of American defense priorities is based in part on the diversified array of challenges to U.S. interests at home abroad, the consequence of which is a shift away from threat-based to capabilities-based defense planning. The United States is today less concerned with who might threaten its security and that of its allies as with increasing diversity in *how* threats will manifest themselves. A capabilities-based defense necessarily broadens the strategic perspective of the security policy of any state, but it requires sweeping change from a superpower with global interests. The *QDR* states that "U.S. military forces will need to deter and defeat adversaries who will rely on surprise, deception, asymmetric warfare to achieve their objectives" --- a prediction confirmed in every way by September 11. It concludes that defense planning must "focus on emerging opportunities that certain capabilities, including advanced remote sensing, long-range precision strike, transformed maneuver and expeditionary forces and systems, to overcome anti-access and area denial threats, can confer on the U.S. military over time."[13] The capabilities-based perspective of the *QDR* is a logical response to the fact that the probabilities of conflict for a state with interests as far-flung and diverse as those of the United States will require an extraordinary commitment to power projection by successive administrations. Inevitably, the enhanced capabilities offered by technological change will be critical to the defense priorities of any state so positioned, *regardless* of its leadership's interpretation of the revolutionary or non-revolutionary implications of new technologies.

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[11] Generally defined as *the ability of an actor to leverage inferior tactical or operational strength against the vulnerabilities of a stronger opponent, and thereby achieve disproportionate effect, with the aim of undermining the will of the opponent to resist or thwart the achievement of the actor's objectives.* In other words, the diffusion of technologies and military capabilities to non-state actors, combined with the willingness of non-state actors to resort to radically innovative methods in the application of such technologies, can at least temporarily offset the strengths of the target with devastating physical and psychological impact. Al-Qaeda's use of passenger aircraft as guided-missiles to attack the Pentagon and destroy the World Trade Center is a classic example. McNair Paper No.62, *The Revenge of the Melians: Asymmetric Threats and the Next QDR*, November, 2000.
http://www.ndu.edu/idss/mcnair/mcnair62/CH01.html

[12] Donald H. Rumsfeld, "Transforming the Military," *Foreign Affairs*, Vol.81, No.3, 2002, pp.20-32.

[13] United States Department of Defense, *Quadrennial Defense Review Report*, September 30, 2001, p.14.

In the United States, the conceptual template for channeling innovation and technological change is *Joint Vision 2010*, prepared by the Joint Chiefs of Staff. The document cites the operational imperatives of dominant maneuver, precision engagement, full dimensional protection, and focused logistics as the building blocks of the the "full spectrum dominance" the United States means to achieve against any adversary in the twenty-first century. Yet because the United States expects to work in concert with allied and coalition partners in nearly all future operations, the document advises that "we must find the most effective methods for integrating and improving interoperability with allied and coalition partners."[14]

There is the rub. The best evidence is that problems of integration and interoperability within NATO will get worse over the next decade. The source of the problem is one of perceptions on the one hand and of fiscal resources on the other. Among influential defense analysts in the United States, the revolutionary nature of the RMA is often regarded an incontestable given, and the United States itself is thought to be moving too slowly to exploit its full advantages.[15] Yet even in light of an American embrace of new technologies that RMA enthusiasts find too tentative, the military capabilities of the United States are pulling away from those of its European allies. Moreover, an American wholesale abandonment of the RMA could not reverse the divergence of capability and strategy --- to the point, in the worst scenario, "where U.S. and European forces cannot operate well together even if they deploy together."[16] The quality of American precision-guided munitions (PGMs) and command, control, communications, computers, intelligence, surveillance, and reconnaissance capabilities (C4ISR) has improved significantly since the 1991 Gulf War, whereas those of the European allies for the most part predate *Operation Desert Storm*.

This presents a danger to the military effectiveness and political legitimacy of NATO. The United States, even with a military clout vastly superior to all potential rivals, prefers to wage coalition warfare with allies such as the United Kingdom, France, and Germany --- not only to spread the risks and share the burden but also to "satisfy the American people that their young men and women are not being asked to police the world alone."[17] If European forces cannot fight effectively alongside American forces due to a capabilities gap and recurring problems of interoperability, then the very viability of NATO as an effective alliance comes into question.

III The Expeditionary Era

It is important to stress that not all of the differential between American and European military capabilities is accounted for by the new technologies driving the RMA. The vastly greater mobility of American forces is also a product of twentieth century war and the requirement imposed by geography that the United States, in every major and minor

[14] Joint Chiefs of Staff, *Joint Vision 2010*, p.9.
[15] Gompert, Kugler, Libicki, *Mind the Gap*, p.3.
[16] Ibid., p.4.
[17] Ibid., p.6.

conflict, has had to project decisive power over enormous distances. To the extent that the development of post-Cold War doctrine in NATO stresses highly-mobile rapid reaction forces, those European states with an expeditionary military culture will in theory also be the states whose forces must be most conversant with American capabilities. As important to NATO cohesion as the evolution of information and precision weapons technologies are in objective terms, more critical still is the attention and prestige given to the RMA by governments on either side of the Atlantic. The attractiveness of the RMA in the United States is influenced significantly by a security community historically attracted to technological solutions to defense challenges. A European skepticism about, or a comparative abstinence from, the RMA is not necessarily of itself terminal to alliance unity. As long as a basic conceptual coherence is present, rooted in general agreement on the most probable adversaries and deployment scenarios --- as well on the most appropriate array of political and military means with which to act --- allies can function in unison and yet disagree on the longer-term military implications of what they accomplish together. [18] Ultimately, applied experience in combat is the only genuine measure of the validity of new ideas about the prosecution of war.

The Combined Joint Task Force concept (CJTF), proposed by U.S. Defense Secretary Les Aspin in line with NATO's *New Strategic Concept* and developed during the mid-1990s, reflects such an agreement.[19] It is based on the assumption that non-Article V regional crisis-management scenarios on the European periphery, as demonstrated in Yugoslavia, would be the alliance's most common deployment scenario of the future. An additional merit of the CJTF is that it responded both to an American concern for increased burden-sharing by European allies for post-Cold War tasks and to allied aspirations for a European Security and Defense Identity (ESDI). It did this by way of the possible use by the European allies, through the Western European Union (WEU), of "separable but not separate" NATO assets for missions from which the United States might want to abstain.[20] Inherent in the CJTF idea from the outset was the assumption that the alliance would need to fashion "coalitions of the willing" for non-Article V missions in which some member-states had no interest. Also implied was the notion that NATO might become involved in crises beyond Europe and would have to work together with non-NATO countries.[21] Although the CJTFs were intended for operations such as peacekeeping and crisis intervention, they could in principle be developed for a wider spectrum of contingencies, including large-scale power projection and high-intensity conflict. In theory, then, the requirements identified for effective CJTFs could focus attention on the specific RMA capabilities --- and non-RMA capabilities --- needed by the European allies in order to operate in coalition with the United States. European forces would need greater flexibility and mobility for rapid deployment, along the

[18] Gray, *Modern Strategy*, pp.246-248; Martin Hoch, Die 'Revolution in Military Affairs' – Zur Kritik eines Mythos, *Europäische Sicherheit*, August, 2000 http://www.gfw-sicherheitspolitik.de

[19] Joint Doctrine refers to *the employment of the assets of two or more services (air, land, sea) in coordinated acation toward a common objective*.

[20] David S, Yost, *NATO Transformed: The Alliance's New Roles in International Security*, (Washington DC: United States Institute of Peace, 1998) p.200. See also Simon Duke, *The Elusive Quest for European Security from EDC to CFSP*, (New York: St. Martin's, 2000), p.296.

[21] Ibid.

command and communications that would enable them to work with each other as well as with U.S. forces. The capabilities gap would be narrowed *à la carte*.[22]

However, the CJTF concept did not satisfy the appetite in European capitals for the symbol of greater European autonomy. The discussion of CJTFs --- and NATO's de facto application of them in Yugoslavia --- was accompanied by a European debate on a Common Foreign and Security Policy (CFSP), and the evolution of ESDI into a European Security and Defense Policy (ESDP). Added to this was the further development of the Eurocorps, a Franco-German initiative dating to 1983 yet made official by Chancellor Kohl and President Mitterrand in 1991 with the announcement that a European force would be built upon the foundation of the 4,200-strong Franco-German Brigade. Whereas French motives for a European force were linked to a concern for European defense autonomy from the United States, the German government viewed its integrative aspect as a political end in itself rather than a step toward enhanced European capabilities.[23] The issues of distinctly European defense and security robustness and the gap in alliance military capacity both came to a head in 1999, in NATO's Defence Capabilities Initiative (DCI) agreed at the Washington Summit of April and in the European Union's Helsinki Headline Goal (HHG) established at the European Union summit the following December. The DCI was primarily concerned with the gap in a wide array of military capabilities between the United States and its European allies, many if not all of which are related to the RMA. By September 2001 the DCI had listed no fewer than 59 decision areas grouped into five categories:

- deployability and mobility
- sustainability and logistics
- effective engagement
- survivability of force and infrastructure
- NATO-level C³

For its part, the HHG called for the creation by 2003 of a European force capable of undertaking the full range of Petersberg Tasks,[24] including the most demanding operations. In concrete terms this meant a force of 50-60,000 troops with provision for support and rotation, deployable within 60 days and sustainable for a year. The relationship between the DCI and the HHG is clear: in order even to approximate the latter serious progress would have to be made through the long shopping-list of the former. While virtually all of the DCI's five priority areas speak to the requirements of CJTFs, and were thus adjustments to the post-Cold War security environment from territorial defense to expeditionary missions, the last three --- effective engagement, survivability of force and infrastructure, and C³ --- are *necessarily* connected to the advanced technologies associated with the RMA. This meant in principle that both the

[22] Gompert, Kugler, Libicki, *Mind the Gap*, p.83

[23] John S. Duffield, *World Power Forsaken: Political Culture, International Institutions, and German Security Policy After Unification* (Stanford: Stanford University Press, 1998), p.134.

[24] Meaning humanitarian and rescue operations, peacekeeping and crisis management, including "peacemaking," approved in 1992 by the WEU as integral to ESDI. Helsinki European Council, December 10-11, 1999 *Presidency Conclusions*, Annex I-IV.

cause of greater European self-reliance and the goal of narrowing the capabilities gap would be served by concentrating resources on those technologies that critical to the effectiveness of CJTFs, for contingencies ranging from peacekeeping to coalition war fighting.

IV European Multilateralism

Unfortunately, accomplishing this in a robustly multilateral European effort --- much less one centered on the EU itself --- currently has little chance, and there is little evidence that this will change any time soon. Instead, there is an unmistakable trend among the European states, due to the rationalizations brought on by modest defense budgets, toward differing degrees of defense national specialization and bilateral innovations based on regional interests or compatible capabilities --- the U.K./Netherlands Amphibious Force and the German/Netherlands Corp HQ representing two examples.

Moreover, of the major European allies most attractive to the United States as coalition partners --- France, Germany, and the United Kingdom --- Germany is currently a poor candidate for anything beyond the most modest participation in RMA capabilities. For their part, France and the UK were strong promoters of the HHG. The Helsinki Summit took place a year after the meeting between Prime Minister Blair and President Chirac at Saint-Malo, at which the two leaders gave front-page priority to the development of collective European capabilities. The Saint-Malo summit represents a landmark event in that, after nearly fifty years of opposition to the idea, the United Kingdom consented in principle that the EU should have a role in defense and security. As President Chirac put it, such a role would not be effective without "the two countries which are amongst those with a strong tradition, both diplomatically and militarily."[25] Beyond their status as Western Europe's only nuclear powers, the common tradition to which Chirac refers has involved the maintenance of comparatively robust conventional forces with an expeditionary culture. In a contest between the goals of European integration and the imperative of enhanced European military capacity, it is hard to believe that an Anglo-French entente genuinely serious about the goals of Saint-Malo will be willing to wait for the EU to accomplish in a multilateral format what be could more quickly accomplished bilaterally. Two years after the Saint-Malo meeting a British parliamentary progress report on ESPD observed both that European defense budgets remained too modest for the EU to become less dependent on NATO and that France and the U.K. "have provided the driving force behind the reinvigorated search for a more capable European defence pillar."[26]

For the time being, Germany will be a spectator more than a participant in any effort to reconfigure European defense capabilities to the requirements of the expeditionary era.

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[25] Charles G. Cogan, *The Third Option: The Emancipation of European Defense, 1989-2000*, (Westport: Praeger, 2001). P.147; Foreign & Commonwealth Office, British-French Summit: Press Conference 04/12/98.

[26] House of Commons, Research Paper 00/84, 31 October 2000, *Common European Security and Defense Policy: A Progress Report*, pp.35-36.

For Germany more than any of the major West European state the transformation of capabilities --- to fulfill 'Petersberg Tasks' on the one hand and to remain conversant with the RMA on the other --- would be sweeping. In so far as the *Bundeswehr* was a political and military creature of the Cold War, constituted as a peoples' army and equipped for the territorial defense of Western Europe against Soviet invasion, it is fundamentally ill-suited to the challenge of mobile crisis management.[27] One particularly sound observation about post-Cold War Germany is that its armed forces have already been through a revolution of sorts, though one qualitatively different from the RMA as it is commonly discussed. In addition to the heavy costs of national reunification a good deal of the burden of reintegrating Eastern Europe into the liberal-democratic world has also been shouldered by Germany. The incorporation of the East German *Nationale Volksarmee*; the contraction of its manpower strength from 495, 000 to 340,000; and the initial changes undertaken to move the armed forces to a crisis-reaction footing --- collectively, these changes have already imposed on the *Bundeswehr* the most radical change since its creation by the Adenauer government of the 1950s.[28] But the revolution continues. The verdict of *Bundeswehr Generalinspekteur* Harald Kujat as of March 2001 was that Germany's forces need both revenue and revitalization "from the foundations up," to punch their weight among NATO allies.[29]

The most comprehensive recent review of the *Bundeswehr*'s current condition and future needs is that of the commission headed by former *Bundespräsident* Richard von Weizsäcker. Released in the spring of 2000, the commission's recommendations were radical. They were based not only on the assumption that Germany's security circumstance has changed fundamentally but also that the change is likely to be durable, especially as it would take a recidivist Russian Federation a decade to again pose a credible danger to Germany's security.[30] The document maintained furthermore that the size, and to a certain extent structure, of British and French conventional forces ought to be the benchmark goal of *Bundeswehr* reform, while acknowledging that Germany is presently in no position to approximate the capabilities of either country.

Nonetheless, it advised that reform should concentrate on building rapid reaction capability to prosecute coalition warfare in two crises simultaneously.[31] While the document also featured the customary platitudes concerningGermany's Atlantic and European responsibilities --- insisting that regional crisis-management and Article V missions receive equal attention --- the thrust of its substantive recommendation stressed the former: smaller and much more mobile forces featuring a much lower percentage of conscripts. While overall strength would be cut from 338,000 to 240,000 troops, the

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[27] See David Clay Large, *Germans to the Front: West German Rearmament in the Adenauer Era*, (Chapel Hill: University of North Carolina Press, 1996) and Stephen Szabo Ed., *The Bundeswehr and Western Security*, (London: Macmillan, 1990).

[28] Institute for National Strategic Studies, McNair Paper No.60: The Revolution in Military Affairs, Allied Perspectives, Germany and the RMA.

[29] *Handelsblatt*, March 6, 2001; also Harald Kujat, "Die Bundeswehr auf ihrem Weg der Erneuerung von Grund auf," *Europäische Sicherheit*, January, 2001, pp.30-40.

[30] Bundesministerium der Verteidigung, *Gemeinsame Sicherheit und Zukuinft der Bundeswehr: Bericht der Kommission an die Bunderegierung*, May 23, 2000. (hereafter *Gemeinsame Sicherheit*), p.23

[31] Ibid,. pp.52-53.

preference for a radically improved crisis-management capacity was most visible in the recommendation that operational strength jump from 60, 000 to 140, 000 troops.[32] The shopping list of procurement priorities was long. Integral to the logic of the report is that --- barring an unlikely steep increase in defense expenditure --- the proportion of new investment in the total defense budget should be increased through savings in personnel and maintenance costs.[33]

Ii is fair to say that German Defense Minister, Rudolf Scharping, and the *Bundeswehr* Inspector General found the report too radical. In defense review studies of their own they rejected the Weizsäcker recommendations on total force strength and on base closures, arguing that the *Bundeswehr* is the biggest employer in many rural districts and that enabling conscripts to do their service close to home will preserve the military's relationship with civil society. Both reports favor the retention of a balance of collective defense and peace support capacities and shy away from the changes that would transform the *Bundeswehr* into a power projection force.[34] Moreover, although the Weizsäcker commission suggested a reconstitution of the draft into a system of selective service rather than outright abolition, Scharping has opposed the change as inconsistent with the constitutional legitimacy of the *Bundeswehr* and has had the support of the CDU-CSU opposition on this point. Because the retention of conscription limits the savings to be realized by force reductions --- even though the Defense Ministry has acquiesced in austerities on the defense budget imposed by the Finance Ministry --- Scharping will likely be unable to meet the reform goals of his own report, much less those proposed by the Weizsäcker study.[35]

The prediction of the most extensive scholarly study of German security policy in English maintains that it "will continue to be marked by a degree of multilateralism, anti-militarism, and reticence that will make it exceptional for a country of Germany's size and resources."[36] To these politico-cultural limitations to radical change clearly evident in Sharping's thinking, however, must be added the significance of the structural changes a modern *Bundeswehr* will require, according to Weizsäcker commission, and a national fiscal environment which prohibits them. In light of these facts there is really no chance that Germany will achieve the targets prescribed by NATO's DCI or the EU's Helsinki Headline goals. It should be noted, lastly, that the defense debate in Germany is *not* influenced fundamentally by the RMA and a national strategic vision of Germany's role within it. Rather, the issue of a restructured *Bundeswehr* is a continuation of post-Cold War downsizing running into a good deal of political resistance --- and, in the opinion of

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[32] Ibid, pp.53-55.
[33] Ibid., pp.137-140.
[34] *Eckwerte für die konzeptionelle und planerische Weiterentwicklung der Streitkräfte*, May 23, 2000 and *The Bundeswehr – advancing Steadily into the 21st Century: Cornerstones of a Fundamental Review*, June 2000. See the comparative analysis of all three defense review documents by Franz-Josef Meiers, "The Reform of the Bundeswehr: Adaptation of Fundamental Renewal?" *European Security*, Vol.10, No.2, 2001, p.8
[35] Meier, pp.16-19; Hans-Dieter Lemke, "Bundeswehrreform: Schwachpunkt Krisenfähigkeit," *SWP-aktuell*, No.66, November 2000.
[36] Duffield,, pp.241-242. Also Robert H. Dorff, "Germany and the Future of European Security," *World Affairs*, vol.161, no.2, 1998, pp.59-69.

a former director of Germany's defense planning staff, running well behind strategic reality.[37]

The more grotesque inconsistencies of Germany's post-Cold War adjustments are now mostly past. There is official recognition in principle that Germany and Europe have a responsibility to take on an equitable share of international security tasks. Still, any attempt to professionalize Germany's armed forces --- as in France, Belgium, or the Netherlands --- would be very sensitive politically. The Schroeder coalition may be sincere in principle about placing the Federal Republic on par militarily with Britain and France, but there are a good many hard choices to make, and the best evidence of the recent past is that Berlin is evading many of them. Thus, American skepticism that the European NATO states are genuinely prepared to assume a greater military burden usually cites the case of Germany, the EU's largest economy committing roughly 1.3 percent of its GDP to defense expenditure.[38] German defense and security analysts agree. "The situation would be hilarious if it weren't so tragic," argued Holger Mey of the Institute for Strategic Analysis, "we come out of the Washington and Cologne NATO and [European Union] meetings with strong statements of how Europe has learned its lesson from Kosovo, but the defense budget shows that we haven't learned a thing."[39]

This is a harsh verdict. It is one thing for the German government, any government, to acknowledge the country's comparatively modest contribution to collective European defense readiness and quite another to move radically to change the situation --- against serious budget constraints as well as the pacifist strain in German public opinion. It is a fact, moreover, that Germany has over the course of the 1990s incrementally abandoned its strictures against the use of the *Bundeswehr* for contingencies other than self-defense. Yet each time the symbolic value of a German contribution, rather the military robustness of the operation, was the primary motive for Germany's action. This came out in the Bundestag debate over Germany's offer of 3,900 troops for multinational military operations in the effort against terrorism after September 11. On that occasion Foreign Minister Fischer defended the government's action above all as in investment in multilateralism --- as an end in itself --- and warned the chamber that United States would progressively turn to unilateral action if Washington could not count on its friends to share a burden, however modest. The national press generally agreed with him.[40] The symbol of support, in other words, was more important than its substance. The same has to be said of the EU in its present incarnation.

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[37] *McNair Paper No.60*; Hans Rühle, "Das Ende der Wehrpflicht in Deutschland," *Neue Zürcher Zeitung*, March 5, 2002, p.1. See also Reiner K. Huber, "Umfangsreduzierungen der Bundeswehr zum Abbbau des Investitutionsdefizits," *Europäische Sicherheit*, October, 1998, pp.43-47.

[38] See, for example, the testimony of Jeffrey Gedmin, Resident Scholar of the American Enterprise Institute, before the European Subcommittee of the U.S. Senate Foreign Relations Committee, *FDCH Political Transcripts*, March 3, 2000, available at http://www.jsonline.com/news/nat/ap/oct99.

[39] Douglas Barrie and Jack Hoschouer, "Bundeswehr's Unclear Role Underlies Budget Conflicts," *Defense News*, August 9, 1999, p.1.

[40] Deutscher Bundestag, *Stenographische Berichte*, 198 Sitzung, Berlin den 8 November, 2001; *Frankfurter Allgemeine*, November 8, 2001, p.1. For a dissenting voice see Han Werner Kilz, "Staatskunst in Kriegszeiten," *Süddeutsche Zeitung* November 10/11, 2001, p.4.

V The Potential of Anglo-French Entente

During the 1990s both France and the United Kingdom produced produced defense review documents of strategic import. While the 1994 *Livre Blanc sur la Defense*, the most fundamental review France's defense posture since 1972, has been described as a national "strategic revolution," the UK's *Strategic Defence Review* of 1998 had the more specific and modest goal of giving the country an expeditionary capability that would not be dependent on host-nation support. Reforms pursued in France by the Chirac presidency in the mid-1990s were revolutionary above all because they placed a new stress on conventional force projection, as opposed to national and nuclear priorities. Critics of military reform in France in the 1990s maintained that its conception was too broad and that it avoided critical choices; nevertheless, defense choices made by France in the second half of the decade "did signal a transition toward expeditionary warfare."[41]

France's defense culture is in many respects a mirror image of Germany's. Unapologetic for the commitment of considerable fiscal resources to robust military capability and determined to address its military liabilities in the first half of the twentieth century, France maintains strong conventional and nuclear forces and has placed a Gaullist premium on autonomy and freedom of independent action. In the 1990s the presidencies of Francois Mitterrand and Jacques Chirac embarked on an intense effort to redefine France's relationship with NATO, with two principal goals in mind:

- In a reversal of President De Gaulle's withdrawal from NATO's integrated military structure in the 1960s, to engage closely in Alliance affairs and exert influence on its strategic reorientation in a post-Cold War environment.

- To upgrade collective European defense and security capabilities --- and to promote the development of European Defense and Security Policy (ESDP) --- thereby reducing European dependence on the military capabilities of the United States.

Because France is, in the view of U.S. military analysts, "arguably a global power with 46,000 military personnel outside its borders or in its territories" and has been engaged diplomatically and militarily in NATO's Balkan crisis-management commitments, it is rightly seen as a "pivotal security partner."[42] Even as France drew closer to NATO between 1991 and 1995, its government was the driving force behind a failed effort to bring the alliance's Southern Commend (AFSOUTH) under European control and to make Europe less dependent on NATO generally. The plan was that Europe should turn to NATO only for tasks the EU could not handle without American help. While the

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[41] Sten Rynning, *Changing Militray Doctrine: Presidents and Military Power in Fifth Republic France, 1958-2000*, (Westport Praeger, 2002), p.140; R.E. Utley, *The French Defence Debate: Consensus and Continuity in the Mitterrand Era*, (London: MacMillian, 2000), pp.156-158, 207-208; Charles G. Cogan, *The Third Option: The Emancipation of European Defense, 1989-2000*, (Westport: Praeger, 2001), pp. 104-107.

[42] Jeffrey B. Jones, " French Forces for the 21st Century," *Joint Force Quarterly*, Summer 2000, pp.31-38. On the Gaullist legacy and its revision see Philip H. Gordon, *A Certain Idea of France: French Security Policy and the Gaullist Legacy*, (Princeton: Princeton University Press, 1993).

Eurocorps was to be assigned to NATO for Article V duties, its primary task was to be a European army that could act without the United States. When the crises in Yugoslavia forced NATO to make practical adaptations at a much faster rate than the European hypothesis, the AFSOUTH gambit was dropped. But the hankering for a measure of European autonomy remained.[43]

The French government is acutely, even painfully, aware of the capabilities gap and of the implications of the RMA for any ESDP worthy of the name. France has a sophisticated defense industry with a commitment to research and development of advanced technologies strong enough to make it a major force in shaping a "European" RMA. The defense White Paper of 1994 is a dated document in terms of the security challenges that have since engaged the attention of France and its European allies. But even in the light post-Kosovo assessments of the country's strengths and weaknesses, French ambitions to bridge the capabilities gap between itself and the United States are too broad and too state-centered to form a realistic basis for significant European self-reliance.[44]

In terms of on-the-ground change, on the other hand, many recent reforms in the French military are encouraging. The reforms of the mid-1990s were to a significant extent provoked by the need for down-sizing in order for France to meet its financial commitment to Maastricht monetary unity. Yet they were also influenced by an inadequate military performance on the Gulf War and in Bosnia, where French technology, weapons, interoperability limitations, and the constraints of a conscript army caused difficulties. The government is still officially committed to a unilateral capacity to secure national interests, but the renovation of France's forces are increasingly focused on a smaller, professionalized army; the need to project and protect expeditionary forces; and the need to provide corresponding joint theater command resources to work with allied forces. In confronting operability problems, the French army stresses three areas of special attention: equipment, information systems, and procedures.[45] Projects such as the Helios satellite intelligence system are considered European investments geared to greater independence from the United States; on the other hand, France's new nuclear-powered aircraft carrier, *Charles de Gaulle*, is designed to be compatible with U.S. Navy F/A 18s and has the same catapult and arresting gear as American *Nimitz*-class carriers. Consistent with the C4I imperative of continued interoperability, moreover, the *de Gaulle*, the E-2C Hawkeye, E-3F AWACS, and the Rafale are to use the Link-16 data link.[46]

It is instructive that Presidents Chirac's ambitions for a reformed and restructured French military was informed by the superior performance of British forces during in *Operation Desert Storm*. If France is presently moving its conventional forces in the direction of

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[43] Kori Schake, "NATO after the Cold War, 1991-1995: Institutional Competition and the Collapse of the French Alternative," *Contemporary European History*, Vol.7, No.3, pp.381-382.
[44] *McNair Paper no.60*.
[45] Jones, pp.32-35; Ronald Tiersky, "French Military Reform and NATO Restructuring," *Joint Force Quarterly*, Spring 1997, pp.95-102.
[46] Ibid., pp.34-37.

expeditionary warfare, conducted by highly-mobile rapid reaction forces in joint operations with NATO allies, the armed services of the United Kingdom have provided much of the model for change. That being the case, the *Strategic Defence Review* completed by the Blair government in 1998 is potentially the most important national document of the past decade dealing with European security. Its chapter on Defence Missions and Tasks highlights peacetime security, overseas territories, defense diplomacy, wider British interests, peace support and humanitarian operations, regional conflicts outside NATO, regional threats to NATO, and strategic attack in NATO.[47] The SDR plans for a new generation of military equipment by 2015, including attack helicopters, long-range precision munitions, digitized command-and-control systems, a new generation of aircraft carriers, submarines and escorts, the Eurofighter, a successor to the Tornado bomber, and a replacement Short Takeoff and Vertical Landing aircraft (STOVL) to replace the Harrier and Sea Harrier --- that latter covered as of January 17, by the US-UK agreement on the Joint Strike Fighter.[48]

Turning to the impact of technology, the SDR does *not* accept the RMA as a given in the sense common to U.S. defense intellectuals but notes that "there is a growing body of opinion, particularly in the U.S. that that we are approaching a Revolution in Military Affairs," and concludes that "leaving aside the academic debate on whether or not a revolution is underway," it is clear that exploiting new technologies will "lead to significant improvements in military capability."[49] Neither does the SDR focus on closing the gap in defense capabilities but advises instead that, if Britain and the European allies can "tap into" technological revolution led by the United States, "the result will be more effective coalition operations."[50] The price of failing to do so intelligently, it cautions in a critical passage, could turn out to be high:

> There is a potential for multinational operations to become more difficult if compatible capabilities are not preserved. This could lead to political as well as military problems. Our priority must therefore be to ensure that we maintain the ability to make a high quality contribution to multinational operations and to operate closely with U.S. forces throughout the spectrum of potential operations. To do this we need to be selective about the technologies we develop nationally or on a European basis, and be prepared to use U.S. technologies in other areas in order to continue to make a leading contribution to multinational operations.[51]

Selectivity between developing or purchasing new capabilities is at the root of what the U.K. Ministry of Defence calls "smart acquisition." Smart acquisition is based on the notion that acquiring new capabilities rather than new weapons is the goal of defense investment. By "leaving the supplier greater freedom to determine how best to deliver the desired outcome," the logic goes, the customer gets more "value for money" --- defined

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[47] Ministry of Defence, *Strategic Defence Review, 1998*, Ch.3, available at http://www.mod.uk/issue/sdr.
[48] Ibid., Ch.11.
[49] Ibid.
[50] Ibid.
[51] Ibid.

as the solution that meets the capability requirement at the lowest through-life cost.[52] In other words, the SDR is concerned primarily with acquiring new, even "revolutionary," capabilities without a dramatic increase in defense expenditure and is only secondarily interested in whether new technologies are American or European in origin. The market competes for Her Majesty's defense budget.

Government perceptions in Great Britain provided the catalyst for both the *SDR* and historic Saint-Malo declaration. Upon coming to office in 1997 Prime Minster Blair had been dismayed by the lack of collective defense self-sufficiency among Europe's major powers. The reluctance of the Clinton administration to consider the use U.S. ground troops prior to a settlement of the unfolding crisis in Kosovo deepened this discomfort and set the stage for the Anglo-French initiative.[53] It remains to be seen whether the meeting marks the advent of a sustained reorientation in British and French security policy. At the very least the Saint-Malo summit appears to reflect Blair government's conviction that the United States will no longer underwrite European security as dutifully or as comprehensively as during the Cold War. Putting muscle on the bones of an ESDP --- or a bilateral program dressed up as an ESDP --- is a hedge against American impatience.[54]

While it is easy for British governments to exaggerate the importance of the 'special relationship' with Washington, it is true that no other state in NATO is in a position to bridge the gap between American and European interpretations of the security requirements of the Euro-Atlantic area. The Blair government seems to appreciate that post-Cold War revisions to French foreign policy are significant and are not driven by a reflexive anti-Americanism. Equally, the experience of Kosovo can only have underscored for Blair the logic of one aspect of Gaullism that has always been clear-headed, namely that the *extent* of Europe's security dependency on the United States is imprudent.

It is too early to predict how far the new Anglo-French understanding will go, but it is hard to disagree or even to qualify with scholarly judgment on its importance hitherto. Britain and France have come to the conclusion that "cooperation with each country's former *bête noire* (NATO for France and European defense for Britain) [is], henceforth, in their own national interests."[55] Apart from the long-term American response to it, moreover, intensified Anglo-French cooperation constitutes *the* critical factor to any measure of European self-reliance, for without it there will never be a Common Foreign and Security Policy or a European Security and Defense Policy worthy of the name.

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[52] Ministry of Defence Policy Papers, No.4, *Defence Acquisition*, p.14.
[53] Cogan, 98-99.
[54] Jolyon Howorth, "Britain, France and the European Defence Initiative," *Survival*, Vol.42, No.2, 2000, pp.33-55.
[55] Ibid., p.34.

VI Kosovo, A Test of Sorts

Operation Allied Force, the campaign waged by NATO in the spring of 1999 was a success, and, in the estimation of some of the most qualified observers, a extraordinary success. To underscore this point, one study quotes Andrew Krepinevich, a vocal critic of air power RMA enthusiasts. "Almost alone," Krepinevich notes, "American air power broke the back of the Yugoslav military and forced Slobodan Milosevic to yield to NATO's demands."[56] Added to this is the fact that the prospects for success in Kosovo were from the start beset by drawbacks such as a determined enemy in Belgrade, a reluctant administration in Washington, a divided Congress, an indifferent public, and a potentially fractious alliance. Yet since *Operation Desert Storm* in 1991 air power had evolved in its relative combat leverage through improvement in precision attack and battlespace awareness. By 1999 it was apparently able to prevail against all these factors and coerce an enemy --- without the aid of any land combat forces. This may have been its most fortunate aspect, skeptics have pointed out, because NATO's new technologies did not permit its aircraft either to attack Serbian armored forces in poor weather or to distinguish military from civilian vehicles without the aid of a pilot's eye.[57] If one holds that the Clinton administration and most of the NATO allies chose an airpower-only campaign due a fear of casualties, then *Allied Force* was a success above all because the RMA was never subjected to a thorough test. [58]

Among the more celebrated criticisms of the campaign is that the war for Kosovo failed in its declared humanitarian goal of ending the ethnic cleansing of the Kosovars when the rate of expulsion actually accelerated as the bombing got underway. Yet while NATO's air power-only approach my well have been a factor behind the acceleration, Serb preparations for an intensified effort in ethnic cleansing commenced a week before the bombardment got underway. The Clinton administration was at least on solid ground in insisting that that more than a million refugees would have been stranded in Albania, Macedonia, and Montenegro with no hope of return, had NATO not acted when it did. For although the air strikes were unable to stop the Serb campaign before it was all but finished, NATOdid reverse its effects entirely after Milosevic had thrown in the towel.

Another popular assertion is that NATO's reluctance to permit aircraft to attack at less that 15,000ft was the product of a risk-free and even immoral policy. However, Benjamin Lambeth's study of *Allied Force* maintains that the 15-20,000ft range was precisely the optimal altitude from which to conduct attacks with laser-guided munitions. Although it provided no protection against radar-guided surface-to-air missiles, it at least put attacking aircraft beyond the reach of small arms, AAA, and infrared SAMs. Indeed, from an intermediate altitude NATO pilots had a longer timeline for target acquisition, and thus better odds of a hit, than would have been the case at lower levels. Still, a related factor in the conduct of the air campaign was the disappointing performance of operation

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[56] Quoted in Benjamin S. Lambeth, *NATO's Air War: A Strategic and Operational Assessment*, (Santa Monica: RAND, 2001.

[57] O'Hanlon, p.28.

[58] Grant Hammond, "Myths of the Air War Over Serbia," *Aerospace Power Journal*, Vol.14, No.4, 2000, pp.78-87.

for the suppression of enemy air defenses (SEAD). The astute deployment and economic use of Serb anti-aircraft missile defenses, combined with target-location difficulties caused by a rough terrain and poor weather conditions, resulted in the survival of a credible Serb SAM capability for the duration of the campaign. In the effort to lift the "fog of war" SEAD performance was less than revolutionary.[59]

Other flaws of the campaign cannot be said to have constituted a test of new technologies in which the RMA was found to be wanting. On the contrary, *Allied Force* was a dog's breakfast of competing political impulses and military imperatives the sum of which placed egregious limitations on the conduct of coherent operations. A principal criticism of *Allied Force* is that the manner in which it was launched "violated two of the most enduring maxims of military practice: the importance of achieving surprise and the importance of keeping the enemy unclear as to one's intentions." [60] Each weakness was in its own way either a by-product of coalition warfare or of political micromanagement of a military campaign --- or both together. By ruling out altogether a ground campaign, let alone an invasion, the Clinton administration revealed so much of NATO's hand to Belgrade that Serb forces in Kosovo could adapt themselves to the certainty of a one-dimensional threat. The politics of coalition warfare meanwhile further intensified the political scripting of the campaign. French President Jacques Chirac opposed any attack on Belgrade's electrical power grid that would leave the Serb capital in the dark for any length of time. Ultimately, CBU-104 (V)2/B cluster munitions were used to deposit carbon-graphite on the grid and thus shut it down for only a few hours. The point here is that neither weather nor terrain, neither Serb guile nor NATO interoperability problems made *Allied Force* initially a close-run thing. Rather, it was the strategy chosen by the Alliance's political leadership that "risked frittering away the hard-earned reputation for effectiveness that U.S. air power had finally earned for itself in *Desert Storm* after more than three years of unqualified misuse over North Vietnam a generation earlier."[61] To a significant extent the promise of RMA technologies encouraged NATO's political leaders to impose limitations on the campaign, but those very limitations meant that other aspects of the RMA --- and of NATO's concept --- of combined joint task forces were not tested at all.

Among the more publicized problems of the war for Kosovo was the interoperability of NATO air forces. Of all the European allies France's contribution of deployed aircraft and total sorties flown was the largest --- more than 100 aircraft in a total of 2414 sorties. France's possession of precision-guided munitions (PGMs) permitted its pilots to participate in the strike phase of operations involving restrictive rules of engagement, prevailing weather conditions, and challenging terrain. France also contributed a larger number of support aircraft than other European allies for combat air patrol (CAP), electronic warfare (EW), airborne Warning and Control (AWAC), intelligence-

[59] Lambeth, p.231.
[60] Ibid.
[61] Ibid., p.250.

surveillance-reconnaissance missions (ISR), and aerial refueling.[62] The United Kingdom provided the second largest allied force, the Royal Air Force accounting for 1008 strike missions. Because the RAF was supplied with PGMs it is was able to offer a strike capacity similar to that of France. The RAF also flew CAP, AWAC, and ISR missions. However, the combined Anglo-French punch was limited by the fact that it lacked all-weather munitions capable of dealing with the adverse conditions that lasted for the duration of the campaign.[63]

Italy was the third largest allied contributor overall. Its aircraft accounted for 1081 sorties, but Italy's contribution did not include any traditional support. One of the great merits of the Italian effort was that fact that, like the German *Luftwaffe*, Italy's Tornado electronic and combat reconnaissance aircraft (ECRs) were equipped with HARM anti-radiation missiles and advanced electronic countermeasures, permitting them to play a role in (SEAD) missions. German and Italian Tornados jointly accounted for 37 percent of all HARM shots taken during *Allied Force*. Proportional to its size, a remarkable contribution was made by the Royal Netherlands Airforce which chalked up 1252 sorties in strike and CAP roles. Additionally, Dutch aircraft were equipped with forward-looking infrared (FLIR) and were therefore able to undertake strike missions at night. Yet because these aircraft did not carry PGMs, their night capabilities were reduced as the rules of engagement became more restrictive.[64]

The collective effort of the major European NATO states represented a supplementary contribution to the prosecution of *Allied Force*. The United States supplied more than 700 of the total 1055 aircraft deployed and flew more than 29,000 sorties. This USAF provided fighters, bombers, ISR aircraft, SpecOps/Rescue aircraft, and intratheater airlifters. The EA-6 Prowler accounted for most of the SEAD missions, providing stand-off jamming for allied sorties. American aircraft also delivered far and away the largest number of PGMs and all-weather weapons, ranging from JDAM, JSOW, the Paveway II and III also used by the British and French airforces, Maverick AGM-130, to air- and sea-launched cruise missiles. This array of capabilities was ultimately crucial to the success of the air war, given that the restrictive rules of engagement and adverse weather conditions made precision bombing indispensable. The United States provided almost all of the aerial intelligence employed and selected virtually every target.

Commenting on the discrepancy between U.S. and European contributions to the air campaign, the Lambeth study noted that the capabilities gap was both quantitative and qualitative, characterized by *asymmetry* on the one hand and *interoperability* problems on the other. Some aspects of the gap were a result of the fact that European governments typically spend far less on military procurement and research and development than Washington; others merely reflected different defense investment priorities. In coalition warfare interoperability problems pose the more serious threat to the successful

[62] John E. Peters, Stuart Johnson, Nora Bensahel, Timothy Liston, Traci Williams, *European Contributions to Operation Allied Force: Implications for Transatlantic Cooperation*, (Santa Monica: RAND, 2001), pp.18-21.
[63] Ibid., pp.22-23.
[64] Ibid., pp.21-22; Lambeth, p.169.

prosecution of joint operations. There were particular problems with rapid and secure communications given that many European fighters lacked Have-Quick-type frequency-hopping UHF and KY-58-like radios for encrypted communications. American command and control aircraft were often required to transmit target and aircraft position data in the clear, running the risk of giving away tactical intelligence to Serb forces. Neither was the STU-3 secure phone system common to U.S. forces available to the allies. At worst, classified communications had to be passed by hard copy. The absence of a common identification friend or foe system (IFF); a variable ability to detect which Serb SAM installations were tracking coalition aircraft; and the small number of non-U.S aircraft capable of laser target identification all complicated the work of AWACs operators.[65]

Possibly a more telling fact of NATO dependence on U.S. capabilities, however, is that some 70 percent of the American aircraft deployed for *Allied Force* were in a support role**.** The U.S. supplied over 90 percent of aerial refueling and virtually all of the tactical jamming for SEAD missions. Its C-17s and C-130s also furnished the bulk of airlift requirements. The C-160 Transall used by the European allies was perfectly capable but was not available in sufficient numbers to support a mission as extensive as *Allied Force* became. It is tempting to speculate that the transatlantic gap in support capabilities visible in Kosovo could well turn out to be more critical than any difference in combat firepower, because their role in *Allied Force* "reflects the growing importance of these assets in the types of operations NATO could face in the future."[66] Indeed, they are assets central to the CJTF concept developed in the mid-1990s.

Both during and immediately after *Allied Force* much was made of the capabilities gap and the absence of European self-reliance in coping with a European crisis. Former chairman of the NATO military panel, Klaus Naumann, confessed in testimony before the Senate Armed Services Committee that "as a European, I am ashamed we have to ask for American help to deal with something as small as Kosovo."[67] The defense press reported that the Balkan operation had reinforced both the idea that all future wars will be coalition wars and that interoperability with U.S. forces will be the key to coalition success. Yet the more NATO relied on high-tech systems, it went on, the more the alliance would depend on the nations willing to buy them. In the face of these facts, retired RAF Air Vice Marshall R.A. Mason lamented that "we fear that we will end up as spear carriers to the U.S" and "burden-sharing will become no more than a hollow shell."[68] This perception of the Kosovo experience was reinforced from the other side of the Atlantic in statements from the U.S. Deputy Secretary of Defense concerning the "visible antiquity" of European systems and from Congress that the European "are slipping one or two generation behind the U.S.A."[69]

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[65] Lambeth, pp.166-170.
[66] Peters et.al., *European Contributions*, p.24. For detail on Kosovo airlift requirements see Lt.Col. Rowayne A. Schatz, USAF, "Theater Airlift Lessons from Kosovo," *Aerospace Power Chronicles*, July 10, 2000, available at http://www.airpower.maxwell,af.mil/airchronicles/cc/schatz.html
[67] Quoted in *Air Force Times*, Vol.60, No.15 Novermber 15, 1999, p.29.
[68] *Aviation Week & Space Technology*, August 9, 1999, p.32; *Aerospace Daily*, August 17, 1999, p.252.
[69] Deputy Secretary of Defense John Hamre and Senator John Kyl cited in *Defense Week*, July 19, 1999, pp.1, 14.

True, there were also bright spots in allied capabilities. One of the more critical problems for coalition war in Kosovo was that of airspace control among the national contingents making up NATO's air armada. Despite a number of near mid-air collisions the best evidence is that the coordination of NATO aircraft was enhanced immeasurably by the involvement of allied pilots in Red Flag and Green Flag training and simulation exercises at Nellis AFB in the United States.[70] The definition of interoperability cannot be measured by technological standards alone. Post-Kosovo reports by the two most militarily capable European allies, France and the U.K, were nonetheless concerned with European failings in the capability gap. Not surprisingly, the French report was more concerned with closing the gap as much in the pursuit of greater European autonomy from the U.S. as in the name of enhanced European military effectiveness itself. The British report acknowledged European reliance on the United States and indentified five areas of deficiency:

- precision all-weather strike
- strategic lift
- intelligence, surveillance, reconnaissance
- suppression of enemy air defense/electronic warfare
- air-to-air refueling

The British report was also less concerned with European autonomy than with responsible burden-sharing. Consistent with the 1998 SDR and its value-for-money spirit, it highlighted the tension between preferences and limitations. Where it cited "the alarming deficit in European capabilities for suppressing and destroying even relatively unsophisticated air defenses" it recommended that Europe should "accept that its scope for action independent of the U.S. is very limited" or undertake to improve its capabilities "sufficiently to act independently."[71] Under *Command, Control and Coordination* it dealt directly with European dependency on U.S. capabilities, stating that American dominance in NATO could be viewed either as vehicle for Washington to push the Alliance in directions for which there is less than full consensus or as self-imposed constraint on American military might by which European views carry more weight than they otherwise would. The report stated "we favour the latter view."[72] Where the French report turned to the non-RMA dimension of the need for greater European autonomy it called for the Eurocorps to be transformed into a projectable rapid reaction force, whose headquarters could command a multi-national force of the KFOR type. For all their differences over Europe's security relationship with the United States, in other words, the reports jointly catalogued a trans-Atlantic capabilities gap stretching from the most exotic war-making hardware to the most traditional peacekeeping skills. It is ironic that in the present strategic environment, revolutionary military technologies in missile defense could have a special relevance to the completion of non-RMA missions.

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[70] *Aviation Week & Space Technology*, April 26, 1999, p.30.
[71] House of Commons Select Committee on Defense, Fourteenth Report, *Kosovo: Lessons from the Crisis*, Annex A Summary, Paras 110-111; Cogan, *The Third Option*, pp.104-110.
[72] Ibid., Para 202.

VII Europe and Missile Defenses

That missile defense has the attention of the United States to a far greater extent than its European allies is a direct product of the Cold War and a half-century's strategic thinking about the peril of nuclear war between the superpowers. In the late 1960s and early 1970s Moscow and Washington investigated defense systems against missile attack but rejected the option for interrelated reasons of strategic philosophy and technical practicality. The United States adhered to the notion of mutually assured destruction (MAD), according to which peace between the superpowers was based on their mutual vulnerability to nuclear destruction, no matter which side chose to initiate a nuclear attack. In signing of the Anti-Ballistic Missile (ABM) in 1972, the superpowers foreswore the development of missile defense systems, thus stabilizing their strategic relationship by institutionalizing the doctrine of MAD.

The attractiveness of the doctrine, however, was in part dependent on the fact that the available technology of the time was too primitive to permit the development of an effective defense system against ballistic missile attack. Washington considered the effort required to deploy even a minimally effective system to be a waste of fiscal resources. Moscow had just developed an offensive nuclear arsenal giving it rough parity with the United States and feared that American technological prowess would put the Soviet Union at a new disadvantage in any race to develop defensive systems. When the Reagan administration unveiled the Strategic Defense Initiative (SDI) in 1983, the legitimacy of MAD and of the ABM Treaty came under attack --- again, for reasons both philosophical and practical. The administration viewed arms-control agreements skeptically, but additionally maintained that Moscow had violated the ABM Treaty and thus the acceptance of mutual vulnerability upon which it was based. But equally, the emergence of laser and particle beam technologies, high-speed battle-management computers, and high-grade optics made the development of strategic and tactical missile defenses more plausible than had been the case a decade earlier. The political momentum behind SDI faded as the Reagan administration, and the Cold War, drew to a close. However, continuing progress with new technologies kept alive the issue of their defense applications. Because Washington's initial commitment to the ABM had been informed by the technological limitations of the time, a strategic philosophy favoring missile defense capabilities and the revolution in new technologies fed off each other. Missile defense would not go away,[73] because technological progress would not let it.

With the end of the Cold War, the arguments against missile defense tilted toward intellectual and moral bankruptcy. Every administration since Reagan has grappled reluctantly with the missile defense issue, until that of George W. Bush gave BMD a place of privilege on the U.S. security agenda. Critics warned that Moscow sees missile defenses as an attempt by the United States to translate combined offensive and defensive capabilities into a decisive strategic advantage and predicted ominously that "Russian suspicions are technically plausible enough to be politically compelling."[74] After a year's work in attempting, unsuccessfully, to dissuade the Bush administration from developing

[73] Michael J. Mazarr, *Missile Defences and Asia-Pacific Security*, (New York: St. Martin's, 1989), pp.3-6.
[74] John D. Steinbruner, *Principles of Global Security*, (Washington DC: Brookings, 2000), p.75.

missile defenses, however, President Putin has felt politically compelled not to expand Russia's offensive arsenal but rather to make sweeping cuts to it according to the terms of the Treaty of Moscow signed with President Bush in May 2002.[75]

While from an arms-limitation standpoint this is encouraging, it is also a somewhat marginal development in that missile defense is no longer about Russia. Whereas a 1989 study of the Asia-Pacific region dealt primarily with the Soviet presence there and only peripherally with Chinese or North Korean ballistic missile capabilities, the experience of Iraqi missile strikes against non-combatant Israel during the 1991 Persian Gulf War discredited the traditional arguments against missile defense. The war underscored the acquisition of missile technology by Third World states willing to use ballistic weapons in a regional conflict and uninfluenced by the deterrent value of the American nuclear forces that had kept the Soviet Union at bay for forty years. The Gulf War demonstrated, both that Iraq was deterred neither from invading Kuwait by any rational calculation of American response nor from attacking Israel with ballistic missiles despite Israel's nuclear capacity and its reputation for swift retaliation.[76] Henry Kissinger, a principal architect of the ABM Treaty, cautioned that in light of the Gulf War experience, "limitations on strategic defense will have to be reconsidered," because "no responsible leader can henceforth deliberately leave his civilian population vulnerable."[77] In the mid-1990s the International Atomic Energy Agency (IAEA) charged that North Korea was reprocessing uranium to manufacture nuclear weapons. Pyongyang's response was hardly encouraging. It expelled inspectors, threatened war, and denounced the IAEA. The issue of "rogue states" armed with nuclear, biological or chemical weapons of mass destruction (WMD) assumed an ever more prominent place among U.S security concerns. Then in 1998 India and Pakistan tested nuclear weapons, further bolstering the position of missile defense advocates critical of the value of arms control agreements to international peace.[78]

Missile defense acquired a constituency outside the United States. The U.K. Missile Proliferation Study Group chaired by Lord Chalfont, for example, criticized the 1998 SDR for failing to take a more holistic view of the U.K.'s sundry security interests and commitments and linked missile defense to the efficacy of flexible and mobile forces in dealing with post-Cold War contingencies. It went on to scold that:

> The government has failed to find a response to the rapidly maturing missile threat to British centers of population; this in turn raises serious questions about

[75] Dana Milbank, "Bush, Putin Sign Nuclear Arms Treaty," *Washington Post*, May 24, 2002, A1.
[76] For Iraqi use of missiles during the Gulf War see Lawrence Freedman and Efraim Karsh, *The Gulf Conflict 1990-1991*, Faber and Faber, London, 1993, pp. 307 and 436.
[77] Keith Payne, *Missile Defense in the 21st Century: Protection Against Limited Threats, Includung Lessons from the Gulf War*, (Boulder: Westview, 1992), pp.139-157; Lawrence Freedman and Efraim Karsh, *The Gulf Conflict 1990-1991*, (London: Faber & Faber, 1993), pp. 307 and 436.
[78] Dov S. Zackheim, "Old Rivalaries, New Arsenals: Should the United States Worry?" *IEEE Spectrum*, Vol.36, March 1999, pp.30-31.

whether British intervention forces can ever be used against an enemy possessing missiles armed with WMD.[79]

The report concluded that Britain's interests would be served by "U.K. support for and participation in an U.S.-led system of ballistic missile defence," the scope and capabilities of which "could be extended incrementally;" and warned that "continued reluctance to take the subject seriously" could only increase the vulnerability of British cities and armed forces.[80]

The Al Qaeda terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001 were unprecedented in method and impact and almost wholly unanticipated by the advocates of missile defense. Nevertheless, the proliferation of ballistic missiles in the Third World is a serious concern for the U.S. policy-making elite. Moreover, the fact that the attacks were plotted by a non-state organization, although with financial and technical aid from a number of states, further damaged any remaining faith that committed enemies of the United States or its allies would in the future be deterred from attack by the threat of massive retaliation. International concern over missile proliferation in the past decade has been heightened by the news that China and Russia have sold ballistic missile technology to a number of states in Asia and the Middle East, some of which, such as North Korea, have begun to manufacture missiles for export. Anxieties increased when it became known that the states which bought such delivery systems were working on WMD. Iran and Libya now have missiles which could carry WMD, if not to North America at least to American allies in the Middle East --- and Europe.

Prior to the September 11 terrorist attacks in New York and Washington, a European missile defense was unimaginable. Indeed, American missile defense plans were greeted with skepticism or hostility in most European capitals. On the occasion of President Bush's first trip to Europe President Chirac and Chancellor Schroeder trotted out intellectually bankrupt public statements about the ABM as a "pillar" of the "architecture" of the international strategic "balance." European governments may now be more sensitive to threats emanating from the "arc of instability" extending from the greater Middle East and Persian Gulf into North Africa. Parts of Northern Europe, after all, are within range of Iranian or Iraqi missiles with a reach of more than 3,500km. But this is unlikely in itself to illicit enthusiasm for more than a minimal role in developing missile defenses for European territory. European governments tend to look to the intention rather than the capabilities of a hostile regime. History and geography have brought Europeans to accept a degree of inescapable vulnerability in which the peril posed by rogue states constitutes an ever-present worry along with the familiar threat of terrorism and the spillover effects of regional conflicts. One observer has warned that a European consensus will be problematic unless Washington is ready to moderate its ambitions for allied contributions and accept a degree of "free riding."[81]

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[79] *Coming Into Range: Britain's Growing Vulnerability to Missiles and Weapons of Mass Destruction*, A Report by the Missile Proliferation Study Group (undated), p.64.

[80] Ibid., p.67.

[81] Richard D. Sokolsky, "European Missile Defense --- Issues and Options," *Joint Force Quarterly*, Autumn/Winter 2001-02, pp.46-51.

There are three available options for the defense of West European states against missile attack: theater missile defenses, ground- or sea-based midcourse systems, and a boost-phase intercept system. A theater system (TMD) for defense against ballistic missiles with less than intercontinental range would be less contentious politically and diplomatically than a "global" system to shield the continental United States and Europe. A comparatively modest system would involve lower costs, and therefore less pressure on the fiscal resources of participating states, but would also feature the virtue of avoiding the argument that the deployment of a more comprehensive system would provoke with China and Russia over their respective positions in the global strategic picture. A theater-level defense could protect ports, cities against short-range missile attack and, under certain conditions, against strategic missiles. Additionally, it could protect NATO troops deployed in or near conflict zones, the Balkan region coming to mind as a long-term NATO and EU security mission that could be imperiled or terminated by vulnerability to missile attack. Without some form of missile shield the ability of NATO or a coalition of European states to project conventional force on the periphery of Europe or beyond, in completion of some of even the more modest of the Petersberg Tasks for which CJTFs were conceived, could be at risk.

In June 2001 NATO selected two industrial teams to examine the future of trans-Atlantic cooperation. American collaboration with Germany and Italy on a medium extended air defense system (MEADS) has survived multiple setbacks while Germany, Italy, and the Netherlands are considering a joint effort for developing ship-based tactical missile defense systems, and Italy is pursuing lower-tier defenses with Turkey.[82] European missile and radar manufacturers have said that they are interested above all in developing TMD capabilities with technology that incorporates proven missiles and radar systems. Even President Chirac, one the more vocal critics of U.S. missile defense ambitions, has pointed to the importance of TMD to the protection of forces deployed outside France against short and middle-range weapons.[83] Theater missile defense, it seems, combines the attraction of meeting in a limited fashion those threats that European governments deem plausible in the near future with lower costs, financially and politically, than a more comprehensive system. A theater system, lastly, can be the thin end the development wedge for governments seeking a higher level of security.

A system involving ground-based interceptors and radars located in Europe for the interception of missiles aimed at the United States, by contrast, could provide protection for American and European targets alike. To provide the best defense against threats originating in the Middle East, an integrated transatlantic architecture would be required with at least one site located in Central Europe. Much of the political contention inherent in land-based facilities would, by contrast, be circumvented by deploying the U.S. Navy's Aegis technology, with the participation of select European allies, for theater defense in a

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[82] Ibid, pp.48-49.; James M. Lindsay and Michael E. O'Hanlon, *Defending America: The Case for Limited National Missile Defense*, (Washington DC: Brookings, 2001), pp.29-49.

[83] Paul Beaver, "Europeans Ready to Support U.S. Missile Defense Program," *Jane's at DSEI*, September 10, 2001; "Chirac für taktishe Raketenabwehr," *Neue Zürcher Zeitung*, June 8, 2001. http://www.nzz/ch/2001/06/09;

multi-layered format. Aegis platforms deployed in the eastern Mediterranean, the Baltic Sea, English Channel, or North Atlantic "would fill the gap between forward-deployed systems and U.S. –based midcourse systems for homeland security."[84] Because such system is in many respects a logical extension of current NATO programs and offers European participation at comparatively low cost, it would probably be easier for European governments to justify to wary electorates.

Boost-phase missile defense offers the capacity to shield the United States and its European allies against missile threats of any range. However, it is also in many respects the most ambitious form of missile defense and entails political, technical, and operational problems. Additionally, it involves some of the most futuristic and unproven technology, such as airborne laser (ABL); to function on a day-to-day peacetime basis, ABL and escort aircraft would have to be on continuous patrol. Enormous expense, in other words, is built into both its technology and operational features. With the ABM Treaty now gone as a factor in the Bush administration's plans, ABL is among various technology projects that will get careful attention. But the role of a boost-phase system in a multi-layered system --- in particular its interoperability with other layers --- is at this point less than obvious.[85] It represents, therefore, a dimension of missile defense that will get the least serious attention from the European NATO allies. On the whole, however, the September 11 attacks have reinforced the Bush administration's determination to deploy some form of missile shield. Most recently, Washington announced its intention to accelerate progress on the currently most practical --- and for Europe least controversial system --- a sea-based system built around the U.S. Navy's Aegis destroyer fleet.[86]

As long as contemplation of the most plausible threat/response scenario (a limited local attack on forward-deployed U.S.or NATO forces or an American ally, met by a theater missile defense system) remains entangled with anticipation of the least likely scenario – (an attack on the American homeland itself and a comprehensive missile defense system to meet it) the shrillness that currently accompanies the missile issue is unlikely to subside.[87] Over the long-term both the changing international environment and technological progress are on the side of missile defense. A discussion based on surreal interpretations of future dangers and distorted by ossified strategic philosophies will serve only to delay the advent of the inevitable --- or pervert its implementation. Because most missile defense technologies are as yet capable of dealing only with a limited attack in a regional setting, it would serve the sobriety of the domestic and NATO discussion to focus on theater systems. Alliance peace keepers deployed in the former Yugoslavia are, after all, within range of some of the West's more dedicated enemies.[88]

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[84] Sokolsky, p.49.
[85] Lindsay and O'Hanlon, pp.110-111; Robert Wall, "Missile Defense's New Look to Emerge This Summer," *Aviation and Space Weekly*, Vol.156, No.12, March 25, 2002, pp.28-29.
[86] *Wall Street Journal*, June 18, 2002, p.1.
[87] See for example John Steinbruner's criticism of missile defense in *Principles of Global Security*, (Washington DC: Brookings, 2000) , pp.73-75.
[88] Squadron Leader Nicholas J.Newman RAF, "Assymetrical Threats to British Military Intervention Operations," *RUSI Whitehall Paper*, No.49, p.96.

VIII Atlantic Defense Procurement

Whatever the speed of progress in the Bush administration's missile defense program, there will be pressures for increased transatlantic cooperation in research and development, as well as for rationalized procurement, in missile defense as in other realms. The post-Cold War contraction of national defense budgets and technological change in many defense-related sectors --- some of which are genuinely revolutionary --- have through the 1990s jointly pushed defense suppliers and governments relentlessly in the direction of ever greater efficiencies, mergers, and partnerships. Since 1996, for example, Raytheon Company and Kongsberg Gruppen ASA of Norway have partnered to develop the HAWK-AMRAAM, a customizable air defense system for coverage against low- to medium altitude threats.

This kind of collaboration may become more typical in the aerospace industry generally, because of the sweeping change the sector is currently undergoing. Because the sector's vitality has historically been dependent on high levels of defense spending, few of the major aerospace contractors have escaped the need to cut jobs and close plants as the peace dividend was carved out of Western fiscal resources available to the military.[89] An aggravating factor was the fact that, dating to the 1980s, the advent of higher value-added products and the rising intergenerational costs of weapons fueled concern for the efficiency of defense industrial production and demands for government procurement reform to secure more value-for-money from defense spending. Whereas the F-4 Phantom fighter aircraft dating to the 1960s cost the Pentagon less than $4million in 1990s dollars, the F-22 Raptor is projected to cost more than $80million per copy.[90]

Individual states are consequently finding it difficult to stay abreast of change in military technology. Among the major NATO states the problem is especially acute in Germany. In the spring of 1994 the management of Rheinmetall, a long-time defense contractor, noted that between 1990 and 1993 the number of jobs in the national defense sector had declined from 280, 000 to 140,000. Rheinmetall claimed further that the country was fast approaching a critical threshold where it would be difficult to equip the *Bundeswehr* with German arms or to sustain Germany's competence in arms development. Where Germany involved itself in multinational cooperation, the development of the Eurofighter for example, the Kohl government's budgetary rigor and uncertainty over Germany's purchase of 180 of the aircraft repeatedly imperiled the whole project. When in 1997 the purchase finally cleared cabinet, approval had as much to do with the 18,000 jobs created in the finance minister's home state of Bavaria for the montage of the fighter than with Germany's defense needs as such. This trend has not changed in the new century. Industry spokesmen speak of a sector "dramatically imperiled" between tight budgets and dramatic change in defense technologies, falling behind competitors in Britain,

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[89] Keith Hayward, *The World Aerospace Industry: Collaboration and Competition*, (London: Duckworth and RUSI, 1994), p.65.

[90] Ibid., p.67; Jeffrey Becker, "The Future of Atlantic Defense Procurement," *Defense Analysis*, Vol.16, No.1, pp.9-32.

France, and the United States to an extent that Germany's marginalization as a defense supplier possibly presages marginalization in ESDP and NATO.[91]

France, with a much more robust defense budget, has also been under pressure to find new efficiencies for defense procurement in matching its ambition for military prestige to the cost of advanced capabilities. The cost of developing the Rafal fighter was such a drain on the defense budget that it was described by one parliamentarian as a "bottomless pit for billions."[92] A national defense sector in which the links between procurement and national industrial and technology policies have always been strong has found it necessary to seek efficiencies in cross-national cooperation. France's industry finds itself in an environment of unprecedented intra-European and trans-Atlantic mergers, those involving British Aerospace and GEC, Marconi, DaimlerChrysler and Aerospatiale-Matra representing only the opening act to the creation of the European Aeronautic Defense an Space Company (EADS). With a workforce of 96,000 and revenues of €21B, EADS began life as Europe's largest aerospace company and a first-tier manufacturer of helicopters, military combat and transport aircraft, and other defense products. In principle EADS is ready to run with rather than against the forces of globalization by seeking partnerships across the Atlantic, and its understanding with Northrop Grumman on minor joint venture arrangements is encouraging. Still, the consolidation of the European defense sector has just begun and its direction is unclear. The business press in the United States remains skeptical that EADS is more than a form of corporate Euro-Gaullism, while Europeans point to U.S. export controls on defense products as the critical block to genuine defense collaboration.[93]

Again, the United Kingdom stands somewhat apart from other European countries in so far as its defense sector has changed more rapidly in an unmediated response to market rigors. This is in large part because the Thatcher government of the 1980s was intensely committed to the value-for-money principle in defense procurement and rejected on ideological grounds the very idea of a national industrial policy. The result is that British industry is more conversant with American industrial and commercial culture than its European counterpart. In terms of products, technology, and productivity, U.K. firms are well-positioned, both to profit from open world defense markets and to provide a bridge between Europe and the United States. Britain's approach to procurement, based on fixed-price contracting and letting industry compete to meet national mission needs, puts it at the forefront of the transformation of the European defense sector. Other nations taping into the U.S. Joint Strike Fighter program include Canada, as of February 2002, and Denmark, as of May 2002. Among other European states, the Netherlands, Norway, and Turkey are also interested.[94] Strengthened links between European and American industries could also be critical to the vitality of the latter. The rationalization of American firms has gone so far as to leave behind only one or two national suppliers of

[91] *Handelsblatt*, May 25, 1994, p.5. *Financial Times*, March 10, 1997, p.2; *Süddeutsche Zeitung*, October 10, 1997, p.1. *Wehrtechnik*, June 2000, pp.61-63.
[92] Quoted in Hayward, p.82.
[93] " A New Giant is Born," *Air & Space Europe*, Vol.2, No.1, January-February, 2000; "Can Europe Shake the Subsidy Habit?" *Business Week*, July 10, 2000.
[94] afisnews, DEFENSE-PRESS-SERVICE, May 28, 2002.

items such as tanks and missiles. Washington may as a result develop a serious interest in cooperating with other governments in developing a competitive trans-Atlantic market in order to offset the abuse of monopolistic power by domestic firms.[95]

The incentives for trans-Atlantic cooperation are therefore multiple. But in terms of defense capabilities they are more important to Europe than the United States. In light of the pressures on the continental defense sector and the direction shown by value-for-money procurement in the U.K., the most cost-effective method of upgrading European defense capabilities through participation in aspects of the RMA will likely involve intensified trans-Atlantic collaboration rather than a primarily European procurement system centered around the EADS.

IX Conclusions

It needs to be stressed that the rationalization of global defense industries in the 1990s and beyond might well have taken the course they did even in the presence of more robust defense budgets. Any interpretation of European security and the revolution in military affairs must acknowledge that, whatever the ultimate contributions of the RMA in changing the nature of war, participation in it is a hugely expensive undertaking. This is true both for the firms that tackle the research and development and for the governments shopping for cutting-edge capabilities.

At this writing there is little evidence of a sea-change in European public opinion such as would support a boost in defense expenditure to narrow, mush less close, the capabilities gap, in any but a few select areas. It is instructive that at the NATO ministerial of June 6-7, 2002 Secretary General Lord Robertson expressed the desire to move away from the unrealistic DCI goals of the 1999 Washington Summit, with its capabilities shopping-list of 59 items to a more focused agenda of 12 priorities. Just three years after the glove was thrown down, the question as to whether European publics were prepared to consider paying the price of autonomy has been answered.[96]

The arithmetic of European defense policy cannot add up to anything resembling a quantum of self-reliance without the popular sea-change. *Operation Allied Force* in Kosovo represented an incomplete measure of European strengths and weaknesses, or in fact of NATO's capabilities. There is nevertheless every indication that the projection of air power will be critical to the operations envisaged for the combined joint task force operations assumed to be a core capability of the Petersberg tasks. In this realm in particular it seems unrealistic to worry that an ESDP could endanger NATO unity. In 2002 the great problem remains not that Europeans will do too much together --- beyond

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[95] Keith Hayward, "The Defence Aeropspace Industry in an Age of Globalisation," *RUSI Journal*, June 2000, pp.55-59; Becker, p.27. For an alternative view see Malena Britz and Arita Eriksson, *British, German and French Defence Industrial Policy in the 1990s*, (Stockholm: Defence Research Establishment, 2000), pp.230-233.

[96] *Financial Times*, June 5, 2002, p.1. Jolyon Howorth, " Britain, France and the European Defence Initiative," *Survival*, Vol.42, No.2, 2000, p.51.

the elaboration of institutional architecture --- but rather that they will continue to do too little. A strong advocate of pooled resources in European air power, Air Marshall Sir Anthony Garden has argued that Europe would need some 400 Eurofighters complemented by some five aircraft carriers in order to punch its collective weight in air power independent of American support. Even then, much of the punch would be lost unless such a European air armada answered to a single headquarters and were subject to a common operational doctrine.[97]

The paired down ambitions recorded in the Statement on Capabilities issued by the June 2002 NATO Ministerial instead recommend something quite different. The document focuses on capabilities geared to "defend against chemical, biological, radiological, and nuclear attacks; ensure secure command communications and information superiority; improve interoperability of deployed forces and key aspects of combat effectiveness; and ensure the rapid deployment and sustainment (sic) of combat forces."[98] In a cheerleading mode, U.S. Defense Secretary Donald Rumsfeld maintained at a press conference in Germany that the real gap between the United States and its European allies was one of investment, not technology. He added that "specialization" and pooled resources rather than individual national attempts to maintain "360-degree militaries," represented the likely pattern of the future.[99] In an age of expeditionary warfare, conditioned by modest defense budgets and expensive advanced weaponry, this means that a selective European participation in RMA capabilities for the purpose both of living up to the Petersberg Tasks and the remaining an ally capable of effective coalition warfare with the United States can realistically involve:

- The completion of the 60,000-strong European rapid reaction force as set forth in the Helsinki Headline Goal.
- Participation in the development and deployment of theater missile defenses *at least* for the protection of NATO or exclusively European forces deployed on the European periphery against WMD attack .
- Investment in vastly improved air- and sea-lift capabilities.
- Improved air-to-air refueling capacity interoperable with U.S.
- Improved precision all-weather strike capabilities.
- Intelligence, surveillance, reconnaissance capabilities interoperable with U.S. forces.
- Suppression of enemy air defense/electronic warfare capabilities interoperable with U.S. forces.

The recipe is for greater European burden-sharing within NATO in the completion of missions to which NATO has been formally committed since the mid-1990s. It is not a

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[97] Michael Alexander and Timothy Garden, "The Arithmetic of Defence Policy, *International Affairs*, Vol.77, No.3, July 2001, pp.509-529. Wing Commander K.J. Baldwin, "Can Europe Project Airpower Without the Support of the United States?" *Royal Air Force Air Power Review*, Vol.4, No.1, 2001, pp.58-81.

[98] NATO, Statement on Capabilities, Issued at the Meeting of the North Atlantic Council in Defence Ministers Session, Press Release (2002)074, 6 June, 2002.

[99] afisnews, DEFENSE-PRESS-SERVICE, June 7, 2002.

blueprint for European defense and security self-reliance, much less autonomy from the United States. Neither is it meant to be plan for an ESDP orchestrated by the European Union. European specialization in rapid deployable and sustainable expeditionary forces should be built upon the interests, ambitions, and capabilities of flexible coalitions of the willing rather than the common denominator of European resolve. The greatest resolve in evidence to accomplish something substantive in Europe's name presently resides in London and Paris. There is sufficient overlap in British and French perceptions of European defense liabilities --- and sufficient convergence of national ambitions --- to agree on a plan of action from the menu above and develop an Anglo-French core of momentum for broader European initiative.

This study also finds the British reading of the RMA's implications for European security to be the most sober and convincing. Uncritical enthusiasm for the virtues of advanced defense capabilities nourishes contradictory impulses which Europe's defense budget cannot afford. The cost of some high-end weaponry would consume a comparatively large share of defense budgets, creating fiscal shortfalls and barriers to critical procurements and force transformation in other areas. The F-22 Raptor and the air force version of the Joint Strike Fighter are enormously expensive aircraft, so states which purchase them may have to forgo other purchases to meet the cost of acquisition. The realistic development of improved European capabilities must therefore concentrate on expeditionary specialization and accept a high level of continued dependency on the United States. Then there is the fact that a commitment to new capabilities in one realm often implies additional commitments to protect new-acquired and precious assets. Would it be prudent to invest primarily in the capacity to project rapid reaction forces to European trouble spots and yet balk at a theater missile shield for those forces?

In the meantime, Europe and the United States will in all probability continue to drift apart strategically.[100] The drift has less to do with estrangement over perceptions and threats, budgets and burdens, than with the fact that the United States is a superpower with global commitments among which Europe cannot retain its former prominence. The events of September 11 have accelerated this trend. The challenge will be to ensure that Europe and the United States are not estranged politically and diplomatically. In the future, as in the past, a good deal of well-meaning muddling-through will go a long way. For its part, the Bush administration should welcome and encourage Anglo-French leadership in developing a European defense capacity in whatever form London and Paris can agree upon. The fear that Britain will be drawn in to a Euro-Gaullist plot to subvert American leadership of NATO has no basis in the visible facts. Europe's collective military heft remains a very long way indeed from any credible claim on a quantum of autonomy. But as the Europeans put flesh on the bones of ESDP, an astute leadership in Washington should relax its grip and accept its European allies as equals in principle even if they are not equals in substance.

[100] Christopher Layne, "U.S. Hegemony and the Perpetuation of NATO," *Journal of Strategic Studies*, vol.23, no.3, 2000, pp.59-91.