

DETERMINANTS OF NATO FORCE POSTURE

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INTRODUCTION

Since the late fifties there has been increasing concern over the size and balance of the military effort contributed by the European NATO Allies of the United States. This concern sometimes expresses itself in assertions that the Allies are not carrying their share of the load of defending Europe. It is sometimes expressed in assertions that their contributions are not as complementary to the U.S. Forces as they could be.

This concern that the Allies carry their share of the load of defending Western Europe is not a new one. When the United States began to rebuild its forces in Western Europe at the time of the Korean War, many felt that this need only be temporary. It was hoped that after Europe had fully recovered economically and militarily the European countries together would be able largely to defend themselves. The major U.S. contribution was to be through its strategic nuclear forces. Today one hears it said that Europe has now recovered its economic strength and former power. This European recovery is for some the basis of an argument that they should do more for their own defense; for others it is used as an argument for changing NATO institutions to reflect the new situation. The general line of this argument is that now that the Europeans have recovered their political and military strength arrangements made when they were weaker no longer are satisfactory.

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In fact, European economic recovery on any reasonable definition occurred by the early '50s, and what has led to European feelings of economic strength is not mere recovery, but the substantial growth rates and general prosperity enjoyed during most of the last ten or fifteen years. This has led to considerable self-confidence on their part, as regards continued economic stability and the future of their economies. However, it is just not true that the major European countries have recovered their earlier military and political power situation. In fact, one could easily argue that the capabilities of our European Allies for self-defense was better in the mid-'50s than it is in the mid-'60s. Europe is richer, but not stronger.

Partly, this is a matter of the limited capabilities of the Western European countries' capabilities for the production and development of atomic weapons and other technologically advanced weapons systems. But as we shall see, there are many other causes of European military weakness, and consequent political weakness. Nor is the military weakness attributable to a lack of resources devoted to military expenditure; even though given current levels of prosperity, European countries could spend more on defense. In fact, the 12 European NATO Allies have increased their military expenditures approximately 50% since 1961, and are now spending almost \$20 billion a year on defense. While international comparisons are always difficult to make, it is hard to believe that the equivalent cost to the Soviets of that portion of their forces relevant to a European war is more than \$20 billion.

One way to compare Soviet and Western European military expenditure would be to estimate the likely cost of the current Soviet military program using typical Western European costs. This is not easy to do. As compared to U.S. budgetary practices the Soviets understate their expenditures, including military R&D and some other military expenditures in other parts of their budget. The NATO Allies defense budgets may be slightly inflated due to the inclusion of duties and taxes on foreign-made equipment, taxes on gasoline, etc. Nonetheless a rough comparison can be made.

The published Soviet military budget has been running about \$15 billion per year at nominal exchange rates. But some Soviet military expenditures are hidden in other parts of their budget, and Soviet pay scales for military personnel are considerably below the European levels. Making adjustments for these two major differences might produce estimates of total Soviet military expenditures in the range of \$25 to \$30 billion. However, the Soviets are investing considerable amounts in intercontinental strategic forces, in air defenses for non-European regions of their country, major military installations and forces for the defense of the Soviet Far East. At least one-third of the Soviet equivalent expenditures are accounted for by these parts of their programs. No one could assert with confidence that the forces the European NATO Allies currently buy for \$20 billion could defend Western Europe, whether or not atomic weapons were used, against the forces currently available to the Soviets for the invasion and taking of Western Europe.

Thus Western Europe has not recovered its former military strength. Indeed it is quite weak militarily speaking. The United States still has to provide most of the effective defense of Western Europe even though the Western Europeans are spending almost \$20 billion a year. The remainder of this paper will be devoted to suggesting some reasons why it is that the Western European Allies obtain so little capability to defend themselves for the money they spend.

SOME REASONS WHY

No set of explanations as to why countries allocate their military budget as they do or why the resulting force postures are what they are can hope to be complete. Certainly the explanations suggested below have no pretension to completeness. For example, they do not include a discussion of the role of the U.S. commitment to defend Western Europe upon the incentives of the European Allies to defend themselves. The U.S. commitment has probably had the effect, on balance, of reducing European efforts for self-defense below what they would otherwise be.

The explanations suggested in this chapter stress some factors which, while occasionally mentioned, are seldom emphasized sufficiently in discussions of NATO's military problems or taken account of in proposals for improving NATO's military posture. What is of primary importance is the fact that the ultimate decisions as to budgetary allocations among military services, missions, weapons procurement programs, etc. are made by the several countries. This means that there are at least 12 separate decision centers that in aggregate determine each year by their decisions the gradual evolution of the military forces of the European NATO Allies. Moreover, in the case of each of these countries, there are many separate forces which bear upon the relevant decisions. The separate military services of each country, national munitions industries, and many other government ministries, in addition to the ministries of defense, are interested parties. In any case, the various bureaucratic elements and political groups within a given country have an impact upon the decisions of its government as to procurement of weapons, the supply of military manpower, its length of service, etc., that ultimately determine the effectiveness of the forces that country provides to NATO. Too often the bureaucratic, economic, and social factors that so strongly influence individual country's behavior are lumped loosely under the rubric "political" without further differentiation or analysis. Some of the factors are perhaps largely political in the sense that they reflect either specific internal political issues or are related to the external political ambitions of particular nations. But a great number of them are political in only a secondary way and are reflections of the bureaucratic and economic interest of groups within a country and/or its government.*

As background to what follows, readers should be aware that the military efforts of each of the countries, following the NATO tradition, is measured (at least initially) in terms of its total military

* See the testimony of Professor Richard E. Neustadt before the subcommittee on National Security and International Operations of the Committee on Government operations, U.S. Senate, 89th Congress, June 29-July 27, 1965, pages 125-128.

budget. For NATO planning purposes, of course, not all of a country's military forces can in fact be assumed available for the defense of Western Europe. Only NATO committed forces are available almost immediately. Most countries have other forces, some of which would become available to the NATO commanders with specified delays, and are included in certain NATO plans. These two categories of forces do not exhaust the forces of all of the countries. Nonetheless it is argued that should a major war occur in Europe, all forces of all NATO countries are potentially available; thus in discussing the contribution of each country it is appropriate to deal with their total military effort. However, as we shall see below, not all of these additional forces are necessarily of a type that can make substantial contribution to the Alliance, even if in wartime they were to become available.

I have included in Table 1 data on military expenditures for the years 1964-65 of all NATO countries, with the exception of Iceland, which has no military forces. The data in this table gives an impression of the order of magnitude of the military effort of each of the countries. Moreover, as can easily be seen, the United States' military expenditures represent approximately 70% of total Alliance expenditures, and those of Germany, France, and the UK represent nearly 75% of the remaining expenditures. Hence, in an inquiry into why the European contribution of military forces to the defense of Western Europe is what it is, determining how Germany, France, and the UK spend their budgets is most important. Of course, it is precisely these three, former great world powers, who are likely for historical reasons to be most tempted, or pushed by internal political, bureaucratic, and economic groups, to sacrifice Alliance strength to "national" objectives.

The following discussion may suggest some of the reasons why the European Allies contributed so little to the defense of Europe with their combined expenditures of \$20 billion a year.

Table 1

ESTIMATED DEFENSE EXPENDITURES OF NATO COUNTRIES,
RANKED BY SIZE, 1964-65*
(Millions of Dollars)

<u>Country</u>	<u>Defense Expenditure</u>	<u>Cumulative Percentage</u>
United States	50,450	71.2
United Kingdom	5,596	79.1
Germany	5,054	86.2
France	4,270	92.2
Italy	1,741	94.7
Canada	1,413	96.7
Netherlands	725	97.7
Belgium	504	98.4
Turkey	322	98.9
Norway	269	99.3
Denmark	238	99.6
Greece	210	99.9
Portugal	72	100.0
Luxembourg	<u>8</u>	<u>100.00</u>
Total	70,872	

* Institute for Strategic Studies, The Military Balance, 1964-65.

1. Diversion of Resources to National Rather than Alliance Use.

Of the three major European alliance partners, Germany, France, and UK, only Germany devotes almost all its military effort to agreed Alliance forces and objectives. All German forces are committed to NATO, and their general balance and organization conform to NATO plans. This is not true of either the French or the British defense effort. In the case of France, the Force de Dissuasion now takes up at least one-quarter of the total expenditure, and in fact a better estimate would probably put its share of the French defense budget at approximately one-third. This could increase in the future, since there is no guarantee that current program cost estimates can in fact be met. Indirect costs of this program are also likely to be high. A substantial portion of the French Navy is involved in the preparation and support of the Pacific H-Bomb Test Program. Other parts of the Navy are being reorganized into a force for use in future French military interventions in Africa, should these be required by events there.

There has already been some stretchout in the program for re-equipping the five Army divisions that are the portion of the French ground forces appropriate for use in a major European war. The remainder of the French ground forces are being reformed into home defense units with lighter weapons and trained for organized guerrilla warfare, should France be invaded. All of this has been undertaken as part of the difficult transition and phase-down of the French Army after the end of the Algerian War. The substantial reductions in the Army, and especially the Officer Corps, would have been difficult in any case, but have been made even more difficult by the squeeze of the Army required by the program for the nuclear forces.

From the point of view of the Alliance the Force de Dissuasion is not a very productive investment for French military resources. The Alliance is not short on strategic nuclear forces, relative to other military forces. French defenders of this program use a variety of political and prestige arguments to support its acquisition. They also argue that their nuclear program and the other new technology that must be developed for the Force de Dissuasion will have a strong modernizing

effect on French industry. Some argue the military effectiveness of the Force de Dissuasion. However, it is not clear that the sort of military force the French now have and are planning to produce in the future is in fact the most militarily effective nuclear force a country like France could produce. There is too much emulation of the U.S. and USSR programs. This may result in part from an attempt of a medium-sized country to acquire forces like those of the super powers, and hence acquire the prestige that may go with having "modern" weapons. But the French acquisition of the relevant weapon systems is running about a decade behind the date of acquisition of similar weapons by the United States. To the extent that the Soviet Union is bound to optimize its active defense weaponry against the American forces this means that the Soviet defenses tend to have a ten-year lead on French offensive forces. This may mean, especially if some sort of anti-ballistic missile system can be perfected, that the French will consistently be procuring forces which will have difficulty in penetrating to targets in the Soviet Union. It is doubtful whether the Force de Dissuasion as currently planned is a good investment, except perhaps for French prestige purposes. There probably are Darwinian niches that forces produced by countries the size of France could occupy in the arena of nuclear strategic forces, but neither the French nor the British have tried so far to produce forces of the required subtlety of design. The pursuit of numerous other objectives in these programs has perhaps obscured the way to more effective military forces.

The low productivity of the British nuclear force as far as the Alliance is concerned is not the only drain on the British defense budget that limits British capabilities to assist in the defense of Western Europe. About one-third of all British military forces are devoted to the protection of British and Western interests in the area east of Suez. These forces are not readily deployable to Europe, even in time of crisis. When combined with the low productivity and diversion of substantial portions of the French military expenditure to non-Alliance purposes, almost half of the \$10 billion expended each year by these two countries may be largely non-productive of forces useful or readily available for the defense of Europe.

From a wider point of view, and in particular from a U.S. point of view, these diversions are not all net loss. The British defense of its interest east of Suez is in the general interest of the other NATO Allies, especially the United States. But the question under discussion is why the European members of NATO make so little contribution to the defense of Western Europe, given that they spend almost \$20 billion per year for defense. Part of the suggested answer is that: (1) Some of the effort is devoted to Non-European defense, (2) Some expenditure goes for forces that relate more to national prestige than they do to the defense of Europe, at least within the framework of the NATO Alliance.

Diversion of resources to forces that have low priority from an Alliance point of view is not confined to the major countries. One example will suffice. It has been clear for some years that the greatest shortage within the Alliance is in the area of ground forces, adequately equipped, trained and available to the major NATO commanders in reasonable time in a crisis or war. It is not that the Alliance is over-supplied with naval forces, but rather that comparatively speaking it has been undersupplied with effective ground forces. Nonetheless, essentially all of the European Alliance members support Navies. These Navies on the average probably absorb between 10 and 15 per cent of the yearly military budgets. Navies are capital intensive enterprises as compared with ground forces and have been more affected by the steeply rising cost of modern military equipment. In order to have a technically efficient and effective Navy, it is necessary to invest periodically in new ships and new equipment. For most European countries this is increasingly difficult to afford. A number of the European countries are unable within their current military budgets to support both the yearly operating expenses and modernization programs for Navies of the size they currently have. They have a choice between a current sized but technically obsolescent navy, a smaller but more modern navy, but also the choice of more ground forces and a smaller navy. These are hard choices, especially the latter. Therefore, there is a tendency for Navies to survive from year to year with declining effectiveness relative to the job to be done (at least in their Alliance role) using

their accustomed 10 to 20 per cent of the national military budget. In many European countries there is a long naval tradition, and it is not easy politically and bureaucratically to reduce expenditures in this area.

2. Diseconomies of Scale

Overhead and some other costs are high in the European military establishments because of the small scale of the separate national military programs. Within the expenditure of \$20 billion overhead costs are likely to be higher than one would judge by any normal rule of thumb, if only because of the large number of separate Ministries of Defense, and other overhead operations that each of the European governments supports in its military establishment. The \$20 billion has to support 12 Ministries of Defense, 12 General Staffs, a large number of military academies, training schools, training commands, etc. It may well be that the existence of the NATO Alliance and the required staffing of its military command structure, the general operation of the NATO machinery, all add to the overhead costs of the national military establishment.

In addition, for most types of support and maintenance operations there are significant economies of scale. The support and logistics systems for the military forces of NATO are largely run nationally and suffer accordingly. Everyone is aware that major savings are potentially available through combined or pooled arrangements. Some attempts have been made to run combined logistics operations, but these have not been entirely successful. Some bilateral U.S.-German logistics support operations, however, seem to be going well. For all European NATO countries other than the 3 largest -- Germany, France and the United Kingdom -- the problems of providing adequate logistic support systems for their Air and Naval forces are particularly acute. For example, it might easily be the case that countries such as Belgium, Denmark, Norway, provided they were flying the same types of aircraft, could operate a pooled maintenance system at about half the cost their three separate systems now cost them.

The question remains why, for example, an operation like SAS can succeed while similar arrangements usually fail in the defense area. Clearly it reflects the fact that the national governments do not entirely want to pool their efforts. Perhaps partly because independent capabilities for defense are involved in the notion of national sovereignty. Perhaps partly because the military services of the separate countries all wish to have as much control as possible over procurement decisions with regard to major weapons systems and to have under their control national support and maintenance facilities. The pursuit of these objectives prevents the effective standardization of equipment and the use of pooled support and maintenance systems.

There has been no study so far of the reasons why it has been impossible to attain within the NATO Alliance the substantial cost-saving major improvements in the effectiveness of the operation of support and logistics systems that everyone agrees are, in principle, possible. One can only speculate, as above, as to the forces within the nations that prevent effective cooperation, joint programs.

3. High Cost Production of Weapons

Until recently it was settled British policy to equip essentially all British forces with British designed and British produced weapons. It is probable that over the last ten or fifteen years the cost of this policy has been substantial. The British have often developed major weapons for which they hoped would be sales to other NATO countries. These sales in addition to their own planned procurement could have led to a large enough production run to significantly reduce its average cost per item. Research and development costs of new weapons are large and form a substantial part of the total program cost of developing and producing such weapons. The number of any such weapon the British themselves are likely to want is small, because of the relatively high unit costs of modern weapons, and because the British forces do not in any case need very large numbers of these weapons. The potential savings feasible through additional sales to other countries could be very substantial. They would allow the write-off of the high R&D costs over

a larger number of production units. The potential size of the savings that might be expected from wider sales may be indicated by the following statement in a British newspaper in January of 1963: "If Britain could produce the P-1154 for NATO, for whose need it is perfect, the price would drop by half." However, in most cases, the British have been disappointed in the sales of their weapons. During the '50s, when the U.S. Military Aid program was supplying a great deal of U.S. equipment to the European Allies, there was not much market for British weapons. In recent years, some European countries are developing their own weapons, others are participating in production consortiums for the production of some U.S. designed weapons, and the U.S. gold flow problem has led to vigorous attempts by the United States to sell U.S. weapons to its NATO Allies.

The problem for the British of the high cost of their weapons has been aggravated by the fact that the British aircraft industry has been an overlarge, declining industry. The British have given contracts to aircraft firms to keep them alive, continued R&D beyond the point where it became clear the weapon design was unlikely to be sold or used, continually put off the day when employment in the industry would be reduced from its current level of 250,000 to 260,000, to the level that has been thought to be about right for several years, of 150,000 employees. British airlines and the British military services have paid the price of the government's policy of maintaining a large British aircraft industry competing across the whole spectrum of aerospace technologies.*

As has been the case in other aspects of military policy, just as the British give up, the French move to the earlier British position. The French are now attempting to supply their forces with French designed and produced equipment. The French have designed new tanks for their ground forces, and with few exceptions have been buying only French aircraft. On the average, the cost of the French equipment is probably above U.S. costs; partly because of small production runs. However,

* For an unofficial, but informed, view of the situation see The Economist, December 18, 1965, pages 1293-95.

with respect to aircraft, they have been more successful than the British in producing technically good aircraft at reasonable prices. In contrast to the British, the French aircraft industry has been growing in the post-war years. Efficiency is more readily attainable in growing than in declining industries.

In any case, there has been a revival of European munitions production in the last decade. But it is doubtful that on the average the prices at which European countries can produce military equipment will fall below the prices at which they could buy similar equipment from the United States. As one would expect, price is not the only element in European procurement decisions. Moreover, European weapon designs in many cases may be better than U.S. designs of similar weapons, and in some cases will cost less. But the small scale of European national weapons production in most cases is likely to lead to higher than U.S. prices. The potential gains from some form of coordinated production so as to take advantage of economies of scale has long been discussed within NATO. Very elaborate arrangements, in fact, have been set up within the NATO institutional framework to work towards coordinated production. This has included an Armaments Committee, which coordinates the activities of a complex network of interlacing agencies, including the production, logistics, and infrastructure section of the international staff, the military committee, the standing group, and ad hoc mixed working groups appointed for the specific weapons under discussion as possible items for coordinated production. What has been envisaged is a NATO system which can either coordinate the process of specifying weapons requirements through to the design and prototype construction stage of development, or organize the production of weapons already developed in one of the NATO countries. This institutionalized NATO system for coordinated production has not worked very well, in the sense that few weapons have in fact survived this process and been produced in quantity.*

* For excellent study of this system and the operation of the production consortiums as well as suggestions for future Alliance undertakings in this area see the study by Brigadier General E. Vandevanter, Jr., USAF (Ret.) Coordinated Weapons Production in NATO: A Study of Alliance Processes, RM-4169-PR, The RAND Corporation, November, 1964.

As an alternative, there has emerged a procedure of European production consortiums, which have so far produced weapons of American design. The five weapons systems produced by such arrangement are: the Hawk Air Defense Missile, the Sidewinder Air-to-Air Missile, the Bullpup Air-to-Surface Missile, the Mark 44 Anti-Submarine Torpedo, the F-104G Fighter Bomber Aircraft. As Vandevanter points out, such consortiums are easier to form than it is to have a design pass through the regular NATO machinery for coordinated production, since in the case of the consortium only those parties who really are going to take part in actual procurement and production are parties to the agreement. But of primary interest for the point being made here is the fact that these consortiums produce the U.S. weapons at prices (which generally include no write-off of U.S. R&D expenditure) that are probably substantially above the prices at which these weapons could be obtained directly from the United States. Of course such European production arrangements conserve foreign exchange for the countries involved, and also have other payoffs to the governments of these countries and various interest groups within them. For example, several years ago when various European countries wanted to get into the production of missiles or of more advanced aircraft types, they lacked the technological know-how. Through participation in a consortium producing these types of weapons, they were able to introduce much more modern production technologies into their munitions and other technical industries, and bring them abreast of more advanced U.S. production technology.

Thus each participating country bargains within the consortium to get its share of the production contracts, partly to upgrade the technological competency of its industries, partly in order to minimize foreign exchange requirements within the consortium as well as vis-a-vis the United States, partly to satisfy the desires of particular manufacturers to obtain contracts to produce specific components, etc. The ability of a country to recoup through taxes a part of the military procurement cost from manufacturers within its borders may be another reason for a country to prefer to let contracts at home rather than with foreign manufacturers -- despite what might appear to be more favorable prices from the latter. Moreover, even though European countries have enjoyed

full employment for a long time, they probably have been anxious to use the production contracts to further various economic or development programs within their countries.

In any case, bargaining to maximize the satisfaction of these multiple objectives of the participating countries leads to complicated arrangements for the over-all direction and control of the consortium effort and for sharing out the production among the countries. This has significantly driven up the prices at which these weapons have been produced, even though the United States, in all cases, has entirely written off the R&D expenditures. To quote from Vandevanter:

"Experts almost universally agree that articles produced by international syndicates have cost more than they would have if produced under national auspices. As to just how much more, calculations and estimates run from 15% to 30%, depending largely on the project. Some reasons for higher cost can best be demonstrated by a quick summary of the F-104G program ...

"Complications and uneconomical restrictions were built into the enterprise from the beginning. First, each of the four European countries insisted on having its own final assembly line, where one facility would have sufficed. Then, three countries are assembling their own engines and manufacturing their own electronic systems. These requirements, which serve only the countries' prestige, not only are dissipating the savings that might be expected to accrue from mass production, but they also vastly complicated the management of accessories and sub-assembly. ...

"One of the factors that run up the cost of common production is the 'quota' system. Each country has been given the privilege of manufacturing a guaranteed portion of the entire output. Presumably, these quotas were established in proportion to the number of aircraft bought by each country, but, reportedly, Germany's slice of the production contracts, particularly in air frames, is smaller than such a pro rata share.

"Under the quota system, negotiating sub-contracts became a complex task. More than five hundred contractors were involved. First, the four participating countries had to decide which would have the privilege of manufacturing a given part. Selections often were influenced as much by the necessity to keep quotas balanced, as they were by price consideration. The winning country would then choose the commercial company to negotiate with its American counterpart for licensing rights, technical assistance,

initial supplies, etc. Because of the complexity of these negotiations the United States Government frequently became involved against its will. At times the Pentagon would have to intercede to persuade American manufacturers to reopen facilities already closed out in order to furnish parts needed to prime the European assembly line."*

There is no published study comparing across the board the prices at which U.S. and European countries procure major items of military equipment. The European countries purchase some items from the United States at U.S. prices (which often do not cover full write-off of all U.S. costs., e.g., R&D), purchase some items from consortiums producing weapons of U.S. design, and purchase some items of European design and manufacture. One can only guess how much more on the average European NATO Allies pay for major equipment as compared with U.S. prices. Ten to twenty per cent might be a reasonable guess, but it is no more than a guess. One's guess as to relative prices of European and U.S. military equipment could be improved perhaps by considering the various kinds of items separately. For example, for products such as ships which give little opportunity to capitalize on economies of large volume production, the European countries probably produce below U.S. costs since their labor costs are less. Where volume is large even for the forces of a single European country (e.g., transport vehicles, rifles, guns, and ammunition) the marginal advantage of still larger volume production is probably not great. Where the United States has the greatest advantage is in the complex, high R&D, low volume items such as aircraft and missiles and, to a somewhat smaller extent, in Army combat vehicles.

4. Under-Investment in New Equipment

Not only do many of the European countries pay, on the average, higher prices for weapons they buy, but they devote a significantly smaller proportion of their total budget to investment in these items than is true of the United States. Since European manpower costs are

* Op.cit., pp. 49-52

lower than U.S. and equipment and costs higher than U.S. one would expect European forces to substitute men for machines and other equipment. How much, and in what direction, this would shift the budget allocating for equipment is not clear. But there are reasons to believe that the low European equipment allocations are not entirely the result of an adjustment to their different relative prices of men and equipment. How did this budgetary pattern come about?

First, this pattern does not hold for the German military budget. Germany has been building up its military forces since the mid-'50s and investing substantial resources in equipment for these forces. Also Germany, in order to offset American balance payment problems, has agreed to purchase each year substantial quantities of American equipment. France was under-investing in equipment until quite recently, although for the 1966 and future budgets it expects to invest almost half of its yearly budget in new equipment and R&D. Most of this is going into the French Force de Dissuasion. There have been stretchouts in the previously planned programs for the re-equipping of the five divisional units and supporting tactical air forces forming the French intervention forces.* In any case, this pattern of under-investment in equipment and operational stocks as compared to manpower and operating costs is most typical of the medium and smaller-sized European NATO Allies.

This pattern of expenditure started during the '50s. At that time a great deal of the equipment of the European NATO Allies was either supplied under U.S. military aid programs, financed by U.S. financed

* Jean Planchais, Le Monde, October 21, 1965: "Finally, the Army sees itself getting farther away from the day it will get the five divisions promised by the long-range plan: 377 million (Francs) in old program authorizations disappear. The construction of tanks in particular will be slower than planned: 100 to 110 per year instead of 15 per month. Not until 1968 will production reach its peak. A thirty-ton tank costs two to three million francs. Its price can only go up. And when the last divisions are supplied -- with a delay of a year or two -- won't they begin to be outdated at the time when there are thoughts of equipping the ground forces with tactical atomic weapons? The same is true for tactical helicopters, the price for which per unit has by now reached that of a jet fighter ten years ago."

procurement schemes, or inherited from World War II weapon stocks, directly or indirectly. During this period the budgetary expenditures of these countries could be devoted mostly to cover manpower costs and the costs of training and day-to-day operations. In the late '50s American military aid to Western European countries essentially ended. There is now only some minimal aid to Greece and Turkey, and perhaps a few other countries. Thus, many European NATO countries have entered the '60s with patterns of budgetary expenditure appropriate to a time when substantial U.S. military aid existed.

It is not easy to change these patterns quickly. European military budgets have risen in the past several years and a gradual shift toward more investment in equipment is perhaps under way. But nations have been able to postpone many of the hard decisions by delaying re-equipment and modernization decisions, by living a little longer with obsolescing weapons. These decisions cannot be put off indefinitely; but re-equipping with new weaponry will be very costly. The governments of these countries will have to make decisions as to future budgetary allocations under many conflicting pressures from the national military services, the NATO military commanders, national industrial interest, etc.

For example, despite the fact that these countries are now supporting more men under arms, and more units in operation, than they can effectively support over the long term given likely military budgets, they have not been able to reach the force goals set down by the major NATO commanders. The European NATO countries have been trying to meet these goals. Defense budgets for the European NATO countries as a whole have risen about 50% between 1960 and 1965. But costs, both of manpower and equipment, have been rising, and will continue to rise, quite rapidly. There has been some shift in the percentage of the budget devoted to the purchase of equipment and operational stocks, but not enough to offset the reduction in U.S. Military Aid Programs. But the attempt to come as close as possible, at least on the surface, to meeting the major NATO commanders' goals has given priority to maintaining or increasing the number of military units, the numbers of men under arms, etc. Consequently, qualitative aspects of their forces

have been slighted; e.g., modernization of their equipment, and the provision of support of all sorts.

There may well be some question whether European military units should be trying to reach the equipment level of U.S. forces. In this sense standardization of forces, in terms of NATO standard division or any given standard, may be unwise. The relative cost of men and equipment differs too much from country to country. But by any standard many of the European military forces are investing too little in equipment and too much in manpower.

The European nations are now experiencing the results of the increased birth rates immediately following World War II. The amount of manpower available each year for military service has increased significantly from what it was in the '50s. Many of the European NATO countries have long traditions of universal military training. This demographic bulge has forced upon these systems of universal military training more manpower than they have budget to effectively train and equip. This has very likely reinforced the decision of many of these countries to delay the re-equipment and modernization of the equipment of their military forces. Many of the countries are reluctant to modify these universal military training systems. In some cases there are internal political reasons for this. One way of accommodating the increased size of the yearly inflow of manpower, within current budgets and authorized size of forces, has been the reduction of the time of service of those conscripted for military service.

France has been one of the countries with this particular problem. In mid-1965, the French changed their law covering military service to allow them to excuse from military service many more men than they formerly could. The French plan significantly to reduce the number of men they take each year, rejecting an alternative proposal that they reduce the training period to one year. The French have also reduced the training and equipment costs per man by diverting a substantial portion of the manpower conscripted each year into a home defense force, which can be trained more quickly and cheaply for its role in local

defense and guerrilla warfare within France. Other of the NATO European Allies might consider similar changes in their laws and use of military manpower.

In any case, many of the European countries, given their universal military conscription laws and the current large manpower classes, are pushed in the direction of continuing their current budgetary patterns. But they are unlikely to be able to proceed indefinitely with these patterns because the long-run effect will be to support over large peacetime forces, manned by troops with limited training, equipped with obsolescent equipment. Moreover the operation of these systems of universal conscription, short training periods, produces large numbers of reserve military personnel that are limited in their capabilities to effectively use modern military equipment. In any case equipment for reserve units will be limited, and even more obsolescent than that of the operational units. The operation of these systems is very wasteful and very costly; the expense of training the men is largely wasted since their active period of service is so short, and their usefulness as reserves is doubtful, both because of equipment shortages and, perhaps, also because of the changed nature of modern war.

Those countries that have this problem will have to find some way to reduce the manpower taken each year so that, within a reduced proportion of the budget, training periods can be long enough for adequate training, and modern weapons can be procured.

SOME IMPLICATIONS

Military force postures change slowly over time. They are the result of a sequence of past procurement and military policy decisions. The same patterns of behavior tend to continue year to year and determine the budgetary allocations, influence decisions as to weapons procurement, policy towards military manpower, its training, etc. The contribution that the European NATO countries make toward their own self-defense is decisively influenced by and constrained by the national objectives of the individual countries and the patterns of behavior discussed above. These countries are not now, nor are they likely in the near future

to be, nearly able to defend themselves against potential maximum Soviet and Warsaw Pact aggression. Given the annual expenditures of nearly \$20 billion, their contribution to their own self-defense is well below what in principle it could be. However, the constraints, inefficiencies, and conflicting objectives which have limited their past ability to produce forces adequate for their collective self-defense are unlikely to change rapidly in the future. Many of the causes are built into the European situation: the division of effective decisionmaking among the twelve nations; the attendant high overhead costs of their military establishment; the political and economic forces within each of the nations which lead to the failure of coordinated production and logistic support operations; the historical attachment in many of the countries to universal military training programs, etc. Altering NATO strategic guidance or changing a few paragraphs in supposed key NATO documents will do next to nothing about these factors which determine to an important extent the performance of these countries in supplying military forces.

Most suggestions for curing the ills of NATO, however, seem to be based precisely on such changes in the agreed NATO strategy or in some revision of the upper level NATO administrative or bureaucratic structure. But most of the real problems reside within the countries, and limit their abilities to produce appropriate and effective forces. The Military forces of the European countries are now, in fact, probably too large, given current and probable future budget levels, to be supported as efficient units. The defense contribution of the NATO countries to the Alliance would probably be improved if forces were smaller, if universal military training laws were changed to allow for longer periods of training, if increased budgetary appropriations for equipment were undertaken at the expense of manpower costs. Attempts at regional pooling of supply, logistics and support operations, and the encouragement of ad hoc coalitions of those Alliance members that have a genuine common interest in specific ventures would be useful.

In some cases increased financial contributions to Alliance-wide efforts, such as infrastructure projects, might be obtained through

the reduction of forces in some countries to the net benefit of the Alliance. For example, Italian forces, if kept on Italian soil, are badly placed geographically with respect to the most likely military contingencies. Italy might, perhaps, give increased support to infrastructure projects while reducing its forces. Through changes in the infrastructure burden sharing formula and compensating reductions in active military forces in some of the NATO countries a shift of resources within the Alliance might be obtained which would help to support active forces in geographic areas where they are most needed.

The United States and the European NATO Allies probably have more to gain by improvement in the efficiency with which the \$20 billion is used than they have in attempts (in any case likely to be fruitless) to increase European military expenditures.

Better defense management within the countries would help, as it would at all levels within the NATO Alliance. Standard cost-effectiveness studies, however, do not usually deal with military problems in a way that will produce solutions to the kinds of problems discussed above. They may show where the biggest payoffs are, however. Practical suggestions for improvements can only be made on the basis of detailed knowledge of the forces, mostly within the individual countries, that now shape the evolution of military posture and policy. Although many of hypotheses put forward in this chapter describe tendencies, habits, conditions, that some will call deplorable; the objective of the chapter is not to deplore, but to describe in part, how NATO force posture results from the decisions of the governments of the constituent countries, and to describe some of the reasons why the result is so often so far from what seems in principle attainable.