STANDING AT A CROSSROADS: THE WESTERN EUROPEAN DEFENSE INDUSTRY

ROBERT G. CURRAHAN JR.

STANDING AT A CROSSROADS:

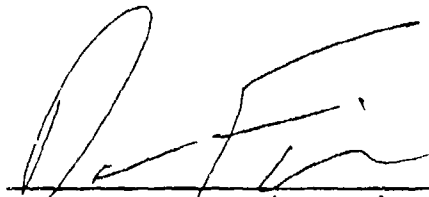
THE WESTERN EUROPEAN DEFENSE INDUSTRY

Robert G. Cheatham Jr.

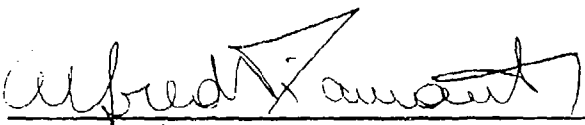
Submitted to the faculty of the University Graduate School
in partial fulfillment of the requirements
for the degree
Master of Arts
in the Department of West European Studies
Indiana University

December 1994

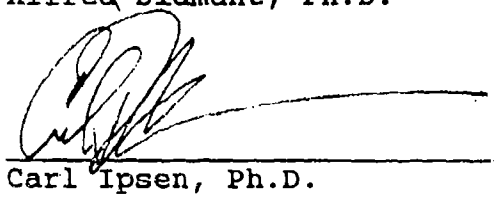
Accepted by the Graduate Faculty, Indiana University, in partial fulfillment of the requirement for the degree of Master of Arts.



Norman S. Furniss, Ph.D.
Chairman



Alfred Diamant, Ph.D.



Carl Ipsen, Ph.D.

ACKNOWLEDGEMENTS

I wish to thank sincerely my Thesis Committee for their guidance and support. Professor Norman Furniss provided invaluable assistance by helping me determine a topic that was both personally and professionally interesting to me. Professor Alfred Diamant was instrumental in assisting me to tailor my work to meet the objectives of my research. And Professor Carl Ipsen provided numerous suggestions that helped me better illustrate my argument. Without this professional guidance, my work would have been much more difficult.

As to the West European Department Staff, I cannot thank enough the ever helpful and supportive Mary Kay Welsh and Amanda Ciccarelli. Their conversation and advice served me well and for which I shall remain forever in their debt.

In addition, I thank my friend and colleague United States Army Captain Philip Thieler for his hospitality in the final days. To my Father, I commend him for continually urging me to complete my work early for it has been to my benefit. And lastly, I wish to thank United States Army Major Jeffrey W. Yaeger for whom I accepted advice to take the leap into the computer age. For had I not acted on his advice, my return to academia would have been much more challenging.

TABLE OF CONTENTS

CHAPTER ONE

The Historical Context: 1945-1970s

The purpose of this thesis is to try to determine what the future prospects are for the Western European defense industry under the terms of the European Union (EU) and the Maastricht Treaty. An analysis of the defense sector of Western European industry holds the promise of providing an indication as to the viability of the ultimate objectives of Maastricht. This sector embraces the three spheres of interests that must be reconciled within the EU, and Western Europe as a whole, if the European Union is to become a reality. Such prerequisites for resolution are in the realms of political, economic, and security interests. They do not exist nor operate in isolation, but form, rather, a tightly interwoven web where one decision affects another.

The political realm faces an immediate institutional impediment to its progress in Article 223 of the Treaty of Rome. This article stipulates that defense equipment is exempted from the EC market legislation. Article 223 has inhibited the movement to a true European market and hinders aspects of the Common Foreign and Security Policy. Nevertheless, the same national leaders who have adhered to Maastricht have shown a lack of enthusiasm regarding amendment of the Article.

The original White Paper of 1985, which provided the

framework for the current Single European Act of 1987 (SEA), stated a desire to see the defense sector rolled into the SEA. Jacques Delors was then, and is now, a supporter of that concept. However, that position lacked support among the national negotiators and has failed to carry the majority. Despite lacking treaty justification, the EC Commission asserted, in 1988, that the defense sector should be brought under the SEA. The movement to amend Article 223 was again blocked due to a continued lack of enthusiasm by the national participants. Mustering the political will to address the extension of the SEA, or the failure to do so, affects both the defense industrial sector and the long term vision of Maastricht.

However, the political decision to pursue such a clause is not without economic consequences. Currently, 80 percent of EU military expenditure is still spent within the respective national borders. The SEA could potentially have a significant impact on the distribution of these funds and see large sums shift outside the home nation's borders. Governments would be forced to concede significant influence over what has traditionally been a sector of the economy very closely associated to the state. This association has created a healthy-sized domestic lobbying force that does not easily bend to the winds of change.

Relevant political discussion will have t take place in the face of industrial consolidation, rationalization,

declining job roles, and rising Research and Development (R&D) costs. In addition to these domestic challenges, the Western European defense industry also faces stiff competition over a dwindling arms market. The high technology threat from American firms is complemented by exports from Russia, Eastern Europe, and some newly industrialized states such as India, Brazil and Israel. Consequently, each national government will have to reach its own political decision in the face of both long term objectives and current domestic challenges. The success of Maastricht relies upon the signatories' success in managing these challenges.

Interjecting itself into this European discussion is the security aspect of the EU that was lacking in the EC. As part of the desired goal to establish a Common Foreign and Security Policy, the EU must demonstrate a viability of interoperability among its armed forces. Implicit in this is a greater degree of standardization, economies of scale, pooled R&D resources, and the ability to field one export product per system category rather than the current three. The result would be a rationalized and internationally competitive Western European armaments industry.

However, these long term gains can only be attained at the cost of short term sacrifices, and that is where the challenge to the collective EU leadership lies. Overcoming these defense industrial sector challenges shed a bright

light on the future prospects of Maastricht. Though the last verse is far from written and the struggle is still very much in progress, the Western European defense industry is, in itself, a good indicator for the future prospects of the Maastricht process. This thesis assumes that it is a good indicator and so explores prospects for the integration of armaments manufacturing.

A. Reconstruction

To understand the future prospects of the Western European defense industry, one must understand the long, and often complex, history of common defense industry projects, the industrial and institutional relations within the leading national arms producers, and the factors that provide an impetus to pursue further collaborative defense industrial efforts. With these three aspects in mind, one can begin to grasp the slowly growing momentum of defense collaboration work within the EU and what this may mean for itself and the United States.

Well before the birth of the European Economic Community, the nations of Western Europe recognized the advantages associated with common defense and industrial projects. In confronting an expansionist Soviet Union, the western states joined under the North Atlantic Treaty Organization (NATO). From the outset, member states readily recognized standardization and commonality of weapons as an imperative.

Following the disastrous Second World War, there were several fundamental strategic reasons that favored an increasingly integrated effort for Western European defense industries. These were widely recognized on both sides of the Atlantic. First, the United States needed armed European allies in the ensuing Cold War between itself and the Soviet Union. Secondly, given the economic destruction of the war, cooperative measures in armaments would help ease the financial strain of rearmament if duplications in the national industries could be avoided. And thirdly, with the outbreak of the Korean War acting as impetus, an integrative approach to European armaments would provide a means to ensure reasonable western influence over German rearmament. This was especially important for the French who were initially adamantly opposed to any serious German rearmament. Nevertheless, the fear of a Soviet sponsored move in the heart of Europe, along with the prospect of a reunited Germany, proved to be too powerful to stymie permanently American calls for Germany to participate in defending Western Europe. In the end, it was the Federal Republic's entry into NATO, with German troops under NATO command and not a German General Staff, that assuaged French concerns.

Within the first years of NATO's existence, a number of institutional steps were taken to facilitate cooperative planning. A Military Production and Supply Board (MPSB),

set up under the NATO Defense Committee as early as 1949, was to promote more effective "methods of procuring military equipment and the standardization of parts and products of military equipmen.."[1] This was followed shortly afterward by the Standardization Policy and Coordination Committee (SPCC) and the Military Standardization Agency. The creation of the Defense Production Committee (DPC) of 1951 capped this first wave of institution building. However, despite this active interest in cooperative armaments, NATO failed to establish a central procurement organization, primarily because by 1954 the major European national economies were enjoying steady growth and their respective arms industries were adding to the job rolls. The respective governments had little political incentive to alter procurement patterns at that time.

However, official attention to cooperative work continued unabated in the 1950s and into the 1960s. Evidence of this is the rather steady number of changes thought to be necessary to facilitate the process. The new NATO International Staff integrated the MPSB and the SPCC into the Production and Logistics Division in 1952. In addition, in 1958, the DPC was reorganized to become the Armaments Committee. It made a final transformation to become the Conference of National Armaments Directors (CNAD)

---

[1]Trevor Taylor, Defense, Technology and International Integration, (New York: St. Martin's Press, 1982), p. 17.

in 1966.[2] This continual institutional revision reflects an active discussion within the American-led NATO staff. In 1994, from among the original structures, only the slightly modified Military Agency for Standardization (MAS) survives intact.

Outside the NATO structure, government discussion came, for a time, much closer to an integrated Europe and a more integrated arms development. This possibility found support in the negotiations to establish the European Defense Community (EDC). Primarily remembered for the concept of a European Army, it was an outgrowth of the growing fear of Soviet expansionism during the Korean War. This concept did not meet with immediate American enthusiasm, but soon became a key component of U.S. policy in the early 1950s and was vigorously pursued by Secretary of State John Foster Dulles.

As part of the general scheme, the EDC was to be governed by a supranational Board of Commissioners. Under this administration was to be a centralized procurement system. The EDC, under the NATO umbrella and using a centralized procurement system, would plan, purchase, equip, and field an army. In addition, the EDC would be responsible for guiding the development of the Western European defense industry and production base.

Specifically, under Part V of the proposed treaty, the Board of Commissioners would be responsible for the

---

[2]Ibid., p. 17.

armament, equipment, supply and infrastructure of the European Defense Forces.[3] Planning guidance dictated the best possible use of technical and economic capabilities of members and to avoid serious interference within national economies. As part of its integration with NATO, the Board was to ensure equipment standardization as soon as and as broadly as possible. The authority of the commission extended to initiating all contracts, supervising their execution, and approving all arms exports to third parties. This surpassed, in terms of integration, the NATO staff discussion and represented an enormous step forward.

Despite the fact that the French Pinay Government signed the treaty in May 1952, the French National Assembly voted, in August 1954, not to take up the issue for discussion and thus ensured the matter would never come up for ratification. The original support by the French executive was not sustained in the legislative chamber. Both the Gaullists and Communists fought the treaty vigorously for fear of its supranational authority. Adding to French concerns was the fact that Great Britain had summarily declined the option of submitting itself to this new institution. By remaining aloof, the British left the French to deal directly with the Germans without the added advantage of a balancing European power. Such concerns did

---

[3]Trevor Taylor, European Defence Cooperation, (London: Routledge & Kegan Paul, 1984), p. 15.

not enhance the treaty's prospects in the National Assembly. Since the Treaty required ratification by all members in order to go into effect, the strides made in the EDC formally died at the hands of the French.[4]

The British Government proposed, as a political consequence of the collapse of the EDC, expanding the Brussels Treaty Organization (BTO) into the Western European Union (WEU) which would be composed of the six planned EDC members and Great Britain. The motivation for this move was not to spur the cooperative armament issue, but rather as a means of dealing with the rearmament of the Federal Republic of Germany (FRG). However, the WEU had a Standing Armaments Committee which was to promote cooperation in weapons development, standardization, production and procurement. As with the rest of the WEU organization, it became relatively inactive after the contentious issue of German rearmament and the FRG's entry into NATO in 1955. The Committee was not reactivated until 1976 when it started to serve as a link between European industrialists and NATO defense concerns.

Aside from government policy discussion, action was also taken not only to develop the defense industrial base, but to encourage standardization. The Mutual Defense Assistance program of 1949 provided machine tools. Later, in 1952, American aid was linked with offshore procurement.

---

[4]Ibid., p. 16.

These funds were to have a two-pronged impact. Europe could develop production centers and the continental NATO Allies would receive the materiel produced from these same centers as aid. The program was of significant importance as the Korean War was drawing much of the American production effort. Two examples of this program at work were the 1953 initiative to make Europe self-sufficient in ammunition production and the 1954 American order for 450 Hawker Hunter aircraft that were to be built in Britain. These aircraft were, in turn, provided to the Royal Air Force.[5]

It was in this period that the United States Government expanded its policy of encouraging European integration beyond economic and security matters and into the realm of science. The discussions that generated this policy started in 1949 with the appointment of Mr. Lloyd V. Berkner as a special consultant to the Department of State. Commissioned to examine the whole matter of science and foreign relations, he was to formulate recommendations regarding the role and function of the Department in this regard.[6]

The report, entitled "Science and Foreign Relations," advanced four fundamental reasons to support western collaboration in scientific matters. First, science

---

[5]Trevor Taylor, Defence, Technology and International Integration, (New York: St. Martin's Press, 1982), p. 20.

[6]Eugene Rabinowitch, "Science and Foreign Relations: Berkner Report to the U.S. Department of State," Bulletin of the Atomic Scientists, Vol. VI, No. 10, (October 1950): 293.

provides an effective medium for the exchange of ideas among men in an open and intellectual environment. It is, therefore, an instrument of peace. Secondly, only through the open and free exchange of scientific ideas could the United States ensure the continued success of American science. Thirdly, scientific advances are linked to economic growth. In turn, political security rests on economic growth and thus provides national stability. This was the end goal of American policy in Europe. Hence, the United States recognized science as a legitimate foreign policy factor. And fourthly, national defense alone relies on the latest technology and requires complete access to not only all emerging scientific fields, but also the established ones.[7] For these reasons, the Berkner report advanced a "Marshall Plan" in the scientific realm.

The Department of State adopted the recommendation of the Berkner report in 1950. The Department was quickly involved in funding and facilitating the attendance of American Scientists at international conferences. In addition to conference attendance, the Department also encouraged exchanges of scientific personnel; helped restock the shelves of war-ravaged European research centers and libraries; and produced numerous films, bulletins, and radio

---

[7]Ibid., p. 294.

programs discussing a broad range of science-related issues.[8] This effort actively attempted to engage American and European scientists in discussions and collaboration. In so doing, this U.S. foreign policy initiative aided the Western European scientific community to get back on its feet after enduring significant war losses in scientific libraries, equipment, forums, and personnel.

The U.S. government continued to promote the growth of European defense industries throughout the 1950s in the form of offshore purchases and then provided the materiel as aid to its European Allies. There was, though, a change in approach by the Eisenhower Administration in 1957. Concerned with a rising balance of payments problem and a spiraling diversity of weapon systems, a push was made to use licensed production of U.S. weapons in Europe. This would address part of the balance of payments issue, refocus on standardization, and continue to build the European defense industrial base.

Despite steady progress in reviving European defense industries, one sorely lacking aspect was, except in a minimal form, weapons and ammunition standardization. This reflected two problems. First, the national armies of NATO showed little willingness to compromise on issues of military doctrine, such as the French preoccupation with

---

[8]Gerhard J. Drechsler, "The U.S. State Department and World Science," Bulletin of the Atomic Scientists, Vol. VII, No. 4, (April 1951): 121-122.

counterinsurgency rather than the potential conventional conflict in Central Europe, and, therefore, insisted upon contracting for weapons that reflected their specific requirements. Secondly, projections of when and what the various governments were interested in purchasing were not readily known beyond the respective defense ministries. Consequently, it was impossible either to collaborate or to achieve favorable economies of scale that would be available through multinational requisitions.

This practice led to the adoption of the NATO Basic Military Requirements (NBMR) plan in 1959. The thrust of this plan was to direct national and NATO proposals to the NATO Standing Group as tentative NBMRs. Once received, the Committee would conduct whatever research and consultation required to determine the validity of the mission requirement and what capabilities were necessary to support it. The result was a call for proposals issued by the military committee to meet specifications enumerated under an NBMR.[9] Thus, NBMRs would have a significant demand within the alliance and collaborative work and production would take place among the procuring states.

The goal was noble for few would argue against a consolidated requisition system that would eliminate duplication and continue to develop the European defense

---

[9]Simon Webb, NATO and 1992: Defense Acquisition and Free Markets, (Santa Monica: The RAND Corporation, 1989), p. 100.

industry. The system, though, had a fundamental flaw. The coordination and planning to determine the NBMR was entirely conducted by the military staff and its civilian associates within the NATO staff. The projects were finalized before European governments were involved in the process. As a consequence, the developmental process proceeded with no budgeting input. Quite often, it was this consideration that impeded a more successful program. To emphasize this point, one need only consider that while forty-nine NBMRs had been agreed to by 1966, not one weapon system had been developed specifically to meet any published NBMRs.[10]

As it turned out, those weapons that did make it into production during the period either were initiated before the NBMRs or outside its framework. In particular, there is one project that provides a good example of early European collaborative defense efforts. The Breguet Atlantique maritime patrol aircraft was a collaborative effort that preceded the NBMR.

The mission requirement was coordinated by the NATO Armaments Committee with a request for proposals issued in June of 1958. The Committee recommended the Breguet project later that year. It also received the endorsement as an NBMR in January 1959. Under the NATO Mutual Weapons Development Program, it was agreed that the funding would come from Germany, Belgium, France, Holland, and the United

[10]Ibid., p. 100.

States. The nationalities of the firms involved in its construction were French, British, Dutch, and German. Tentative orders represented a respectable NATO cross section with the following seeking the corresponding numbers: Belgium, zero to six; France, seventy; Germany, eighteen; Netherlands, twenty; Norway, six; and Portugal, twelve to twenty-four.[11]

Despite a strong project performance in terms of completion ahead of schedule and within budget, a grand total of forty aircraft was ordered and only from the French and Germans.[12] For a variety of reasons, the other tentative customers backed out. The American alternate maritime aircraft absorbed a portion of this missed market.

The Eisenhower initiative of 1957, a plan to license production of American equipment in Europe, led to a number of high volume production projects. These projects provided invaluable lessons for the European industrialists in production techniques, quality control, organizational and managerial skills, and technological skills.[13] However, despite this opportunity to gain insights into the noted areas, the products remained the fruit of American design,

---

[11]Trevor Taylor, Defence, Technology and International Integration, (New York: St Martin's Press, 1982), p. 22.

[12]Alexander H. Cornell, International Collaboration in Weapons and Equipment Development by the NATO Allies, (The Hague: Martinus Nijhoff Publishers, 1981), p. 41.

[13]Ibid., p. 38.

American technology, and American administration.

The Eisenhower initiative had a number of important supporters in Western Europe. Key among them was the FRG's Minister of Defense Franz Joseph Strauss.[14] In particular, Herr Strauss recognized the US/USSR nuclear stalemate as reducing the likelihood of direct armed conflict and, therefore, increasing the importance of economic and technological competition. He reasoned that it was in Germany's interest to facilitate the growth of advanced technologies in German industry.

This would provide three advantages: first, advanced technology weapons would help confront the Soviets; second, such technological industrial advancements would strengthen the economy and effectively check domestic communist appeal; and third, it would further strengthen the German economy vis-a-vis Western Europe. Consequently, such offers as the F104G program represented an opportunity to work with the latest American technology. The Eisenhower initiative may have helped with the balance of payments issue at the time, but it also served as a double edged sword that was to make European defense products much more competitive in the long term.

There are four good examples of such programs that contributed to the European learning curve, extended the

---

[14]John Krige and A. Russo, "Europe in Space, 1960-1975: From ESRO and ELDO to ESA", (Book Draft, European University Institute, 1994), p. 40.

degree of standardization, and assisted in the U.S. balance of payments problem. The Lockheed F-104G Starfighter was the flagship program that ultimately produced roughly 1,000 aircraft for four NATO national air forces. The program enjoyed large orders despite some infamous Starfighter accidents. France, Germany, Italy, the Netherlands, and Belgium produced the Hawk surface-to-air missile. Production exceeded 4,000 units. Britain, Norway, Denmark, and Turkey produced the Bullpup air-to-air missile. Over 4,000 units were manufactured. Eight countries produced over 5,000 units of the Sidewinder air-to-air missile.[15]

These projects, though an American inspiration, brought about great advances in European weapon-development collaboration. Significant "cross talk" was required to orchestrate the establishment of production centers among the various countries. The many institutional relationships, methods, and commonality of equipment acquired in the process, facilitated the greater European collaboration that became more frequent in the late 1960s. Ironically, these programs were not as successful as the Breguet Atlantique in terms of meeting schedules and budgets. Nevertheless, requisition numbers speak volumes on their own.

By 1966, the NBMR system had outlived its usefulness.

---

[15]Trevor Taylor, Defence, Technology and International Integration, (New York: St. Martin's Press, 1982), p. 23.

Aside from continuing the policy debate over collaboration and facilitating military planning and requirements, the project had nothing to show for its effort in terms of viable systems. The NBMR system was never able to overcome the dichotomy between the fact that the determination of the requirements was a NATO function while the funding aspect was a national function.[16] The Conference of National Armament Directors (CNAD) replaced the disbanded Armaments Committee. The CNAD still meets semiannually. France continued to participate in this structure despite its withdrawal from the NATO Command Structure in 1967.[17]

The CNAD contributed another small step in advancing the collaborative interests of the European defense industry. Using a subcommittee of representatives operating out of Brussels, specialized committees administered "NATO projects" which are transnational cooperation projects. In addition, the subcommittee structure consisted of several subgroups that hold primary responsibility for generating cooperating efforts. The entire procedure was designed to disseminate freely NATO and national requisition needs and project timetables in order that interested industries could

---

[16]Thomas A. Callaghan Jr., The U.S. /European Economic Cooperation In Military And Civil Technology, (Washington: The Center for Strategic and International Studies, 1975), p. 42.

[17]Keith Hartley, NATO Arms Co-Operation, (London: Billing & Sons Ltd, 1983), p. 33.

voluntarily engage in collaborative efforts.[18]

To receive the designation of a NATO project under CNAD, the following three criteria must be met: (1) participation of two or more countries within NATO; (2) an engagement to report progress in the project annually to the CNAD until the equipment had been produced or the project ended; and (3) the incorporation provision for the admission of other interested NATO states.[19]

By 1981, the institutional structure had grown to handle rising participation in several fields. The main subgroups within the CNAD's subcommittee doubled from three to six. These exercise administration over a proliferating number of committees that now exceed 150. NATO has created an Industrial Advisory Group to facilitate the flow of information from European industry to the CNAD.

The projects vary in nature, size, and degree of multinational cooperation. Small projects such as discussion over a common field howitzer are as active as plans for future fighter aircraft. The program has a greater degree of flexibility than the old NBMR. While there have been commonality gains in terms of NATO equipment, it is far less of a measurable outcome as compared to the more noticeable effort within European

---

[18]Alan G. Draper, European Defence Equipment Collaboration, (New York: St. Martin's Press, 1990), p. 23-26.

[19]Trevor Taylor, Defence, Technology and International Integration, (New York: St. Martin's Press, 1982), p. 24.

industry for cooperative efforts.

B. An Emerging Identity

True seeds for European collaboration began to germinate in the 1960s. Despite the repeated policy initiatives of NATO and the United States throughout the 1950s and the 1960s, real momentum was not gained until two other actors began to take a more active role: European governments and private industry. These two parties entered into collaborative discussions for reasons other than military security. Until this point, the NATO/U.S. push for European industry was essentially centered on a "Free World" focus. These two new actors recognized this too, but also had other concerns as well. The momentum may have started slowly, but it is very much present today in the post-1992 Europe.

With European industry essentially recovered and an armed, but stable, peace existing by the 1960s, other concerns came to the forefront. Rather than always seeing American industry as decisive assistance, a perception of a threatening competition arose. The clear U.S. lead in advanced technology created the mind set of a "technology gap" between Western European and American industry.

The Europeans began to read United States calls for standardization as calls to "buy American." This, of course, in the eyes of many European industrialists and their governments was a squeeze on jobs and the future

viability of their industries. These fears were reenforced by U.S. pressure to address the growing balance of payments problem, the same problem that led to the Eisenhower initiative of 1957, by seeking up to 1.5 billion dollars of arms sales to NATO countries annually.[20] These sales were to start, if agreed upon, in the mid-1960s.

The U.S. Congress saw this approach to the problem as an equitable means to address the issue by permitting the Europeans to purchase high quality weapons, advance standardization, and help foot the bill for the U.S. defense of Western Europe. The Europeans, instead, viewed this approach as a further U.S. attempt to absorb an ever greater share of the arms market, a move that would result in a further weakening of the European competitive position. The classical fix for the European "technology gap" was to invest a greater percentage of profits in research. But this would never happen if the U.S. firms increased their market share. Therefore, the reasoning went, Stateside industry would come to dominate European industry permanently. Since the balance of payments issue was not projected to recede in the short term, the Americans were not likely to rescind such proposed deals any time soon.

Formal negotiations did not always explicitly address these wide-spread fears. Although the Eisenhower initiative

---

[20]Trevor Taylor, Defence, Technology and International Integration, (New York: St. Martin's Press, 1982), p. 25.

did not come to fruition, the issues it represented surfaced in various forms well into the 1980s, especially in the U.S. Congress. Consequently, although European governments were not pressed to enter formal, large purchasing arrangements, the fear that they would face a limited market share remained high within the European defense industry.

Exacerbating the concern over U.S. competition was the rapidly rising cost of doing business in the defense industry. Inflation in the defense industry was, and still is, rising at a higher rate than in civilian industry. Consequently, European firms found they had very real and tangible grounds to seek collaboration efforts in order to compete. Subsequent cooperative arms efforts often were oriented to obtain access to technology, markets, and capital. Such factors strengthened the competitiveness of the participating firms. This is particularly the case in terms of research spending. European national research spending can in no manner compare to the real dollar advantages of U.S. Government budgets over its continental counterparts.

Numerous ad hoc collaborative projects were started without the impetus of NATO as a result of these factors. It was not that the Alliance did not benefit from them, but the motivating factors arose elsewhere. Nevertheless, defense projects began to enjoy, and have right through to the present, a gradually increasing cooperative atmosphere.

Among the numerous projects that resulted, not all proved viable. Several were notable for their failure. For example, the Main Battle Tank (MBT) programs never survived their early stages.[21] The challenges to overcome included the high unit cost of an MBT, as well as the need to reconcile individual tactical national requirements. Even more important, guaranteeing a wide enough market to sustain such a capital intensive project through requisitions was never achieved. Finally, the British and French who were both vigorous participants in the program, had different requirements for the MBT. Without one or the other, there would not be a viable market for the MBT.

The British envisioned their MBT for heavy mechanized forces to deploy and fight in Central Europe. This requirement clashed directly with that of the French need for a lighter tank that could prove readily deployable to global contingencies, given France's continued involvement in their former colonial empire. These two requirements repeatedly proved irreconcilable. In addition, the Franco-British V/STOL aircraft came to the same end.

However, there were European industrial success stories as well. The British-French Jaguar aircraft, Martel missile, and the Lynx-Puma-Gazelle helicopter family were all viable enterprises. Furthermore, Franco-German

---

[21]Alexander H. Cornell, International Collaboration in Weapons and Equipment Development and Production by the NATO Allies, (The Hague: Martinus Nijhoff Publishers, 1981), p. 45.

cooperation produced the HOT-Milan-Roland family of missiles and the Alphajet.[22]

C. Confronting Change

In 1974, standardization again came to the forefront. It sprang forcefully from a report written by Thomas A. Callaghan, a consultant for the U.S. Department of Defense.[23] The report, written for the U.S. Congress, argued that despite previous NATO efforts, the lack of standardization was resulting in inefficient, and therefore costly, duplication in research, production, and fielding. The proposed remedy for this was the "two way street" of trans-Atlantic dealings in military equipment. The report findings gained significant support in the U.S. Congress.

As part of this envisioned two-way street, the United States would have to accept purchases of European manufactured weapons. The purchase criteria would be those of efficiency and U.S. arms manufactures felt they could more than compete if this were the issue rather than industrial protection for European industry. Such public steps as the Eurogroup, an informal grouping of the European Defense Ministers, and its statement on "Principles of Equipment Collaboration" had fueled American concerns of a

---

[22]Pauline Creasey and Simon May. The European Armaments Market and Procurement Cooperation, (Southampton: The Camelot Press Ltd, 1988), p. 76.

[23]Ethan B. Kapstein, The Political Economy of National Security, (Columbia: University of South Carolina Press, 1992), p. 165.

European attempt to shut American producers out of the continental NATO arms market.

Consequently, the U.S. Government policy of reiterating its call for standardization received widespread domestic support. This concept would permit Stateside industry a long term future role in the NATO European market and inclusion in collaborative discussions that, until then, had been primarily Euro-oriented.

Given America's leading role in NATO, the issue of standardization was quickly felt. The European States of NATO decided upon organizing a new initiative in 1976. The Independent European Program Group (IEPG) was to plan collaborative projects that could be adopted by the Alliance as a whole, and, therefore, eliminate duplication. These programs were to compete in the new two way street.[24]

Although the IEPG's purpose was clearly tied to NATO, it is actually an independent structure as implied by the first word of its name. Both facets reflect concessions made to bring the French into the organization. To ensure its distance from the NATO Command Structure, France had insisted upon these actions. The high hopes of the IEPG fell short initially. Although there were many project groups working on future issues, little change actually took place in the manner in which the European defense industry

---

[24]Ethan B. Kapstein, The Political Economy of National Security, (Columbia: University of South Carolina Press, 1992), p. 102.

conducted business during these early years.

The IEPG itself had no secretariat and was an informal structure. The work of the organization was organized around three panels. The first panel was responsible for collecting information dealing with the long term acquisition plans of its members. The IEPG analyzed the information and developed opportunities for collaborative development, production, and procurement. The second panel, through the use of project groups, looked in detail at each opportunity and sought to put together proposals. The third panel studied the legal, managerial, and industrial problems inherent in such projects.[25]

Despite the fanfare that the IEPG received, it remained a relatively uninfluential institutional factor in the continuing growth of collaborative defense projects until 1984. It did, though, become a fundamental supplier of ideas to the CNAD, and this institution has maintained its role as the institutional leader on this issue within the NATO structure.

With the conclusion of the 1970s, the Western European defense industry had again become a vibrant part of continental industry. The industry had successfully formed close links to national governments and to leading European and Atlantic institutions. The industry, though, was about

---

[25]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), p. 19.

to enter a new era dominated by economic and political forces of change.

We shall see in the next chapter how the European defense industry, despite steps toward integration, is not a monolithic structure. The defense industries very much reflect the contrasting industrial and institutional characteristics of their respective states. The leading national armament producers in Europe are Great Britain, the Federal Republic of Germany, France, and Italy. They may all travel the same path toward creating a single European defense industry, but they are surely all starting from different positions along the way.

CHAPTER TWO

The National Actors: Industrial and Institutional Relations

Virtually every Western European nation has an arms industry of some size. However, for the purposes of this discussion, we shall review the leading four national arms producers in Western Europe: Great Britain, the Federal Republic of Germany, France, and, a distant fourth, Italy. In addition, we shall review the leading corporate performers that, in 1992 American dollars, exceeded one billion dollars in defense revenues. Of the forty-six firms that achieved this level, thirty-three were American, twelve were Western European, and one was Japanese.[26] The institutional environment within each nation reflects the historical and political context in which the industry matured. It is within this structure that these successful firms must operate and confront these changing times.

A. Great Britain

Our first case is the British defense industry, an industry that is both large and extensive. The 1993 estimated work force is between 325,000 and 340,000 which contrasts to its peak size of 560,000 in the early 1980s. This employment represents approximately 3 percent of the British labor force while the defense sector of the economy

---

[26]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Printers, 1993), p. 41.

is responsible for 3 percent of the GDP.[27] In terms of procurement and exports, the British industry traditionally is the second largest in Europe.[28]

However, as the industry moves further into the 1990s, it will face increasingly tight procurement requisitions from the Ministry of Defense (MoD). This future was outlined in a 1991, MoD White Paper entitled "Options for Change." The Paper projected reductions in real military expenditures by 6 percent annually over the next few years.[29] This translates into military expenditures falling from an average 5.2 percent of GDP from 1980 through 1984, to 4.0 percent in 1990, and headed toward 3.0 percent over the medium term.[30] Such a downward spiral in British defense outlays adds great pressure for continued rationalization of the industry and for pursuit of increased exports to attempt to compensate for domestic shrinkage.

With this situation as a backdrop, it is important to understand the philosophy behind British institutional relations that has shaped the modern industry.

---

[27]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 28.

[28]Herbert Wulf, Arms Industry Limited, (Oxford: Oxford University Press, 1993), p. 145.

[29]Michael Brzoska and Peter Lock, Restructuring of Arms Production in Western Europe, (Oxford: Oxford University Press, 1992), p. 89.

[30]Herbert Wulf, Arms Industry Limited, (Oxford University Press, 1993), p. 141.

Specifically, this philosophy can be traced back to the Thatcher Government. Emphasis was placed upon the "value of money" in that the MoD would require competition for defense contracts. This would save the government money, tap the competitive process to develop effective weapon systems, and provide an incentive for firms to pursue more extensive R&D efforts. The rather cozy relationship that existed between the MoD and many traditional suppliers was brought to an end as the contractors found themselves openly competing for British procurement contracts. Where a single firm had predominance in its field, the MoD encouraged the firms to pursue competitive bidding for subsidiary components in an attempt to drive down costs.

In line with this more laissez-faire approach, came a denationalization program that turned its attention to those firms inherited from previous governments. It was believed that private management, rather than government, could best administer corporate affairs. This effort resulted in the privatization of nine arms producing firms: Rolls Royce, British Aerospace, VSEL, Swan Hunter, Vosper Thornycraft, Yarrow Yard, Royal Ordnance, Devonport, and Short.[31]

Officially, the Government will tolerate foreign ownership. However, it has not always appeared comfortable with this in practice, as became evident in the political

---

[31]Herbert Wulf, Arms Industry Limited, (Oxford: Oxford University Press, 1993), p. 145.

controversy generated within the Thatcher Government when Westland was purchased by the American helicopter firm Sikorsky. The deal was ultimately approved, but only after a vigorous debate concerning foreign ownership of British defense industry assets.

At least three success stories of British firms that have prevailed in the face of adversity stand out. They have defence revenues ranging from 1.364 billion dollars to 6.065 billion dollars.[32] These firms are British Aerospace (BAe), General Electric Company Ltd. (GEC), and Rolls Royce.

The largest British defence firm, and fourth largest in the world, is British Aerospace which earned 6.065 billion dollars in defense revenue in 1992.[33] As a privately owned firm, it employs an estimated 55,000 workers and enjoys leading R&D capability in civil and military transports, supersonic combat aircraft, and tactical missiles.[34]

The BAe is actively engaged in major collaboration projects with European, fellow British, and American firms. It recently sold its Rover subsidiary to raise two billion Pounds to finance future defense business and joint

---

[32]Reference Appendix 1 for Corporate statistics displayed in chart form.

[33]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Press, 1993), p. 41.

[34]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry?, (Exeter: BPCC Wheatons Ltd., 1990), p. 58.

ventures.[35] Some of its major collaboration projects are the following: the Eurofighter (France, FRG, Spain); Advanced Short Range Air-to-Air Missile (ASRAAM) (FRG, until cancellation); Millan and TRIGAT tactical missiles (Euromissile); the MESH (Consortium leader); Tornado attack aircraft (Panavia); Jaguar fighter (France); Harrier Vertical-Takeoff-And-Landing (VTOL) fighter (US); ALARM Missile (GB); and the Sidewinder AIM-9L (US).[36] Since mid-1993, BAe has been negotiating with Matra of France to merge their missile business.[37]

The second largest British firm, ranking eleventh in the world, is the General Electric Company Ltd. (GEC) with defense revenues of 4.088 billion dollars in 1992.[38] The GEC is estimated to employ 50,000 workers and was one the last privatized British defense firms. Its leading R&D capability is in the field of avionics, communications, radars, space, and defense systems. Reflecting current conditions, it too is heavily involved in collaboration

---

[35]"British Aerospace," The Financial Times Limited, 5 February 1994, The Lex Column, p. 22.

[36]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry?, (Exeter: BPCC Wheatons Ltd., 1990), pp. 58-59.

[37]"The best line of defence: The political and commercial challenges facing Europe's arms industry," The Financial Times Limited, 17 May 1994, p. 19.

[38]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Press, 1993), p. 41.

projects, including various satellite systems (ESAT); Fly-by-Wire for Air Missile Experimental (AMX) (Italy); HISOS Anti-Submarine Warfare (ASW) system (GB); NAVSTAR navigation satellite system (US); and Wide-Angle Heads-Up Display (HUD) (US).[39]

The third and last ranking British firm operating with defense revenues exceeding one billion dollars is Rolls Royce. Its 1992 defense revenue of 1.364 billion dollars ranked it as ninth in Europe and thirty-sixth in the world.[40] Joining GEC as one of the late comers of private ownership, it is estimated to employ 20,000 workers and specializes in Aero-engines. Its major collaboration projects are with fellow European firms. These projects include the RB-199 Turbofan (Turbo-Union), Tyne Turboprop (Belgium), Adour Turbofan (France), ODIN Ramjet (GB), and the V2500 Turbofan (IAE Consortium).[41]

As the British defense industry continues to rationalize, the largest companies continue to grow in size and the smaller companies diminish in number. As part of the national consolidation process, four different

---

[39]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry?, (Exeter: BPCC Wheatons Ltd., 1990), pp. 58-59.

[40]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Press, 1993), p. 41.

[41]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry?, (Exeter: BPCC Wheatons Ltd., 1990), pp. 58-59.

strategies have emerged. The first is the outright takeovers such as GEC together with the German Siemens Company takeover of Plessey. This added 30 to 40 percent to GEC's naval and avionic interests.[42] The second emerging strategy of consolidation is the diversification into new defense sectors such as BAe's acquisition of Royal Ordnance.

The third affects firms producing major end items. Corporations, such as BAe, are increasingly committing more resources to software and electronic components. The importance of these subpackages has grown substantially since the 1960s and represents a major share of the cost of the carrier vehicle itself. Consequently, BAe has expanded in scope so as to avoid losing influence in such a large portion of an end product. And fourth, joint company ventures are increasingly popular, such as France's Thompson-CSF and BAe in creating a joint missile company. In addition, GEC-Marconi may be taking similar action in regard to France's Electronique Serge Dassault. Such steps as these not only rationalize the national industry, but move Europe closer to a single European defense industry.

B. Federal Republic of Germany

The Federal Republic of Germany has the third largest European defense industry in terms of procurement and export orders combined. The defense sector represents 3.5 percent

---

[42]Michael Moodie, Defense Implications of Europe 92, (Washington: The Center for Strategic and International Studies, 1990), p. 9.

of preunification German industrial production.[43] The ten thousand mostly small firms that fill MoD contracts generated an estimated 250,000 jobs in 1992 and so employ about 1 percent of the German work force.[44] This figure is down from the 310,000 defense employees existing in the West and the 40,000 in the East in the early 1980s.[45]

There are three aspects that differentiate the German defense industry from the British and French. First, there was no policy to maintain a domestic sufficiency in armaments until recently, though the Germans have been concerned to pursue their own R&D. This is one reason they have preferred to order from and work with the Americans since they would then have access to the latest technology. Research and development is still very much a concern today. The Germans have focused on ensuring their technology advances have been diffused throughout the national economy rather than creating a national security focus like the British and French.

Secondly, the German armaments industry did not rebound until the late 1950s and was well behind the other two. Consequently, the German effort was focused on catching up through collaboration efforts with primarily American firms

---

[43]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 31.

[44]Ibid., p. 31.

[45]Herbert Wulf, Arms Industry Limited, (Oxford: Oxford University Press, 1993), p. 146.

with licensed production and later with European collaboration projects. The Franco-German Rapprochement was instrumental in leading both governments to encourage industrial cooperation. This form of doing business is so entrenched that 60 to 70 percent of all German defense programs are collaborative in nature rather than nationally administered.[46] Currently, their projects are principally European in scope.

The German Government has encouraged the growth of a corporate giant in the Deutsche Aerospace (DASA). This was a merger creation of Daimler-Benz. The 1991 arms sales for DASA were four times larger than the second and third producers. These competing firms were Siemens and Rheinmetall respectively. DASA now receives 40 to 50 percent of all German MoD contracts.[47] No other European country has one firm commanding such a large slice of contracts as does Germany.

Although defense expenditures are projected to continue to decline in the 1990s, as well as funds allocated for R&D, there are some sectors experiencing growth. In particular, the aerospace sector, when civil and military are combined, turned over the same figure of 12.1 billion dollars in 1989 as the defense industry as a whole. Defense contributed

---

[46]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 33.

[47]Ibid., p. 33.

half this figure, but this was down from 60 percent as of the early 1980s.[48] Nevertheless, the aerospace field, to the credit of both sectors, has been growing at 14 percent annually which is three times faster than the French and four times faster than the British.

DASA is the only German firm that earned in excess of one billion dollars in defense revenue. This is, perhaps, because it is composed of many previously major firms within the industry. It ranks fourth in terms of sales in Europe and thirteenth in the world with 1992 defense revenues of 3.912 billion dollars.[49] This firm was created by the merger of the privately owned Daimler-Benz (DB) and the former government owned Messerschmidt-Boelkow-Blohm (MBB). The convergence of two strong interests saw to the initiation and conclusion of the merger. The DB Chairman wanted to expand his company into aerospace and obtain high technology assets while the Kohl Government desired to rid the State of the responsibility of administering the MBB corporation.

After a six-year process, the modern day Deutsche Aerospace came into being in 1990. It has a production base capable of producing the full range of aircraft frames and missiles. In addition, it represents a variety of

---

[48]Ibid., p. 31.

[49]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Press, 1993), p. 41.

diversified interests in terms of trucks, armored vehicles, and high technology. Reacting to declining military expenditures, DASA announced plans to shave 16,000 jobs in 1993 and is currently holding talks with Aerospatiale concerning the possibility of merging their missile activities.[50]

C. France

The case of the French defense industry sharply contrasts with the previous two. It maintains the largest and most self-sufficient of the national industries in Europe. It clearly ranks first in terms of procurement expenditure and exports, but lags Britain in defense employment.[51] With an employment high of 290,000 in the mid-1980s, the industry has experienced a gradual decline in numbers with 270,000 employed in 1988, and 255,000 in 1991.[52] The procurement budget will not shrink, but priorities are changing so the distribution of contracts will change. One such change is the transfer of funds from the Force de Frappe to intelligence gathering systems.

State involvement in the French defense industry has been historically extensive. In the 1960s, Charles de

---

[50]"The best lines of defence: The political and commercial challenges facing Europe's arms industry," The Financial Times Limited, 17 May 1994, p. 19.

[51]Herbert Wulf, Arms Industry Limited, (Oxford: Oxford University Press, 1993), p. 144.

[52]Ibid., p. 144.

Gaulle, as President, created the Delegation Generale pour l'Armement (DGA). This agency became responsible for all military R&D and production. With the DGA acting as the nucleus, the defense sector consists essentially of twelve large firms, of which some are partly government owned. The focus of the DGA has been to maximize the fielding of suitable equipment for the French Armed Forces on a strict mission basis. The aim has been to remain self-sufficient in virtually all fields of systems. Although successful to this end, it has required the State to subsidize the leaders and small firms to ensure development of many sectors. In so doing, the industry reflects a wide breadth of capability with only a few relatively new emerging national champions to compete internationally. A plan tailored to economic concerns would have emphasized selected sectors to highlight development and to enhance French opportunity in securing and holding an international market share.

With the assistance of the DGA, the defense industry has maintained priority status for the national economy due to its high technology component, export prospects, and its close association with the national prestige of the country's armed forces. The French Government's concern over the "technology gap" between the United States and Western Europe has led it to rigorously support defense R&D, not only to facilitate arms production, but in the hope of generating technology "spin-offs" for the rest of French

industry. The Government has been able to exert considerable influence over the defense sector through public policy, investments, tax allowances, export credits, and its involvement in corporate management that is possible by way of the national ownership of company shares. These policies have led to tightly interwoven industrial and financial linkages as well as personal relationships between government and industrial groups.

The export of French armaments have been actively promoted and are an important facet of the industry. In recent years, export sales have declined considerably which has complicated the long held French strategy of maintaining a nearly self-sufficient arms industrial base and holding down unit production cost. From 1985 through 1989, France was the third largest arms exporter behind the Soviet Union and the United States. It shipped sixteen billion dollars in arms of which 75 percent went to developing countries.[53] Since 1989, the share of exports attributed to French arms has declined steadily in terms of gross numbers and percentage of world market share.

One of France's strongest suits within the defense sector has been aerospace. The combination of its civilian and military aerospace assets makes it Europe's largest and represents about 36 percent of the EU total. The 1990

---

[53]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 25.

aerospace turnover alone was 18.7 billion dollars of which 52 percent was in military sales. Fifty-seven percent of this was export.[54] However, future uncertainty has been evident as new orders dipped 9.6 percent. This represented a 16 percent decline in the export field since the end of the Cold War. The technological interdependence between civilian and military aerospace makes such a decline a significant concern. A decline in either civilian or military orders, whether domestic or export, affects the entire aerospace industry.

Given the evident changes in the international arms market and European security scene, there are signs that French policy is in the midst of change. The French Force de Frappe and the new Rafale fighter have both been symbols of the French "go-it-alone" approach in arms. However, recently the French Government has agreed to participate with the British on two major new systems. The Eurofrigate represents a major end item that the French have agreed to produce for their navy in a collaborative program. Furthermore, the French are working with the British on developing an air-to-ground, stand-off missile for nuclear weapon delivery. The latter, perhaps, demonstrates most vividly the winds of change blowing through Paris and the DGA, for never before would the French permit themselves to be reliant on another state for a component of the Force de

[54]Ibid., p. 23.

Frappe. It even appears that the Rafale fighter, produced in competition with the EFA, will be the last nationally produced French fighter aircraft.

The French Government has increasingly encouraged cooperative work between French companies and other European firms. They have, in particular, held a favorable view of Franco-German work, as it neatly meshed with the post-war policy of Franco-German Rapprochement.

Individual French firms see several advantages in establishing cooperative agreements whether among themselves or with European firms. Such agreements pose the tantalizing promise of new markets that have become increasingly important in the face of declining exports. French defense firms derive a competitive advantage against new-comers entering the market. Working with equally large foreign firms provides for economies of scale and greater export prospects.

The French have gained significantly from their work with German companies. The Germans have provided technological know how, capital, and solid engineering skills. The fact that the German Government has imposed stringent constraints on arms exports to nations in regions of conflict has worked to the advantage of the French. German components, such as an engine, can be sold as part of a French tank. Bonn may still have to clear the component, but it is viewed in a different light. The French generally

play the leading role in collaboration ventures since they are in the position to market the product globally.

There are seven French firms that have achieved defense revenue over one billion dollars. The Thompson Group earned 4.68 billion dollars in 1992 and ranked second in Europe and eighth in the world. Aerospatiale earned 3.499 billion dollars and ranked fifth in Europe and fourteenth in the world. Dassault earned 2.182 billion dollars and ranked sixth in Europe and twenty-fifth in the world. Giat Industry earned 1.577 billion dollars and ranked eighth in Europe and thirty-seventh in the world. Alcatel Alsthom earned 1.338 billion dollars and ranked tenth in Europe and thirty-seventh in the world. It was followed immediately in the European hierarchy by SNECMA that earned 1.3 billion dollars and ranked thirty-eighth in the world. Matir Hachette earned 1.052 billion dollars and ranked twelfth in Europe and forty-third in the world.[55]

Of these seven, five represent major aerospace firms in a critical sector of the French defense industry. Thompson-CSF employs 35,000 workers and enjoys a leading R&D capability in a full range of military electronics and remains government owned. Its major collaborative projects include: the SA 90/SAN 90 Surface-to-Air Missile systems (France); Antelope Airborne Radar (France); Dragon Anti-

---

[55]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Printers, 1993), p. 41.

Aircraft Gun systems (FRG); and the AMSS Sonar for the USN (US).[56]

Aerospatiale employs 40,000 workers and has a leading R&D role in subsonic civil and military aircraft, helicopters, tactical missiles such as air-to-air; and strategic missiles. Some of its major collaborative projects include the Airbus (Airbus Consortium); Concorde (GB); Euromissile; Puma, Gazelle, Lynx Helicopters (GB); Transall C-160 cargo aircraft (FRG); and the SA 90/SAN 90 Surface-to-Air Missile systems (France). It remains 75 percent government owned.[57]

Dassault-Breguet is a privately owned firm employing 14,000 workers. It has a leading R&D capability in supersonic combat aircraft and subsonic transports. Its major collaborative projects are: the Jaguar fighter (GB); Alphajet (FRG); Fanjet Falcon (US); and the venerable Atlantique ASW aircraft (FRG).[58]

The SNECMA is another private firm employing 13,000 workers. It leads in military turbofan engine R&D. Its major collaborative ventures are: the CFM 56 Turbofan (US); Larzac Turbofan (France); General Electric 36 Propfan (US);

---

[56]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry, (Exeter: BPCC Wheatons Ltd., 1990), P. 51.

[57]Ibid., p. 51.

[58]Ibid., p. 51.

and the CF6 Turbofan (US).[59]

The Matra-Manurhin division employs 8,000 workers and is in private hands. The company enjoys a leading role in R&D for small jet engines, missiles, electronic warfare (EW) systems, and satellite systems. The four major collaborative projects are: the MESH Satellite (Consortium); Crolale/Shahine Air Defense system (France); Sycomor Electronic Warfare (EW) system (France); and the Adour Jet Engine (GB).[60]

The French military-industrial policy has permitted them to sustain the greatest number of large earning firms. However, with the market environment changing fundamentally, it is not likely that the expense required to sustain such a field of competitors is, in itself, sustainable. The field will undoubtedly continue to narrow in the wake of future mergers.

D. Italy

The case of the Italian defense industry is substantially different from the others. It is significantly smaller, while remaining the fourth largest in Europe, than those of Great Britain, Germany, or France. Whereas the other states have faced a declining defense work force for some time, the Italians have just begun to feel the effects in terms of job loss. The rising procurement of

---

[59]Ibid., p. 51.

[60]Ibid., p. 51.

weapons by the Italian MoD, until 1990, actually offset the effect of losses taking place in their exports. Exports, as a percentage of sales, declined from 70 percent in 1980 to 35 percent in 1990.[61] Current declines in both defense expenditures and exports have brought downsizing and rationalization, however late, to the Italian armament works. Nevertheless, the Italians are several years behind the competition in coming to grips with this challenge.

In addition, the Italian State has an enormous stake in publicly owned firms in the economy as a whole even greater than that of France. Of the three major industrial groups in Italy, two were publicly owned as of 1992. Furthermore, two-thirds of the top fifty Italian defense firms and subsidiaries are controlled by the three industrial groups. The two state owned groups are IRI and EFIM. The former has been traditionally associated with the Christian Democratic Party and the latter associated with the Socialists; the recent disappearance of both of these parties, however, has fundamentally changed this arrangement. IRI owns controlling shares in such defense related firms as Aeritalia, Augusta, Alfa Romeo, Selenai and Elsag. These represent a wide spectrum of defense activities. The EFIM, on the other hand, owns controlling shares in such defense related firms as Oto-Melaro, Sistel, and SMA. These are

---

[61]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 33.

equally diverse in their activities.

IRI and EFIM combined share 60 percent of the turnover in the defense sector. IRI has maintained roughly 37 percent and EFIM 23 percent. The two account for 80 percent of defense employment and control the top fifty defense companies. The third, but private, industrial group is FIAT. There is a total of 8,000 firms in the sector as a whole. Of these, 200 are the principal companies maintaining significant revenues from defense products. This sector accounts for between 50,000 and 80,000 jobs.[62]

These large groups, however, do not bring efficiency with them. The companies associated with defense activities are fragmented and scattered across many sectors with little integration even within the individual group. The low level of concentration is reflected in the low average number of employees involved in military products.

Italian production programs are essentially based on U.S. licenses and collaborations with other NATO nations. This licensed work is driven by the very small national defense budgets and the small annual R&D budget. The latter encompasses only 1.5 percent of expenditures. Even the largest firms have difficulty in acquiring the ability to pursue indigenous, sophisticated equipment.

Italy has heavily invested in cooperative programs. This is reflected in the field of aircraft by their

---

[62]Ibid., pp. 33-34.

participation in the Tornado and the Eurofighter (EFA) programs, in the helicopter field by the EH-101 and NH-90 military helicopter programs, in the radar field by the Euroradar for Eurofighter, and in the missile field by the Family of Anti-Armor Munitions System (FAAMS) as part of Eurosam and Oto-Melaro. Such cooperative efforts do provide for the opportunity to produce weapons of reasonable sophistication for their armed forces.

An important similarity, though, with the other four is the importance of the aerospace industry to the Italian defense sector. It remains the fourth largest in Europe, but is half the size of Germany's and one quarter the size of France's. The aerospace sector does, though, generate 30,000 jobs.[63]

Not surprisingly, given the importance of aerospace in the Italian defense industry, Italy does have one firm with defense revenue in excess of one billion dollars. Alenia SpA earned 1.959 billion dollars from its defense contracts in 1992.[64] Alenia is a relatively new representative of the current trend to privatization and mergers sweeping the Italian economy. It possesses a full range of aerospace activity, including the development and production of both

---

[63]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry?, (Exeter: BPCC Wheatons Ltd., 1990), p. 60.

[64]John Appleby and Edward Foster, Up in the Air: European Union and Transatlantic Defence Industrial Cooperation, (Weymouth: Sherrens Printers, 1993), p. 41.

civilian and military aircraft, avionics, aircraft equipment, remotely piloted vehicles, missiles, and space systems. A large portion of its work consists of providing components to collaborative programs.

E. Collaboration In A More Competitive World

The European defense industry is confronted by a sea of change brought on by four fundamental international factors. The most monumental was the collapse of the Warsaw Pact and the Soviet Union that had previously stood menacingly facing Western Europe. Second, the evaporation of East-West rivalries meant that there were fewer Third World brush fire conflicts requiring large doses of weapons. Third, the declining crude oil prices in the mid and late Eighties constrained the Arab States' ability to afford larger and larger acquisitions of new weapons. And fourth, as a consequence of the softening Soviet policy line of the late 1980s, the NATO and WTO member states signed the Conventional Forces Agreement that stipulates obligatory conventional weapon ceilings by 1995. The combination of these events has had a potent effect upon Western Europe's arms industry with an implosion of demand for weapon contracts.

In the face of the changing international environment, the industry is struggling from an onslaught of stiff competition for a reduced market coming from several directions: their traditional competitors in the United

States, developing arms producers in some newly industrializing countries, and even from the former communist arms manufactures in Eastern Europe. To remain competitive requires an enormous effort. Despite shedding workers, closing plants, and completing mergers of several arms related companies, the Western European defense industry as a whole still lags behind their American competitors in adapting to these changing times.[65]

There is, for example, still significant redundancy in their Research and Development (R&D) and marketing of defense products. While the U.S. industry is working on one future fighter aircraft in the Lockheed/Boeing F-22, the Western Europeans are developing three: the Eurofighter, the French Rafale, and the Swedish Grippen; the U.S. is marketing one Main Battle Tank in the M-1A2, the Western Europeans are developing three; and national defense ministries continue to prohibit fellow European firms to bid on supply contracts, reserving the lion's share for their own national companies.[66] This sort of policy diffuses Western European defense efforts and denies them the opportunity to consolidate and take advantage of economies of scale in a bid to be more competitive.

However, the Western European defense industry has made

---

[65]"Europe Uniting in Building Arms," New York Times, 16 August 1994, sec. C, p. C1.

[66]Ibid., p. C1.

efforts to cut costs, combine technological strengths, and eliminate excess capacity through joint ventures, partnerships, and outright takeovers. There are, today, five major cross-border projects taking place whose developmental costs total approximately 21.6 billion dollars.

The Eurofighter (EFA), with a development cost so far of thirteen billion dollars, has firms from Great Britain(British Aerospace with a 33 percent stake), Germany(Daimler-Benz with a 33 percent stake), Italy(Alenia SpA with a 21 percent stake), and Spain(Construcciones Aeronautices with a 13 percent stake). It will have two assembly lines, one in Britain and the other in Germany. Consortium executives admitted that one assembly line would be more economical, but that political considerations over job distribution led to two.[67]

The Future Large Aircraft (FLA) will be a military transport. The development cost to date is about seven billion dollars and has firms participating from France, Germany, Italy and Spain. The NH-90 military helicopter development cost has been 1.6 billion dollars with firms from France, Germany, the Netherlands, and Italy

---

[67]"EFA Go-Ahead Would Be A Tonic For Defence Shares," Reuters, Limited, 10 December 1992, Financial Section.

participating. Production is estimated to start after 1997.[68]

The two latest newcomers are the GTK/VBM armored personnel carrier (APC) and the Eurofrigate. The APC has firms participating from France and Germany with development expected to start in 1995-1996. Each participating country is expected to purchase at least 3,000 units.[69] Firms from Great Britain, France, and Italy signed the Eurofrigate contract in July 1994. The total price of the contract could rise as high as twelve billion dollars.[70] The Eurofrigate program is particularly representative of the new effort in Western Europe to support collaborative projects. This is very evident when one considers the fate of the NFR-90, a common frigate planned for NATO and the predecessor to the Eurofrigate, only canceled in 1992 due to the inability among the participating governments to agree to its required specifications. A comparable reversal of the twelve billion-dollar Eurofrigate would not be taken lightly in the face of tightening defence budgets.

With the [illegible] of an increasingly competitive relationship [illegible] erican industry, and the European down

---

[68]"The best lines of defence: The political and commercial challenges facing Europe's arms industry," The Financial Times Limited, 17 May 1994, p. 19.

[69]Ibid., p. 19.

[70]"Europe Uniting in Building Arms," New York Times, 16 August 1994, sec. C, p. C1.

side of military "downsizing," the industry has come across difficulties despite its collaborative work. Western European arms exports, measured in 1984 dollars, have declined by 40 percent since 1984. Defense spending within the EU has declined 14 percent from 1987 to 1994. Among the major European States, the FRG's 1994 defense spending is at the 1984 level and Great Britain's spending is projected to decline 16 percent from 1991 through 1997.[71]

Major Western European defense firms have felt the effects. Deutsche Aerospace, with military sales making up 27 percent of total sales, has posted losses in four of the previous five years since 1994 and shed 8,300 jobs in 1993. Britain's Royal Ordinance, Europe's largest ammunition manufacture, has seen its sales shrink by 50 percent from 1987 to 1994. British Aerospace has downsized by shedding 25,000 workers from 1991 through 1994. Dassault's earnings are 40 percent leaner than 1984. The Italian defense sector has experienced a 40 percent plunge in revenue from 1990 through 1994. If this were not already bad enough, future predictions call for an additional decline of 150,000 to 200,000 jobs in the industry by 1997.[72]

However, despite a changing international environment,

---

[71]Robin Knight, Fred Coleman, Peter Green, David Bartal, Mark Fuller, Jessica Skelly von Brachel,and Elaini Dimmler, "Europe's Defense Contractors Get Hit," U.S. News & World Report, June 27, 1994, p. 49-51.

[72]Ibid., p. 49-51.

rising and stiff business competition, and at least tacit official recognition of the need for greater collaboration, the future path is by no means clear. Even given a consensus on the broad goals of collaborative arms development, the Western European defense industry is still composed of vastly different national industries. All have unique and contrasting government-industry relations. These institutional relationships often have a long history behind them and are not easily dispensed with in order to usher in a new approach. For all the talk of a European industry, there is still a very distinct national imprint present.

In addition, government policies are not coordinated to support the industry. Currently, the British MoD is accepting bids for a new military transportation aircraft and has placed itself at the center of a European controversy. The first of the two competitors is the American Lockheed C-130J that is an updated version of an aircraft that has been in production for years. This provides several advantages in that it has a long production run time which lowers the cost, the basic technology is proven and not prone to delay, and Lockheed can deliver the aircraft in the near term. The result is that Lockheed can offer the C-130J for a discounted price of less than forty million dollars. This makes the C-130J a very competitive

product in the British MoD bidding process.[73]

The trouble arises in that the Lockheed aircraft is competing against a European consortium consisting of British Aerospace, Deutsche Aerospace, and Aerospatiale. The European bid represents a new design with more current technology, but with an estimated price tag exceeding sixty million dollars. Furthermore, since the consortium is new to producing military transport aircraft, it is not at all unlikely that the consortium could face cost overruns and schedule delays.[74]

Should the British MoD adhere strictly to its established acquisition policy, it would most likely have to award the contract to the American firm Lockheed. While this would save the Ministry money and provide the Royal Air Force with a mission reliable aircraft, the decision would contradict European defense industry efforts to strengthen their competitive position against American industry. If the consortium cannot count on the major European military powers to purchase their final products, they run the risk of having an insufficient market to justify their R&D and production costs. With British and European aerospace jobs at risk, the MoD may have a challenging decision not only about aircraft transport but also about an attack helicopter

---

[73]"Europe Uniting in Building Arms," New York Times, 16 August 1994, sec. C, p. C5.

[74]Ibid., p. C5.

replacement where the choice is between the American designed Apache and the Franco-German Tiger. This is a telling example of how European policy is far from monolithic with regard to their defense industry.

None of the four leading national defense industries, with their associated national markets and institutions, finds it easy to mesh its programs and operations with its European neighbors. This difficulty demonstrates that despite the many pressing international challenges for the major Western European defense industries, there is no clearly defined path for concerted European action. What they have in common is the importance of their aerospace sectors, declining exports to support their industry, varying levels of privatization, and industry rationalization, with Italy seriously lagging behind the other three. What they do not share is a common government policy response. London champions laissez-faire competition, Paris a virtual industrial policy for defense, Bonn a privatized push for consolidation, while Rome is in disarray except perhaps over the commitment to privatize. Given this policy spectrum, the continental defense industry may be moving in a common direction, but maintains a very wide breadth along the path to a single European defense industry.

In the next chapter, we shall examine the factors that have provided the impetus for the Western European States

and their respective industries to pursue further collaborative work. Over the last decade, such issues as European security considerations, the Single European Act of 1987, the Maastricht Treaty, and the international arms market have weighed heavily on development of the defense industry. The existence of isolated, national armament industries have entered their twilight days.

CHAPTER THREE

Impetus for Collaboration: Factors in Play

In this chapter we shall examine the factors that have provided the impetus for the Western European States and their respective industries to pursue further collaborative work. Over the last decade, such issues as European security considerations combined with the implementation of the Single European Act of 1987 had a profound effect. Furthermore, the Maastricht Treaty and the international arms market weighed heavily on developments in the defense industry several years later. The interaction of these developments provided the impetus for the Western European defense industry to achieve the degree of collaboration it enjoys today.

A. Security Concerns & The Single European Act of 1987

With the Independent European Program Group (IEPG) working actively with the Conference of National Armaments Directors (CNAD) in 1994, the European defense industry is now enjoying the fruits of many years of effort to strengthen it. The U.S./NATO effort to support the Western European defense industry, driven by security concerns, managed to achieve incremental advances over the previous decade in terms of both reestablishing the European defense industrial base and limited weapon standardization. The United States remained committed to that policy through the

last years of the Cold War.

The U.S. did not start seeing real advances toward its goal of greater European cooperation until the early 1980s and much more concretely at the end of the decade. Standardization, on the other hand, became increasingly difficult to achieve. The European Governments showed a preference for domestically produced systems while the U.S. effort stressed commonality with American produced systems.

While international security considerations did provide an impetus for growth in defense industrial cooperation, the industry also felt the effect of substantial change in the then EC's domestic economic situation. While the defense sector of the European economy was not specifically affected, as were all other sectors of the economy, the Single European Act of 1987 did, nevertheless, have some not so subtle effects on the defense sector. These two factors complemented one another with the SEA having a more significant impact as the Cold War came to an end.

The European Council agreed to the concept of the SEA on December 3, 1985. It was negotiated over the course of 1986 and the twelve EC members had ratified the Agreement by July 1987. The overall thrust of the agreement was to revitalize the EC in fulfilling the long term goals of the Treaty of Rome. This new single market would provide for a more competitive European industry vis-a-vis the Americans and the Japanese and provide for significant job expansion.

The SEA specifically stipulates 300 initiatives that would create a unified European market by the end of 1992; ensure free movement of goods, capital, and labor within the common market area; substantially extend the scope of majority voting; amend the Treaty of Rome to include several new policy areas such as technological cooperation, common economic policy and the European Monetary Policy; extend the powers of the European Parliament; and codify greater European cooperation in a formal international agreement.

Of the four key issues not included in the Treaty of Rome, the three issues of money, macroeconomic policy, and foreign policy were all included directly in the SEA. Military matters, though, remained an ambiguous issue in that Article 223(b) of the original treaty remained in tact. Efforts had been made to amend it both during the SEA negotiations and the later Maastricht negotiations. This article, still in force, exempts "arms, munitions, and war material" from the Common External Tariff (CET) and market legislation.[75] This left the fundamental aspect of military procurement completely under national jurisdiction.

Failing to amend Article 223, the EC did nonetheless address military matters under the SEA's Article 30, paragraph (6)(a) and 6(b). In article 30(6)(a), the member states committed themselves to working together more closely

[75]Michael Brzoska and Peter Lock, Restructuring of Arms Production in Western Europe, (Oxford: Oxford University Press, 1992), p. 218.

on the "political and economic aspects of security." Furthermore, in paragraph 30(6)(b), "The High Contracting Parties are determined to maintain the technological and industrial conditions necessary for their security. They shall work to that end both at the national level and, where appropriate, within the framework of the competent institutions and bodies."[76]

Consequently, the Commission has slowly started to assert itself in the defense realm in accordance with the stipulations in Article 30 of the SEA. The implementation of the SEA had both legal and psychological effects on the European business community. With the economic future framed in terms of the SEA, and with the vast majority of business concerns civilian related, the corporate climate has oriented its activity toward transcending national borders and producing and marketing for a European-wide market.

Influencing the Western European defense industry at the same time was the Independent European Program Group (IEPG) that was formed in 1976. As discussed earlier, its primary responsibility was to encourage a common understanding of the member states procurement processes, identify future military requirements and the potential for collaborative projects. The second critical change in

---

[76]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 54.

European defense industry affairs took place in November 1984. The IEPG conducted its first meeting at the Defense Minister level. Out of this meeting came the decision to increase current efforts in Europeanization of defense work and to rationalize and increase the efficiency of Europe's defense-industrial base.[77]

As a result, the IEPG greatly strengthened its links with the European Defense Industrialization Group (EDIG), an organization also formed in 1976, which represented private industrial defense firms in Europe and was to be the formal advisory group to the IEPG. The IEPG officially recognized the EDIG as such in 1984.[78]

The EDIG then took immediate steps to form working groups in the mold of the IEPG. These groups focused on the European Defense Industrial Study (EDIS). Additionally, it maintained close ties with the NATO Industrial Advisory Group. The EDIG set ambitious goals: (1) harmonization of programs and procurement practices; (2) early involvement of industry in operational requirement planning; (3) achieving economies of scale; (4) strengthening the IEPG industrial base; and (5) create definition of IEPG market rules. These represented some of the most "hands on" goals that would be

---

[77]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), p. 40-41.

[78]Ibid., p. 41.

necessary to achieve really meaningful collaboration.[79]

The program produced by the IEPG, since 1984, has been instrumental in facilitating the growth of collaborative projects. Specifically, drafting the 1985 EDIS report helped provide a clear focus for government and the private sector. The timing of the compilation of the report was critical politically. It was during this time that political discussion produced a decision on moving Europe toward the single integrated market. With the SEA treaty in the works simultaneously, there was a natural incentive to move the defense industry issue along the same path. The flow of history had finally caught hold of the collaborative efforts of the European defense industrialists.[80]

One analyst summed up the report's findings as follows: "the root cause of the transatlantic arms trade imbalance is the fragmentation of the European market on national lines, which translates into high R&D-to-production cost ratios and elevated unit costs. Only greater inter-European competition and extensive industry linkages, combined with a far more liberal sharing of technology, could lessen this handicap."[81]

Despite the importance of the EDIS recommendations, the

---

[79]Ibid., p. 41.

[80]Simon Webb, NATO and 1992: Defence Acquisition and Free Markets, (Santa Monica: The RAND Corporation, 1989), p. 104.

[81]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), p. 42.

report did not face a smooth adoption. The Defense Ministers initially did not agree to the terms of the common R&D fund and a permanent IEPG secretariat, but ultimately adopted the report in 1988. Along with this agreement came a side agreement in which Defense Ministers planned to start freely exchanging information pertaining to future arms purchases. Ironically, the Defense Ministers were driven to agreement in 1988 more over concern for American domination in the trans-Atlantic arms trade than the Soviet threat.

Two influential factors leading to the Europeanization of a single market can be seen in two reports. The first is a report entitled "The Cost of Non-Europe" and published in the late 1980s. This attributed high custom costs to border delays and trade barriers that may range as high as eight billion ECUs for corporations and one billion ECUs for governments. The implication was that national policies hindered development of strong world competitive companies. The business community recognized the single market as a means to strengthen their collective competitive position and oriented their strategy planning accordingly. Since many of the largest arms producing firms have equally large civilian market concerns, the trend toward Europeanization extended indirectly to the defense sector.[82]

In addition, another factor in Europeanizing the market

---

[82]Jane D. Drown, Clifford Drown, and Kelly Campbell, A Single European Arms Industry?, (Exeter: BPCC Wheatons Ltd., 1990), p. 128.

was the 1990 EC decision to open public procurement to European-wide bidding in the previously restricted areas of water, energy, transport, and communications. With open bids implemented on January 1, 1993, what once was a fragmented market became one worth 300 to 400 billion dollars. The creation of such advantageous change in the European market only served to reenforce a European, strategic business vision.[83]

As real-world incentives for corporations to act European and not national expanded, indirect economic factors affecting the defense sector grew increasingly influential. This is particularly the case for defense firms that are involved in either a mixed civil-military entity or one that deals with dual-use technology. As a consequence of the merger trend and the advent of high technology in dual-use application, it has become very difficult to distinguish between military and civilian spheres of industry.

The heavily diversified corporation, with stakes in military and civilian activities, will benefit from EU supported policies to support survival oriented consolidation and more extensive research and development. The defense components are likely to benefit equally from this support as the official recipients in the civilian

---

[83]James B. Steinberg, The Transformation of the European Defense Industry, (Washington: RAND, 1992), p. 55.

sector. With the indirect and strictly unintentional support slowly taking place, it would be analogous to say that it would only be a stone's throw to extend EU support and guidance directly to a significant portion of the defense sector. The rising importance and extensive use of dual-use technology and products would only serve to facilitate such an eventuality.

Due to the increasingly murky distinction between the defense and civilian sectors, and despite the rigidity of Article 223(b), the European defense industry faces the increasing prospect of operating within the parameters of the single market. The industry will encounter increasing pressures to pursue collaborative projects and to rationalize. The impetus for such movement toward the SEA is already being felt, but there are f.ve means currently under discussion by the Commission to extend gradually the jurisdiction of the SEA over an increasingly single European defense industry. These policy discussions influence corporate management in that they seek to anticipate encroaching regulatory change in order to minimize the later impact upon their business operations.[84]

In the area of dual-use, the EU may pursue a policy of imposing legal constraints on the civilian sector divisions of a corporate entity that has defense activities. This

---

[84]Michael Brzoska and Peter Lock, Restructuring of Arms Production in Western Europe, (Oxford: Oxford University Press, 1992), p. 10.

regulating approach, while not directly dictating defense related concerns, certainly would influence and shape corporate strategic planning in terms of R&D, consolidation, production, and marketing options. Furthermore, the Commission may argue that it is within its competence to regulate state subsidies to dual-use producing firms.[85] Since these products would be competing in the single market against products without subsidies, the Committee would argue that funds targeted to support a defense product would provide discriminatory advantage in its civilian marketing. Again, this shows the complexity and difficulty in determining what extends to defense products and what is separate only unto itself.

In another extension of the subsidy argument, the EU may, in pursuit of fair competition within the single market, attempt to prohibit subsidies to firms that then gain an advantage over firms from other member states. Such a success would create a more competitive environment for defense products since the firms would have to rely upon their own resources. This, in turn, would provide the economic incentive to rationalize and seek the most efficient means to remain in the market to include collaboration.[86]

---

[85]Ibid., p. 39.

[86]Herbert Wulf, Ar[illegible] Industry Limited, (Oxford: Oxford University Press, 1993), p. 199.

In addition, there are several other means being considered by the Commission to foster movement out of the collapsing shells of national defense works and toward a single European defense industry in accordance with the SEA. The merger and anti-monopoly regulations are also a component of EC competition policy. The application of Article 85 and Article 86 of the Treaty of Rome to national firms that dominate a national defense market would ease the industry toward the single market. The political advantage of this approach is that the authority can be cited in the original text of the Treaty of Rome.[87]

In the area of public procurement, the Commission has begun to attempt to reiterate the initial, strict definition of defense equipment in the words of the treaty text. This would extend the exemption only to "arms, munitions, and war material" and would roll back the current number of products being categorized as defense related. This would certainly expose all dual-use items to the SEA.

The opportunity to exert pressure to move the industry toward the SEA has not always met with success. An example of a failed bid by the Commission to assert control over the defense sector can be seen in the 1988 Common External Tariff (CET) decision. At that time, the Commission asserted that all defense products would be subject to the

---

[87]Herbert Wulf, Arms Industry Limited, (Oxford: Oxford University Press, 1993), p. 195.

CET. Those items specifically outlined in the Treaty would be granted a 0 percent tariff, but all other items would be affected.

This announcement was met with an uproar by national governments and the United States. The political debate dragged on for two years until the Commission postponed indefinitely any action on the proposal in April 1990. Part of the resistance stemmed from competing institutional structures such as the IEPG and national governments. Neither felt the EC Commission had competence in defense affairs since defense ministers are not a working group in the EC. Only the IEPG provides for the forum to discuss the defense market with authority. Off the center stage for now, it remains a discussed option for some with potential consequences for many.

The magnitude of the Single European Act is such that the European defense industry must necessarily be affected. Economic ties and activities have become too intertwined in the advent of growing corporate mergers. Wide, diversified portfolios and the rapidly expanding use of high technology dual-use items are too much for firms not to be influenced. With an ever increasing European corporate mind set, it will be increasingly difficult to resist efforts to hedge one's bet in the pursuit of joint projects, consortia, and outright takeovers. With the already murky line distinguishing civilian from military activities diminishing

by the year, the powerful competitive forces of the single market will continue to provide national incentives for growth toward a single European defense industry.

B. Maastricht Treaty: Common Foreign And Security Policy

As the Single European Act began to make itself felt upon the Western European defense industry, another influential factor came into play. With the successful conclusion of the Cold War coinciding with the implementation of the Maastricht Treaty, a new effort is underway to form a common foreign and security policy (CFSP) for the member states of the European Union. It was the intent of Maastricht to forge ahead with the development of the CFSP under the auspices of the Union regardless of an on-going superpower rivalry. This was especially true since the treaty was negotiated in the last years of the Cold War. However, the unexpected collapse of the Warsaw Pact and the Soviet Union added an extra impetus to the process. For the first time in forty-five years, the Europeans found themselves no longer dependent upon the United States for their security and could, therefore, contemplate a more independent stance than before.

This opening window of opportunity complemented the European Union's desire to create a European Security Identity (ESI). This would be the basis for the European pillar of the North Atlantic Treaty Organization (NATO) and the Atlantic Community. The ESI is not intended to supplant

NATO membership, but rather enhance it. The Europeans are to provide more in terms of their own defense and relieve some of the burden sustained by the Americans throughout the Cold War. In order to provide a focus for pan-European security concerns and discussions, the Western European Union (WEU) was selected to be the defense component of the European Union.

Underlying all this is the thought espoused by French President Francois Mitterrand in 1992. He stated that nothing will come of European Union if Europe cannot reliably provide for its own defense. Consequently, the Maastricht Treaty is expected to harmonize defense procurement. Such harmonization would come at an opportune time to facilitate the fielding of the Franco-German Corps and any future sister pan-European units.

The WEU is tapping into much of the work of the IEPG to find common denominators for equipment needs for the European nations working within NATO. The defense industry has been working closely with the WEU staff and this has led to greater cooperation among the firms themselves. This cooperation minimizes the total number of competitors in the bidding process and, therefore, enhances the prospect they will earn a portion of the winning contract. With the WEU empowered to work the EU defense policy, the gradually continued streamlining of demand will continue to create the economic incentive to match the process among suppliers.

Since national governments are politically committed to the CFSP, the harmonization process promises to be for the long term.

C. International Competitiveness: Arms Bazaar

In addition to the previous three motivating factors, the changing nature of the international arms market has provided a powerful impetus for increasing cooperation between Western European arms industries. Of the leading four armament producers in 1993, Great Britain ranked first in terms of arms exports, France second, the FRG third, and Italy fourth.[88] All except the FRG court arms exports to help sustain the viability of their national arms industries. The FRG is the exception because the Government and industry have consciously avoided reliance on arms sales due to the nation's history and related national legislation that places significant restrictions on potential sales. The importance, though, for the remaining three cannot be overstated for none have sufficient national requisition needs to support their defense industrial base by itself.

Since sustainability of the national defense base requires exports, any change in the market would have ramifications for the industry as a whole. This is evident when one considers that a total of 30 to 50 percent of British and French defense production is currently exported.

---

[88]"European Defence Industry Has To Cut Its Ranks," The Reuter European Business Report, 25 January 1993.

Buoyed by high oil prices in the early Eighties, 50 percent of British arms exports and 60 percent of French sales went to the Middle East. The French shipped about 40 percent of their military exports to Iraq alone at a value of forty million dollars per week in 1985. And in 1986, 47 percent of arms sold to Africa and 48 percent sold to the Middle East were from Western Europe.[89] With such large sums reliant on exports, the industry can only ignore developing changes at its peril.

In particular, the arms market was affected by three developments. These three are listed in the order of importance. First, the decline of world oil prices coupled with the continuing recession in the Third World. This has dried up the funds previously available for arms purchases resulting in declining sales as discussed earlier. Second, the decline in East/West confrontation has eliminated the urgency in many formerly frantic regional arms races. And third, the number of competitive arms producers has increased as the total demand has decreased. Of the three, the first two have been discussed previously and have been well established for some time. The third, though, requires more discussion.

Among the major arms exporters of the world, there are essentially three sources. The traditional ones are Russia,

---

[89]Beverly Crawford and Peter W. Schulze, European Dilemmas After Maastricht, (Berkeley: University of California at Berkeley Press, 1993), p. 233-235.

as the successor state to the Soviet Union, the United States, and the Western Europeans. There are today new sources of competition coming in different forms. First, over thirty Third World nations have developed indigenous arms industries that can now supply them with stocks of basic small arms and ammunition. Second, newly industrializing nations such as Brazil, Chile, and China have developed arms industries and now collectively hold roughly 10 percent of the global market. Third, and just recently making the break into the market, are weapon sales from Eastern Europe and Russia to nontraditional buyers. Until 1991, Eastern Bloc industries sold to Soviet client states. Now, with the Cold War as history, the very competitive prices of the former Eastern Bloc industries are poised to make potentially significant inroads into market share. Unless the Western European industries can rationalize and market more efficiently, they will face losing prospects.

Under the previous communist armaments policy, an extensive industry was developed in the Eastern European states. This has provided the successor governments a means of obtaining hard currency. Whether arms sales are officially encouraged or not, they can have a significant effect. According to the Stockholm-based International Peace Research Institute (SIPRI), the Czech Republic became the world's sixth largest arms exporter in 1993 with a total

sale of 484 million dollars.[90] The Czech arms industry is able to offer reliable and inexpensive weapons to poor countries that cannot afford the first line Western systems.

This report came shortly after Chilean Army Chief General Augusto Pinochet's visit to Prague to discuss the purchase of Czech made arms and military equipment. The visit was coordinated between the private arms firms and the Chilean Army and represents a major penetration of the Latin American arms market by an Eastern European arms producer.[91] Given the region's historical anticommunist national policies, the trip shows just how much has been overcome in a short period.

In addition to this rising competition from Eastern Europe, the Western European defense industry must be wary of the post Soviet Russia. The Yeltsin government has been taking visible steps to strengthen the viability of their potential armament exports. As recently as May 19, 1994, the First Deputy Prime Minister urged the liberalization of Russian arms exports. He cited as an example a factory that had 200 million dollars worth of automatic weapons stockpiled, but the company managers were having difficulty with sale permits from Moscow. Easing restrictions would facilitate such sales and help keep some three million defense industry workers in their factories rather than on

---

[90]RFE/RL Research Institute, Daily Report, 20 June 1994.

[91]Ibid., 31 May 1994.

the streets in 1994.[92]

With such a visible sign of potential unemployment, it is not surprising to learn that the Russian government is supporting subsidies for some Russian defense firms for dual-use technology, aerospace, shipbuilding, and missiles.[93] President Yeltsin went so far as to say that the Russian Army should possess equipment that not only contributed to its mobility, but could be sold competitively on the world market.[94]

The Defense Committee Chairman of the Russian Duma stated that his country should operate just like the United States in selling arms. He noted that from 1987 to 1993, the share of the world's arms trade controlled by the U.S. had risen from 30 percent to almost 60 percent while that of Russia had fallen to 5 percent. He believes that Russian arms can and should be vigorously marketed.[95]

Russian progress in recapturing traditional clients is readily apparent in the contract signed with India on July 30, 1994. The Russians are to upgrade the Indian fleet of MIG-21s and are currently negotiating a potential sale of MIG-29s. The initial contract is worth 760 million dollars and prevailed over bids by France's Dassault Electronique

---

[92]RFE/RL Research Institute, Daily Report, 20 May 1994.

[93]Ibid., 26 July 1994.

[94]Ibid., 15 June 1994.

[95]Ibid., 28 June 1994.

and two Israeli firms.[96] In a smaller contract, Sri Lanka agreed to purchase seventy-three million dollars worth of armored vehicles, gunboats, helicopters, and transport aircraft.[97] Even China, an arms purchaser from the 1950s and early 1960s, is back with a reported agreement to purchase five billion dollars worth of arms over the next several years.[98]

However, Russian arms exports have not been limited to traditional clients. The Russians have made remarkable penetrations in very traditional Western European and American markets. The first such contract in Latin America was reported on June 6, 1994. Brazil agreed to acquire 110 shoulder-held, ground-to-air Igla "Needle" missiles and associated launchers with a delivery date of that same year. The deal, part of a two billion-dollar trade agreement, had been signed in 1993.[99]

In three other geographical regions, the Russians have also made surprising penetrations. Turkey, a NATO member, has purchased Russian artillery and armored vehicles.[100] Kuwait, a close American ally and Western European arms customer, signed a contract for the acquisition of "Smerch"

---

[96]Ibid., 5 May and 1 July 1994.

[97]Ibid., 29 August 1994.

[98]Ibid., 5 August 1994.

[99]RFE/RL Research Institute, Daily Report, 7 June 1994.

[100]Ibid., 20 July 1994.

rocket launchers and BMP-3 armored personnel carriers; the contract was worth several hundred million dollars.[101] And in a contract worth 500 million dollars, Malaysia agreed in June of 1994 to purchase eighteen MIG-29s with a delivery date of April 1995. Russia is currently discussing further arms sales with other members of the Association of Southeast Asian Nations (ASEAN).[102]

Should such market penetration into traditionally Western markets continue, the Western European defense industry will be facing an increasingly competitive world market since it is very likely that American firms will scramble to compensate for revenue lost to the former Eastern Bloc. The only means to compete in this new world order will be to pursue vigorously cooperative European efforts to reduce redundancy in competition among similar European products.

Such heavy market incentives as the contracting arms market with a growing number of competitors, the institutional and industrial coordination undertaken as security considerations, the effects of the Single European Act of 1987, and the implementation of Maastricht have all provided an impetus for a broadening and deepening collaborative effort within the Western European defense industry. Failure to act will leave the European industry

---

[101]Ibid., 11 August 1994.

[102]Ibid., 27 July and 18 August 1994.

competitively hamstrung as it enters the Twenty-First Century.

In the next chapter, we shall consider several questions as to the future prospects of the industry. Given the potential promise of the WEU, just what likelihood does it have of succeeding? For its success, or failure, could translate into that of the industry itself. With a post Cold War Europe, are any of the leading European powers contemplating policy changes that could have significant implications on the industry? The comings and goings of different strategies have always affected acquisition. Given the long public commitment by both the United States and Europe to furthering trans-Atlantic cooperation in a multitude of matters, just what ramifications do the Americans face as the Western European industry changes?

CHAPTER FOUR

Future Prospects

In this chapter we shall consider several questions as to the future prospects of the Western European defense industry. There are three questions in particular that are of concern. Given the potential promise of the Western European Union (WEU), just what likelihood does it have of succeeding? In a post-Cold War Europe, are any of the leading European powers contemplating policy changes that could have significant implications for the industry? And given the long public commitment by both the United States and Europe to furthering trans-Atlantic cooperation in a multitude of matters, just what ramifications do the Americans face as the Western European industry changes?

A. The WEU: The New Hope?

From among these questions, the first we shall consider is the most promising institutional and policy development that could benefit the struggling European defense industry. What is important for this discussion is to determine just what are the future prospects of the WEU, a long-standing, but newly empowered institution, as it may affect the European defense industry. It remains in its formative condition, but if fully implemented could greatly strengthen the European defense industry in terms of economies of scale and providing a unified market for its products.

The Europeans have been vigorously pressing integration beyond the economic sphere. The spillover of these efforts could provide an enormous boost for the defense industry should the WEU meet with success. The potential is so vast that one cannot afford to take the likelihood of such an endeavor lightly.

Given this historical moment with a widening Europe officially poised for greater strides in integration, one cannot help but take a passing glance over one's shoulder to the early 1950s. The scene was surprisingly similar in certain respects. Western Europe was showing visible signs of growing cooperation and integration. Heightening expectations for progress were drawn from the successful creation of the Organization for European Economic Cooperation (OEEC), the Council of Europe, the European Coal and Steel Community (ECSC), the European Payments Union (EPU), and the North Atlantic Treaty Organization (NATO). The European Defense Community (EDC) was being developed in the same period. This institution appeared as a natural component of this growing integration and filled many prerequisites for successfully orchestrating a collective defense in the face of the Red Army.

However, despite evidence of success elsewhere on matters of European integration, the EDC was to meet its

demise in August of 1954 in the French National Assembly.[103] Despite the many advantages the treaty was to provide for Western European collective defense, the EDC was defeated on political grounds. After having been ratified by five of the six treaty signatories, the EDC was defeated for four main reasons.[104] With the British having opted out of the EDC, the French were increasingly fearful that the organization would be dominated by the Germans. This took on particular significance at the time since influence in the organizational decision making was linked to the respective size of each nation's troop commitment. While Germany would have her entire army deployed on the central front in Germany, France would still have most of its army tied down overseas in her colonies, including Indochina. Recognizing this, the French doubted that they could maintain sufficient troops in Europe to ensure that their interests prevail.[105]

Secondly, much of the initial pressure for a rapid solution to Western European defense matters dissipated with the end of the Korean Conflict and the death of Joseph Stalin. Thirdly, national signatories aside from France

---

[103]Edward Fursdon. The European Defence Community: A History, (New York: St. Martin's Press, 1980), p. 296.

[104]Trevor Taylor. European Defence Cooperation, (London: Routledge & Kegan Paul, 1984), p. 16.

[105]Olav Riste, Western Security: The Formative Years, (New York: Columbia University Press, 1985), p. 276.

were concerned that a common European army would potentially lead them to commit troops in the defense of European colonial possessions other than their own. This was particularly galling for Italy since she had just lost her overseas possessions. The French debacle in Indochina only reenforced this uneasiness. And fourth, and proving decisive, the composition of the French Assembly had changed since the time they had initially approved the concept. Contributing significantly to the negative vote in August of 1954 were the Gaullists and the Communist Party. The Gaullists were opposed to the supranational aspects of the treaty and the Communists were opposed to any Atlanticist defense efforts.[106]

Proponents of European integration made dire predictions concerning the cause of integration should the EDC fail. It did, but its failure was not to sidetrack the economic integration movement. However, the failure did provide a stunning blow to future ventures in developing a European Defense Identity. This was to delay any further attempt for almost thirty years. Aside from the American-led NATO initiatives, European defense integration efforts ground to a halt. This interruption, though, is a significant negative consequence that should not be overlooked.

---

[106]Daniel Lerner and Raymond Aron, France Defeats EDC (New York: Frederick A. Praeger, Inc., 1957), p. 184-194.

Given the price of failure in developing a European defense pillar thirty years ago, several questions beg to be asked. First, to what extent does the EU's WEU initiative reflect the goals of the stillborn EDC? And secondly, given the earlier political defeat, to what extent is the political atmosphere different today as the EU attempts to implement its concept of a European security identity?

In comparing the goals of the EDC and the revitalized WEU, one can see significant similarities in their goals. One can identify structural differences in institutional formats, but it is the goals over which the political battle will be waged. Indeed, as time progresses, it may be that the WEU will face institutional realignment in order to support the EDI goals, thus resulting in a structure not so different from that of the stillborn EDC.

The EDC had six primary goals: first, establish a supranational authority to administer a comprehensive European defense policy; second, establish a common, pooled defense budget; third, establish a centralized procurement system; forth, establish a European Army to be integrated at the Corps and Army level; fifth, provide for German rearmament and integration in the Western Alliance; and sixth, guide and develop the Western European defense industry and production base.

Despite the acknowledged vagueness of the role of the WEU, Jaques Delors identified the primary goals of forming

an EDI in his speech to the IISS on September 10, 1993.[107] The overarching guidance from the terms of Article J.4 of the Maastricht Treaty stipulate: "The common foreign and security policy shall include all questions related to the security of the Union, including the eventual framing of a common defense policy that might in time lead to a common defense."[108] Given this sweeping statement, Delors proceeded to identify two more specific goals for the EU. The first was the continued expansion of the presently forming Eurocorps.[109] This military unit, based on the Franco-German Brigade concept, would provide the Europeans with troops that, while still under NATO, could be tapped to exercise a WEU mission in support of European policy. While not the same in detail as the European Army of EDC fame, it does represent a move toward a greater "European" military force. The Eurocorps is to become operational in October 1995 with 40,000 troops. Furthermore, the WEU will develop a common procurement policy that would certainly affect national defense budgets.[110] When linked to the current work of the Independent European Program Group (IEPG), the

---

[107]"Delors Speech At IISS Conference," The Reuter European Community Report, September 10, 1993.

[108]Assembly of Western Europe Union, Western European Union: Information Report, (Paris: Imprimerie Alenconnaise, 1993), p. 23.

[109]"Delors Speech At IISS Conference," The Reuter European Community Report, September 10, 1993.

[110]Ibid., September 10, 1993.

EU will also have a hand in directing and orienting the European defense industry.[111]

While perhaps lacking the specificity as outlined in EDC structure, much of the long range interests of both efforts, in fact, have much in common. If one takes into account that German rearmament was an EDC goal specific to that historical date, then the only notable difference lies in the absence of a common defense budget under the auspices of the WEU. This, though, should the sister Maastricht goals of economic and political union succeed, may become a natural consequence of Europe 1992.

Given the similarity in goals between the EDC and the new WEU, we must look to the second question. As to the political atmosphere of the early 1950s, the situation was extremely complex. There were, in fact, three critical underlying issues that impacted national decision making.

The first was the Cold War that generated a great fear of a potential invasion of Western Europe by the Red Army. This very real security concern provided an impetus for the governments to seek an efficient means to meet their collective defense needs under NATO. Furthermore, the Korean Conflict was initially and widely seen as a prelude to Soviet action in Europe. As part of this, France and the other Western European nations were seeking a means to rearm

---

[111]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), p. 41.

Germany in order to permit it to contribute to the defense of the West. However, with the memories of the Second World War so fresh in their minds, they all sought the assurance of a fully integrated German Army within the western defense structure. Issues such as these were central to the drafting of the EDC.[112]

A second major factor was economic. As Western Europe continued to recover from the ravages of the Second World War, the governments were hard pressed to meet both reconstruction, social, and defense costs. Facing complex and serious budgeting strains, the governments were very interested in an efficient means to field their armies. The EDC was designed with that in mind since it would eliminate duplication of effort and result in lower unit price costs for weapons being purchased in a pool for its members.

And thirdly, the concern over supranationalism was the most divisive factor. Whereas the first two generally provided the political impetus to pursue the EDC, the latter tended to split the ranks. There were those who were determined Pan-Europeanists who saw the future in a supranational fashion and there were those who resented conceding national sovereignty. Specifically, the Gaullists in France were adamantly opposed to submitting such critical issues of national security to a supranational body.

---

[112]Robert McGeehan, The German Rearmament Question, (Chicago: University of Illinois Press, 1971), p. 52.

Furthermore, they had no desire to see the French Army lose its identity in a European Army.[113] It was this nationalist resistance to supranationalism that ultimately defeated the EDC despite the considerable advantages.

With the passage of thirty years, much has changed in the European political landscape. However, there remain essentially three critical underlying issues of enormous political significance that overshadow the entire CFSP debate. For the EU to develop successfully the desired EDI, the leadership must grapple with the politics of these three spheres. The ramifications for the defense industry will be enormous.

The first sphere is again that of security. There is, though, a fundamental difference; while the Cold War provided a very powerful impetus to pursue an integrated defense to face that threat, the parties now face no threat of invasion. With that good news, though, went one of the most powerful political forces that spurred early efforts to support collective defense through integration. Diluting the defense impetus further are potential quagmires like Bosnia and general talk of "out of area" missions.

Not only does Bosnia fail to generate a rallying cry for greater efforts for concessions in the interest of common defense, but potential German troop deployments are

---

[113]Francis A. Beer, Integration and Disintegration in NATO, (Ohio State University Press, 1969), p. 84.

again an issue for opposite reasons. Rather than worrying about German troops in the central plains of Europe, there are those who argue that Germany must amend its constitution so it may also contribute to an out of area mission. But there are not many Europeans who support this proposition, nor are many Germans convinced that amending their constitution is a good idea just to entitle them to become "part of the action" in any future Bosnian episode. Despite the ruling of the German High Court, the Bundestag is not likely to vote readily in support of transborder troop deployments without significant debate. Consequently, whereas the security realm was certainly a positive impetus for the EDC of old, it is at best, in the 1990s, a very mixed political factor for the attainment of an EDI today. This, in turn, directly affects the viability of the WEU.

As for the economic situation, it too has provided an ironic twist. Whereas thirty years ago European industry was still recovering and governments were financially strained, now Europe faces a prolonged recession with reconstituted national industries competing for jobs.[114] As a matter of efficiency, there is surely room to eliminate duplication in the European defense industry. However, any common procurement system that may, in fact, save governments money in the long term, could very well cost

---

[114]Robin Knight, Fred Coleman, and John Marks, "Summer of Discontent," U.S. News & World Report, June 6, 1994, p. 49.

various national firms jobs in the short term. Currently, 90 percent of defense procurement is on a national basis and often the defense firm is government owned. Given the political challenges facing current parliaments, there is not too much of an incentive to move quickly on streamlining defense procurement and budgets under the WEU if it in any way has a visible effect on employment.[115] Consequently, the economic advantages potentially derived from the stillborn EDC and the Delors-defined EDI, could very well pose a nasty dilemma for current political leaders and tend to undermine enthusiasm for rapid implementation, despite the long term gains in efficiency and global competitiveness that could result.

Of the three issues, the third remains closest to its original state. The issue of defending colonial possessions has been made mute by decolonization. Nevertheless, the issue of supranational versus national concern remains strong. Despite advances in joint military efforts, such as recent evidence of expanding the Eurocorps to include troops from Spain and Belgium, the contentious division over a future supranational path or one of intergovernmental cooperation has not receded.[116] Both the British and French Governments remain wary of conceding too much too fast to

---

[115]Ibid., p. 49-50.

[116]"Delors Speech At IISS Conference," The Reuter European Community Report, September 10, 1993.

Brussels. Since national security is one of the issues most closely associated with one's nation, it is unlikely that a true EDI under a CFSP will come about until the leading European powers are comfortable with that proposition.

The official prospects of Maastricht may be bright, but just as the EDC enjoyed an integrationist momentum in the early 1950s, it was the political realities at home in the capital that dictated the result. Given the similarities among the goals of the two programs, it would be wise for the EU leadership to take careful note of the political landscape in which they must push their agenda. Despite the advantages that existed for the EDC, it was the political issue of supranationalism versus nationalism around which the nationalist advocates rallied to defeat the EDC.

Today, the political impetus is encountering more resistance than thirty years ago. It is not at all unlikely that the CFSP will be one of the more contentious issues of the 1996 Intergovernmental Conference convened to review the "balance sheet" of the Maastricht experience. At the center of this discussion will be the future role and power of the WEU. Consequently, the European defense industry is again poised on the verge of a very favorable development, but by no means is this long term advantage secure.

B. The National Aspect

The second question concerning us is the future prospect of changing national policy. From among the major

European powers come mixed voices about future policy prospects. Using previous defense White Papers as a yardstick to measure changes, none have deviated fundamentally from the last years of the Cold War. Despite spending reductions, national strategies have remained intact and are likely to remain so for the foreseeable future.

Any decisive movement will likely emerge only after the upcoming national elections that currently have the attention of the leaders of Great Britain and France. Prime Minister Major must call elections no later than 1997 and President Francois Mitterrand's term ends in 1996 and he will not seek reelection. Despite the French President's failing health, he is likely to pursue current initiatives such as the "core Europe" proposal for future EU integration. Provided that any policy revision would likely affect the status quo and, therefore, potentially disrupt existing political alliances, the Major Government has little political incentive to seek substantial change prior to the 1997 election.

If the FRG October 1994 election results in a continuation of the CDU-FDP coalition government, then Helmut Kohl will have the opportunity to support the emerging "core Europe" plan while he still has the Mitterrand Government in Paris. His policy options, though, may be limited by the outcome of the post-Mitterrand

relationship between Bonn and Paris. While the prospects of a Conservative election victory in France appear rather likely, it is still too soon to name the Conservative presidential candidate. Depending on the 1996 victor, further EU deepening may still be viable. Discussions over the future of the "core Europe" approach for the EU is very much linked to the outcome of both the British and French elections. Within the context of that debate is the issue of a potential common defense policy that would certainly raise the prospect for change.

Regardless of a lack of official policy change, one can identify several issues that have implications for future national defense policies that will likely inspire intense debate. Should any of these policy changes be adopted, important change would be virtually inevitable within at least national defense industries if not the continental industry as a whole. The only means to avoid change would be a future with robust expanding defense procurement expenditures. There is, though, no visible evidence of such a prospect. Of the major European powers, only France registers a 0.5 percent annual growth in military procurement in its proposed 1995-2000 military program law and this is insufficient to sustain all current programs.[117]

Of the three leading powers, the FRG most likely faces

---

[117]"Leotard on Arms Programs, UN, NATO, WEU Issues," International Intelligence Report, April 29, 1994.

considerable controversy, focusing on the conventional force structure that has been developed and procured to fight a heavy mechanized war in Central Europe. This was the natural focus for two reasons. The first was the NATO defined threat facing the FRG of the WTO armor divisions arrayed throughout the DDR and Czechoslovakia. The second was that the FRG had no recent colonial legacy that generated the need for interventionary forces along the lines of a rapid deployment force or a blue ocean navy.

Two changes confrcnt German national policy which could have ramifications for the defense industry. As a result of the current decline in German spending, the Bundeswehr is essentially maintaining its Cold War structure on a reduced scale. The conclusion of the Cold War has not led the Bundeswehr to usher in any fundamental changes to meet the new European security situation.

The current and growing trend of Franco-German cooperation combined with declining spending could have enormous impact. The 1995 operational date of the European Corps could be an example of things to come. Should such a pattern continue under the form of a common defense policy, military mission requirements could be met by a number of multinational units, but when factoring in the reduction of national mission redundancy, a leaner force could result. While leaner and more cost-effective, the consequence of fewer tank and mechanized battalions translates into an even

leaner defense procurement. It would simply require less in terms of money and equipment to sustain a combined national defense effort than if each country maintained forces with universal capabilities. While perhaps a political victory for integration, it could pose bitter medicine for both the French and German defense sectors.

A second source of potential change is the emerging CFSP and the interlinked three point mission of the above mentioned Euro-Corps. The defense mission is the defense of Western Europe in the context of NATO and WEU treaties, peacekeeping and peacemaking in Eastern Europe or outside Europe, and humanitarian tasks.[118] This mission statement requires a highly mobile force along the lines of a lighter rapid deployment force. Beyond the specifics, it will undoubtedly require a leaner structure than the Bundeswehr currently maintains. Lighter and more deployable forces may be a savings to the Government, but again places the industry in a losing role, for the heavy armament firms will lose a greater share of an already tightening national market.

Just as Bonn faces potential policy choices in the face of growing Franco-German defense cooperation, so does Paris. The above mentioned policy developments apply equally to the French except that they already possess a rapid deployment

---

[118]Philip H. Gordon, French Security Policy After the Cold War, (Washington: RAND, 1992), p. 23.

capability. Consequently, the question would focus more on whether it needed to be expanded.

The French Defense Minister Francois Leotard, after issuing the proposed 1995-2000 military programming law, stated that this cohabitation government was not in the position to change fundamentally or fix policy through the year 2000. Major policy decisions, such as those affecting the nuclear deterrent force's Albion Plateau missiles located in Haute Provence, must be made by the next Head of State. The most that could be done now is the delaying of some systems such as the M-5 missile. However, all other major programs could be sustained, such a· the nuclear-powered aircraft carrier, the naval version of the Rafale, the new nuclear attack submarine, the Horizon frigate, and the LeClerc tank.[119] No major policy changes are in the offing.

The British Government, in contrast, conducted its last defense review in 1991. There is no indication that the Major Government wishes to engage in another one anytime soon. The 1991 White Paper did not call for major policy changes. It advocated the two-pronged approach of either stretching out programs, thus making them cheaper annually but more expensive in the long term, or simply cutting the total production quantity and making do with less.

---

[119]"Leotard on Arms Programs, UN, NATO, WEU Issues," International Intelligence Report, April 29, 1994.

The program with the most visibility, although not as expensive as the Tornado aircraft program, is the nuclear deterrent modernization program. With the Polaris fleet at the end of its service lifetime, the Trident system is virtually complete. The fourth and final Trident submarine is under construction and will cost 500 million Pounds.[120]

The 1989 running cost of the Polaris and Trident accounted for 6 percent of the defense budget and about 12 percent of total equipment spending.[121] Since British defense budgets have declined in real terms, the percentage consumed by Trident has steadily grown. This has taken place in the face of badly needed modernization of conventional forces. Many of the stocks depleted during the Gulf War still have not been replaced.

While Conservative governments have always supported the deterrent and continue to support Trident, the Labour Party has been far cooler. The end of the Cold War combined with a potentially strong Labour showing in the next British general election, the prospects of Trident may be questionable. But any future Labour Government would face a decision over a Trident Fleet already constructed and deployed. The savings from its annual operating budget would still free funds, but might not be worth the dramatic

---

[120]Stuart Croft, British Security Policy, (London: HarperCollins Academic, 1991), p. 103.

[121]Ibid., p. 97.

political fight that would undoubtedly ensue.

Should a major policy change take place in Britain, the likelihood is great that it would concern Trident. While there is a lot of money in Trident, it is expended in a narrow sector of the defense industry. Consequently, while a cancellation would hurt the submarine yards and nuclear warhead development divisions, many other sectors could benefit from the dispersal of defense funds.

With so many subcontractors to the armor, aviation, and naval shipbuilding sectors in jeopardy, such a policy shift could have a significant impact on the industry's overall health. This, though, assumes that the Labour Party would follow through on an earlier platform pledge to plow Trident savings into conventional hardware. But this is a questionable assumption given the continued economic recession in Great Britain and the fading international threat.

The Financial Times reported on May 17, 1994 that several European Governments, which they did not identify, had broadly agreed upon what they would need for home defense and to fight a small version of the Gulf War without assistance from the United States. These expanded requirements were mobile armor, strategic airlift capacity, satellites, and early warning systems to detect and

intercept ballistic missiles.[122] The most ambitious project would be the development and deployment of the strategic anti-ballistic missile defense system along the lines of the Reagan Strategic Defense Initiative (SDI). Given the rising rocket capability of near North African and Mid-East States, there is a strong military case for such a system. However, agreement on that concept has proven far easier than finding the means to provide the additional funding.

C. Ramifications for the United States

The third question affects the greater Atlanticist vision of North American-Western European cooperation that has been central to both American and European policies since the late 1940s. But there might well be negative ramifications for the United States as the Western European defense industry continues to evolve within the continental political context. However, that which was always seen in a positive light during the Cold War is beginning to be seen differently today. Just as the SEA of 1987 was hailed as a sign of a strong Europe and a bulwark against communism, so was the strengthening position of the European defense industry. Now, American concerns are in a state of change.

With the arrival of the Single European Market, the European defense industries are facing a borderless, tariffless existence. While before there was significant

---

[122]"The Best Line of Defense: The Political and Commercial Challenges Facing Europe's Arms Industry," The Financial Times Limited, May 17, 1994, p. 19.

and rising cooperation across the Atlantic, this trend is now being reversed. The efficiency of the defense industry is now very much part of a growing sense of Europeanism that germinated in the euphoria 1992.

The idea of 1992 does not in itself conflict with American goals. A problem does arise in the protectionist nature of a number of the arrangements associated with the treaty. An implied threat to impose import tariffs on imported American defense equipment smacks of protectionism and inhibits the concept of the two-way street. Nevertheless, the whole issue of a common tariff against imported goods, until now only a minor issue for defense related items, is remaining an area of policy discussion. The original plan was to exempt tanks, helicopters, military aircraft, warships, bombs, grenades, torpedoes, mines, and missiles. The decision to move toward a "review" again fuels American fears of protectionist European policy.

As early as 1988, the French Government started a move within the European Community (EC) to extend the common external tariff (CET) to cover military as well as civilian products. The French request to the Commission seemed to strengthen a "Fortress Europe" and negatively impact NATO and Stateside-Continental defense industry work.

The current EU Commission proposal is to interpret the articles, relating to defense under the Treaty of Rome (1957), as exempting member states from internal

regulations, but still subject all imports to the CET. For years this provision remained inoperative. With the Commission looking for new revenue and 1992 providing a justification for its new clarification, the odds are that the CET will fuel a growing movement to amend Article 223(b).

As if this argument alone does not place strain on the trans-Atlantic defense industry work, there is another one that could greatly aggravate further cooperation. Given the deregulation within the European market that is already affecting civilian industry, the much more fragmented defense industry will face the same surge of competition. The argument is that, just as the civilian firms are afforded some protection through the imposition of the CET against non-European products, the defense firms should enjoy the same protection. Should this view prevail, the entire defense industry would enjoy protection against American competition; again, reenforcing the growth of "Fortress Europe."

The protectionist trend is only one of the fears being generated among American defense industrialists by 1992 regarding further trans-Atlantic cooperation. These fears are further aggravated by the issue of technological "spinoffs" from defense work. Such technology would be welcomed within Europe whether it comes from the integrated civilian market or from the defense sector.

The American concern is two-fold.[123] First, spinoffs produced in the integrated market and injected into the defense realm would only increase the competitiveness of European arms manufacturing. This naturally poses no concern for the Europeans, but is of increasing concern to American firms that not only must compete with these European defense firms, but also cannot have equal access to developing technology in the single market. Consequently, the American firms face growing competition while their competitors' technological base is increasingly difficult to access.

In addition, the spinoffs can work in reverse for both American industry and the United States Government. Advanced technology that is transferred to a European defense firm under contract can very readily find its way into other related products produced by the European firm. This can eventually find its way, as a spinoff, into the single market. This poses a problem to the private American firm in that this technology exchange cannot be as tightly controlled in the deregulated market and thus will enhance the position of its competitors across the Atlantic.

Furthermore, the United State Government must be concerned that sensitive technology does not find its way into undesirable hands. This does not even have to mean

---

[123]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), pp. 141-146.

hostile hands, but simply a nation that is unreliable and one that does not exercise strict control of technology transfer. Without special limitations on the workings of the free market, it will prove virtually impossible to retain any degree of confidence that sensitive technology can be safeguarded. Discussions are continuing between the U.S. Government and the Commission on a means to resolve this issue.

Regardless of the fears brought on by the 1992 market, official positions still recognize as valuable cooperative ventures under the two-way street. However, such events as the end of the Cold War and the unification of Germany have delivered some hard blows to current projects. Several recent cooperative programs have encountered trouble. The ASRAAM program is intended to be the follow-on missile to the U.S. Sidewinder and is being designed and funded by Canada, Norway, Britain, and Germany.[124] However, German withdrawal from the program threw its 42.5 percent of the cost back on the remaining three. Such actions have recently led the U.S. Senate Appropriations Committee to recommend going ahead with a national follow-on and not rely upon the ASRAAM.[125]

In addition, another major program collapsed and in so

---

[124]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), p. 130.

[125]Ibid., p. 144.

doing dragged down a related program. The NFR-90 project was to design a common navy frigate for the NATO navies for deployment in the 1990s.[126] After Britain, France and Italy withdrew from the program, other countries followed. The program became untenable and was canceled. The NATO anti-Air Warfare System (AAWS), intended to defend the frigate, was canceled as a consequence.[127] The EuroFighter has had a difficult time keeping its international partners committed and despite recent successful flight tests, still faces hurdles before it can be counted as successful.

Such cancellations are proving disquieting to Governments that had counted on these programs. In the case of the United States, the ability to produce their own replacement systems was voluntarily waved in order to purchase units from the NATO cooperative programs. Now, time has been lost and no cost savings can be made Time and money are both reasons why the NATO governments bought into the program. By showing an inability to follow through with a product, they are encouraging U.S. unilateral development in the future to replace aging systems. This would ensure stiff competition for European industry, but the means to avoid such a situation rest in their ability to

---

[126]Alexander H. Cornell, International Collaboration in Weapons and Equipment Development and Production by the NATO Allies, (The Hague: Martinus Nijhoff Publishers, 1981), p. 41.

[127]Ron Matthews, European Armaments Collaboration, (Chur: Harwood Academic Publishers, 1992), p. 144.

create and manage successfully cooperative defense ventures, not a very promising option.

In the latest in this series of problems, the American Government and defense industry leaders are concerned over the "Buy European" clause that is being advocated by the leading twelve trade manufacturers in land-based weapon manufacturing. The European defense industry is launching a campaign with the signing of this "Buy European" charter to convince their respective governments to make it a policy for future defense procurement to be conducted in a "Buy European" fashion. The document was signed by France's GICAT (Association of Land-Based Weapon Manufacturers) and its sister European organizations such as the FRG's BDI, Great Britain's DMA, Spain's AFARMADE, Belgium's BDIG, Portugal's MID, Denmark's DI, Norway's NHO, Sweden's NIF, and Turkey's SASAD.[128]

Should this campaign prevail, it would bring an end to the acrimonious debate over the competition between the McDonnell-Douglas Apache Attack Helicopter and the Franco-German Tiger and the Lockheed C-130J and the European Future Large Aircraft (FLA). European defense procurement decisions would be guided by this "Europe First" policy. While the debate is still in its earliest stages, the consequences of such a change would be devastating to

---

[128]"EU Arms Manufacturers Urge 'Buy European' Clause," International Intelligence Report, June 20, 1994.

American defense manufacturers. Given the clearly protectionist message in such a policy, this would likely result in strains in the Atlanticist vision.

D. Conclusion

The passing of 1992 marked the end of a long industrial cycle. With the end of the Second World War and the rise of the Cold War, the United States took a very active role in attempting to build up the European defense industry's production base. The U.S. employed various means including direct financial aid, offshore purchasing, encouraging NATO involvement, foreign licensing and production, the two-way street to strengthen standardization, and ultimately the long term encouragement of general European integration. Overall, the U.S. and Western European Governments can be pleased with the outcome of these security policies.

However, the defense industry, which has profited from U.S. policy and the international competition between East and West, now faces a status quo that is untenable. Despite current favorable U.S. policy vis-a-vis the industry, it is not likely that the United States Government can sustain such a policy in the aftermath of the victory over international communism and domestic pressure emanating from the stiff competition for federal defense dollars.[129]

Facing this onslaught brought on by peace, and the

---

[129]Stephen Budiansky, "Hanging on for Life," U.S. News & World Report, June 27, 1994, p. 49.

potential of stiff American competition, the Western European defense industry has already started to take advantage of the new single market. Compelled by necessity, and seeing the advantages, firms such as the French Dassault Aviation, British Aerospace, Deutsche Aerospace, and Aerospatiale have all in some fashion made greater efforts to conclude collaborative agreements on projects in the high technology fields such as jet aircraft and helicopters.[130] The industry will undoubtedly continue to rationalize. However, should the EU successfully fashion the desired ESI, the spillover for the defense industry through the WEU would mean a strengthened competitive position in the global arms market for those firms that best manage the challenge of peace.

Such a success would be a strong indicator of the viability of the ultimate objectives of Maastricht. Only if the Western European nations can reconcile their political, economic, and security interests can the Union prevail as intended in the Treaty. Successfully grappling with the European defense industry, the vortex of these three interests, will be the demonstration of resolve required to expand the Union to encompass Western European society as a whole. With the verdict still out, continuing analysis of the industry will provide increasingly clear indications as to the ultimate strength of the Maastricht process itself.

---

[130]Ibid., p. 49-51.

APPENDIX 1

Corporate Statistics

Company	Rank-Wld	Rank-Eur	Revenue	Holding	Workers
BAe (GB)	4th	1st	$6.065 Billion	Private	55,000 est.
Thomp-son(FR)	8th	2nd	$4.860 Billion	Govern-ment	35,000
GEC (GB)	11th	3rd	$4.088 Billion	Private	50,000 est.
DASA (FRG)	13th	4th	$3.912 Billion	Private	50,000 est.
Aerospa-tiale (FR)	14th	5th	$3.499 Billion	Govern-ment (75%)	40,000
Dass-ault-Breguet (FR)	25th	6th	$2.182 Billion	Private	14,000
Alenia (IT)	27th	7th	$1.959 Billion	Govern-ment	20,000 est.
Rolls Royce (GB)	36th	9th	$1.364 Billion	Private	20,000 est.
SNECMA (FR)	38th	11th	$1.300 Billion	Private	13,000
Matra (FR)	43rd	12th	$1.052 Billion	Private	8,000

BIBLIOGRAPHY

Appleby, John and Foster, Edward. Up in the Air: European Union and Transatlantic Defence Industrial Cooperation. Weymouth: Sherrens Printers, 1993.

Ball, Nicole and Leitenberg, Milton. The Structure of the Defense Industry: An International Survey. New York: St. Martin's Press, 1983.

Beer, Francis A. Integration and Disintegration in NATO. Ohio State University Press, 1969.

Bellany, Ian and Huxley, Tim. New Conventional Weapons and Western Defense. Exeter: A. Wheaton & Co. Ltd, 1987.

Beugel, Ernst H. Van Der. From Marshall Aid to Atlantic Partnership. Amsterdam: Elsevier Publishing Company, 1966.

"British Aerospace." The Financial Times Limited, 5 February 1994, The Lex Column, p. 22.

Brzoska, Michael, and Lock, Peter. Restructuring of Arms Production in Western Europe. Oxford: Oxford University Press, 1992.

Budiansky, Stephen. "Hanging on for Life." U.S. News & World Report, June 27, 1994, pp. 45-49.

Cahen, Alfred. The Western European Union and NATO. Exeter: BPCC Wheatons Ltd, 1989.

Callaghan, Thomas A. Jr. U.S./European Cooperation in Military and Civil Technology. Washington, DC: The Center for Strategic and International Studies, 1976.

Chichester, Michael and Wilkinson, John. British Defence. London: Brassey's Defence Publishers, 1987.

Colchester, Nicholas and Buchan, David. Europe Relaunched. London: Hutchinson Business Books Limited, 1990.

Cornell, Alexander H. International Collaboration in Weapons and Equipment Development and Production by the NATO Allies: Ten Years Later - and Beyond. The Hague: Martins Nijhoff Publishers, 1981.

Crawford, Beverly and Schulze, Peter W. European Dilemmas After Maastricht. Berkeley: University of California at Berkeley Press, 1993.

Creasey, Pauline and May, Simon. The European Armaments Market and Procurement Cooperation. Southampton: The Camelot Press Ltd, 1988.

Croft, Stuart. British Security Policy, London: HarperCollins Academic, 1991.

Cyr, Arthur. U.S. Foreign Policy and European Security. New York: St. Martin's Press, 1987.

"Delors Speech At IISS Conference." The Reuter European Community Report, September 10, 1993.

Dosser, Douglas; Gowland, David; and Hartley, Keith. The Collaboration of Nations. Oxford: Martin Robertson & Co., Ltd, 1982.

Draper, Alan G. European Defense Equipment Collaboration. New York: St. Martin's Press, 1990.

Drechsler, Gerhard J. "The U.S. State Department and World Science," Bulletin of the Atomic Scientists, Vol. VII, No. 4, (April 1951): 121-122.

Drown, Jane D., Drown, Clifford, and Campbell, Kelly. A Single European Arms Industry?. Exeter: BPCC Wheatons Ltd, 1990.

Dudley, James W. 1992: Strategies for the Single Market. London: Kogan Page Ltd, 1989.

"EFA Go-Ahead Would Be A Tonic For Defence Shares." Reuters, Limited, 10 December 1992, Financial Section.

"EU Arms Manufacturers Urge 'Buy European' Clause." International Intelligence Report, June 20, 1994.

"Europe Uniting in Building Arms." New York Times, 16 August 1994, sec. C, pp. C1 and C5.

European Community Commission, General Report #27, 1993. Luxembourg: Office for Official Publications of the European Communities, 1994.

"European Defence Industry Has To Cut Its Ranks." The Reuter European Business Report, 25 January 1993.

Fahey, Liam. Winning in the New Europe: Taking Advantage of the Single Market. Englewood Cliffs: Simon Schuster Company, 1992.

Fursdon, Edward. The European Defense Community: A History. New York: St. Martin's Press, 1980.

Garnham, David. The Politics of European Defense Cooperation. Cambridge: Ballinger Publishing Company, 1988.

Gordon, Philip H. French Security Policy After the Cold War, Washington: RAND, 1992.

Hartley, Keith. NATO Arms Co-Operation: A Study in Economics and Politics. London: Billing & Sons Ltd, 1983.

Haviland, H. Field Jr. The United States and the Western Community. Haverford: Haverford College Press, 1957.

Junne, Gerd and Tulder, Rob V. European Multinationals in Core Technologies. Bury St. Edmonds: St Edmondsbury Press Ltd, 1988.

Kapstein, Ethan B. Global Arms Production: Policy Dilemmas for the 1990s. Lanham: University Press of America, Inc., 1992.

_____. The Political Economy of National Security. Columbia: University of South Carolina Press, 1992.

Kelleher, Catherine McArdle and Mattox, Gale A. Evolving European Defense Policies. Lexington: DC Heath and Company, 1987.

Knight, Robin; Coleman, Fred; Green, Peter; Bartal, David; Fuller, Mark; Brachel, Jessica Skelly von; Dimmler, Elaini. "Europe's Defense Contractors Get Hit." U.S. News & World Report, June 27, 1994, pp. 49-51.

Knight, Robin; Coleman, Fred; and Marks, John, "Summer of Discontent," U.S. News & World Report, June 6, 1994, p. 49.

Krige, John and Russo, A. "Europe in Space, 1960-1975: From ESRO and ELDO to ESA," (Book Draft, European University Institute), 1994.

"Leotard on Arms Programs, UN, NATO, WEU Issues." International Intelligence Report, April 29, 1994.

Lerner, Daniel and Aron, Raymond. France Defeats EDC. New York: Frederick A. Praeger, Inc., 1957.

Matthews, Ron. European Armaments Collaboration. Chur: Harwood Academic Publishers, 1992.

McGeehan, Robert. The German Rearmament Question. Chicago: University of Illinois Press, 1971.

Moodie, Michael. Defense Implications of Europe 92. Washington: The Center for Strategic and International Studies, 1990.

Moravcsik, Andrew. "The European Armaments Industry at the Crossroads," Survival Volume XXXII Number 1 (January/February 1990): 65-85.

Mulley, F. W. The Politics of Western Defense. New York: Frederick A. Praeger, Inc., Publishers, 1962.

Owen, Nicholas. Economies of Scale, Competitiveness, and Trade Patterns within the European Community. Oxford: Clarendon Press, 1983.

Podraza, Andrzej. The Western European Union and Central Europe: A New Relationship. London: The Royal Institute of International Affairs, 1992.

Posner, Theodore Robert. Current French Security Policy, Westport: Greenwood Press, 1991.

Rabinowitch, Eugene. "Science and Foreign Relations: Berkner Report to the U.S. Department of State," Bulletin of the Atomic Scientists, Vol. VI, No. 10, (October 1950): 293-298.

RFE/RL Research Institute. 1994. *RFE/RL Daily Report.* Available from <listserv@ubvm.cc.buffalo.edu> ; INTERNET. Radio Free Europe/Radio Liberty, Inc.

Richardson, James L. Germany and the Atlantic Alliance. Cambridge: Harvard University Press, 1966.

Riste, Olav. Western Security: The Formative Years. New York: Columbia University Press, 1985.

Sandholtz, Wayne. High-Tech Europe: The Politics of International Cooperation. Berkeley: University of California Press, 1992.

Schwok, Rene. U.S.-EC Relations in the Post-Cold War Era. Boulder: Westview Press, 1991.

Sharp, Margaret. Europe and the New Technologies. Ithaca: Cornell University Press, 1986.

Silva, Michael and Sjogren, Bertil. Europe 1992 and the New World Power Game. New York: John Wiley & Sons, Inc., 1990.

Steinberg, James B. The Transformation of the European Defense Industry. Washington: RAND, 1992.

Taylor, Trevor. Defense, Technology and International Integration. New York: St. Martin's Press, 1982.

_____. European Defense Cooperation. London: Routledge & Kegan Paul, 1984.

"The Best Line of Defence: The Political and Commercial Challenges Facing Europe's Arms Industry." The Financial Times Limited, 17 May 1994, p. 19.

U.S. Arms Control And Disarmament Agency. World Military Expenditures and Arms Transfers 1990. Washington, D.C.: Government Printing Office, 1991; reprint ed., 1992.

U.S. Congress, Office of Technology Assessment, Arming Our Allies: Cooperation and Competition in Defense Technology OTA-ISC-449. Washington, DC: U.S. Government Printing Office, May 1990.

Wallerstein, Mitchel B., ed., Scientific and Technological Cooperation Among Industrialized Countries. Washington: National Academy Press, 1984.

Webb, Simon. NATO and 1992: Defense Acquisition and Free Markets. Santa Monica: The RAND Corporation, 1989.

Western European Union, Assembly of, Western European Union: Information Report. Paris: Imprimerie Alenconnaise, 1986.

_____, The Future of European Security: Colloquy. Paris: Imprimerie Alenconnaise, 1989.

_____, Western European Union: Information Report. Paris: Imprimerie Alenconnaise, 1993.

Williams, Geoffrey. The Permanent Alliance: The European-American Partnership 1945-1984. Leyden: A. W. Sijthoff International Publishing Company, 1977.

Wulf, Herbert. Arms Industry Limited. Oxford: Oxford University Press, 1993.

CURRICULUM VITAE

Robert G. Cheatham Jr.

PERSONAL

Born February 8, 1963, Boston, Massachusetts.

EDUCATION

Master of Arts, November 1994, Indiana University, West European Studies.

Bachelor of Arts, May 1985, University of Virginia, Foreign Affairs.

PROFESSIONAL

Captain, Field Artillery, United States Army.

Commander, Headquarters and Headquarters Battery, 1st Battalion, 15th Field Artillery, 2nd Infantry Division, February 1991 -- May 1992.

Battalion Fire Support Officer, Headquarters, 5th Battalion, 20th Infantry, 2nd Infantry Division, March 1990 -- January 1992.

Battalion Plans & Operations Officer, Headquarters, 1st Battalion, 84th Field Artillery, 9th Infantry Division, September 1988 -- June 1989.

Executive Officer, Battery A, 1st Battalion, 84th Field Artillery, 9th Infantry Division, January 1988 -- August 1988.

Fire Direction Officer, Battery A, 1st Battalion, 84th Field Artillery, 9th Infantry Division, July 1987 -- December 1987.

Battalion Ammunition Officer, Service Battery, 1st Battalion, 84th Field Artillery, 9th Infantry Division, August 1986 -- June 1987.

Company Fire Support Officer, Headquarters and Headquarters Battery, 2nd Battalion, 4th Field Artillery, 9th Infantry Division, May 1986 -- July 1986.

Commissioned as a Second Lieutenant, Field Artillery, University of Virginia, May 18, 1985.