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THE EUROPEAN CONVENTIONAL BALANCE: A PRIMER

Robert Shishko

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UPDATE

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November 1981

Since publication of this paper, new data on Soviet divisions by military district and readiness category have been published by David C. Isby in *Weapons and Tactics of the Soviet Army* (Jane's, London, 1981). It seemed worthwhile to incorporate these data into a revised Table 1.

Isby reports that about half of the 33 to 35 line divisions stationed in the three WMDs of the Soviet Union are Category II, a third are Category III, and the remainder, including the airborne divisions, are Category I. His figures for the rest of the Western USSR indicate about the same distribution for the 32 to 35 line divisions stationed there. Not all of these would be available for use against AFCENT as some are committed to the Northern and Southern flanks of NATO. Isby's data do not reflect changes in readiness categories of divisions in the WMDs that may have taken place since the summer of 1981 due to events in Poland.

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THE EUROPEAN CONVENTIONAL BALANCE: A PRIMER

Anyone looking at conventional military balance reports should be struck by the diversity of the assessments and the numbers found in them. What I would like to do in this paper is to discuss the kinds of assessments that are made, the associated problems, and the military issues that are not raised even though they could significantly affect the balance. Ideally, I would like to provide a conceptual framework and enough information for the reader to be able to assess the assessments, but that would require a considerably larger effort than I envision here. By necessity, my goal must be more limited.

I will concentrate in this paper on the balance in the European Central Region largely on the grounds that that is where the largest NATO/Warsaw Pact concentrations of force are found and where most of the post-mobilization reinforcements would flow. Why all the recent pessimism about the conventional military balance in the Central Region? Such pessimism has not always existed, but in fact has waxed and waned over NATO's 30 plus year history. In NATO's earliest days, it was thought that a mixed conventional/nuclear defense of Europe would require about 100 divisions, a goal clearly in excess of what politicians were willing to support.[1] In 1954, a "new look" at NATO's requirements suggested that perhaps 50 divisions would suffice if greater reliance was placed on nuclear weapons. In practice NATO never reached that goal, but it didn't seem to matter because U.S. strategic

[1] For some details, see BG Robert C. Richardson, III, "NATO Nuclear Strategy: A Look Back", Strategic Review, Spring 1981, pp. 35-43.



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✓ nuclear superiority gave the "massive retaliation" doctrine at least some credibility. By the early 1960's, that credibility was in doubt as the U.S. homeland could be attacked by city-busting Soviet ICBMs. Under Secretary of Defense McNamara, the U.S. placed greater emphasis on conventional forces for Europe and the resources to support this emphasis were found. As a result, there was at least some belief through the late 1960s that NATO could conduct a successful conventional or low level nuclear defense in Europe if given strategic warning of about 30 days.

By 1975, these hopes began to fade rapidly. Three reasons may be cited: The first was the noticeable buildup of Soviet divisions in East Germany. Not only were new divisions added, but those already in place were strengthened by adding about 1500 personnel to each and increasing the density of tanks, armored personnel carriers, helicopters, and artillery. The second reason was the improvement in the quality of individual weapons. Often cited as examples were the T-64 and T-72 tanks, the BMP infantry fighting vehicle that had no real counterpart in the West, Soviet air defense systems, and the Hind attack helicopter. The third was the existence of dramatic new capabilities afforded by these weapons and other improvements. Significant among these was the ability to conduct long-range interdiction and airbase attack missions on a large scale using Flogger B/G (Mig-23), Flogger D/J (Mig-27), Fencer (SU-24), and Backfire (TU-22M) aircraft. Soviet ability to operate on a chemical or nuclear battlefield was a source of serious concern as was the capability to conduct large-scale desant operations using naval infantry and airbourne divisions. All of these combined to

give the Soviets what many thought was an unbeatable combination--mass and surprise. So strong was this belief that Belgian General Robert Close, an important NATO commander, publicly stated that the Soviets could be at the Rhein in two days. A statement of the conventional military balance in Europe's Central Region must ultimately come to grips with that contention.

THE MILITARY BALANCE GAME

There are basically three kinds of assessments of the conventional military balance in Europe, and we may classify these as static, pseudo-dynamic, and dynamic. Static balances are essentially bean-counting exercises. Pseudo-dynamic balances focus on the bean counts at several points in time both before and after M-day (essentially, mobilization day). Dynamic balances combine a large number of factors in an attempt to focus on combat outcomes. Static balances usually look at the quantity of manpower (combat and total) and equipment that could be brought to bear in a particular theatre. Alternatively they may focus on the number of formations available to each side. Sometimes formations may be quality or quantity adjusted so as to be comparing apples to apples. Dynamic balances on the other hand may look at FEBA (Forward Edge of the Battle Area) movements, casualties, and remaining war fighting potential, all in an effort to ascertain who won.

Most assessments are static or pseudo-dynamic because only with computer assistance can dynamic balances be determined. Consequently, dynamic balances tend to be expensive. A problem with all balances is that different analysts may use different ground rules, and therefore

come out with different results. Some crucial issues that can change an analysis dramatically are:

- a. whose forces are counted;
- b. what forces are counted;
- c. quality of those forces;
- d. timing assumptions.

First, let us consider whose forces are counted. War in Europe would be fought by alliances, but it is not clear who would participate and to what extent. On NATO's side, the big uncertainty is France. Although no longer part of the integrated military structure of NATO, France continues to cooperate with NATO forces on military matters and continues to participate in certain formal structures. Under certain conditions, France's three armored divisions in West Germany might count as a CENTAG (Central Army Group) reserve. Although these divisions would probably not participate in the covering force (CF) or main battles, they might be employed if a Soviet attack on France itself seemed inevitable.[2] Should Spain join NATO, one must decide if those forces are also to be counted in the Central European balance. On the Warsaw Pact side, should one count the forces of all Pact countries? For example, Hungarian divisions would probably not fight in the AFCENT (Allied Forces, Central) area, but would more likely be used to hold

[2] NATO General Defense Plans (GDPs) envisage two initial phases of a successful defense: a covering force battle in which NATO's most forward elements, e.g., a U.S. armored cavalry regiment (ACR), channelize WP forces along routes most favorable to the defense, and second, a main battle in which NATO's deployed main forces destroy advancing WP units by maneuver and firepower.

Italian formations from redeploying out of AFSOUTH (Allied Forces, South). Yet Hungarian divisions and Soviet divisions in Hungary are often counted against NATO's Central Region.

Second, deciding what forces are counted is probably more difficult. Consider U.S. forces. Should one count just forward based forces in USAREUR (U.S. Army, Europe), or should one count REFORGER and 2+10 units as well?[3] Some analysts might wish to count all U.S. forces that could be deployed to Europe. On the Pact side, some analysts might count only those forces in East Germany. Other might include those forces in Poland, Czechoslovakia, and the three western military districts (WMDs) of the Soviet Union, while others might include all Soviet forces in the western U.S.S.R.[4] Peacetime stationing aside, there is also the problem that not all of these units are ready for combat. Some would not be combat ready for weeks or months following mobilization.

There are three categories of readiness for Warsaw Pact forces. Category I forces have between 75 and 100 percent of their designed strength and equipment density. Category II units have between 50 and 75 percent, while Category III forces are truly cadre units with as little as 25 percent fill. Category II and III units fill out with reservists upon mobilization, no doubt in accordance with a Stavka (Soviet High Command) plan of priorities. With up to 5 million

[3] REFORGER (Return of Forces to Germany) units would be the first to deploy from the continental United States (CONUS). About one and one-third divisions could be moved in the first few days. Following immediately would be two more divisions plus ten assorted other units, hence the 2+10 designation. All of these units would be matched up with their prepositioned equipment upon arrival in Europe.

[4] The three WMDs are the Baltic, Belorussian, and Carpathian.

reservists with military experience in the last five years in the Soviet Union alone, manpower totals could be rapidly expanded.

With these considerations in mind, let us examine the Warsaw Pact threat in detail. Figure 1 shows the deployment areas of the Group of Soviet Forces, Germany (GSFG). The figure shows the 20 Soviet divisions, all Category I, along with the 16th Air Army with 900 combat aircraft stationed there. Additional Soviet and non-Soviet Warsaw Pact divisions are also available for use against NATO's Central Region. These are shown in Table 1. This table should allow the reader to reconstruct various published threat figures.

Some comments on Table 1 are necessary. Aside from the 20 divisions in East Germany, the Soviets station five divisions in Czechoslovakia and two in western Poland; all are Category I. Four Soviet divisions are deployed in Hungary, bringing the total in Eastern Europe to 31. The Military Balance reports that of the 37 divisions stationed in the three WMDs of the Soviet Union, about half are Category III.[5] I have assumed in Table 1 that the other half are equally divided between Categories I and II.

Many threat assessments assume that of the 31 non-Soviet Warsaw Pact divisions available from Poland, Czechoslovakia, and East Germany, all are Category I. At the same time it is widely acknowledged that these divisions are less ready than their Soviet counterparts--a clear contradiction. East German divisions are probably all Category I and are politically reliable, particularly in an offensive designed to force

[5] For details, see The International Institute for Strategic Studies (IISS), The Military Balance 1981-1982, p. 12.

SOVIET FORCES IN CENTRAL EUROPE



Five Soviet divisions are directly subordinate to the Czech Group of Forces. The 30th Guards Motor Rifle (MR) Division, near Zvolen, is off the map in eastern Czechoslovakia.

Fig. 1

Table 1
 SIZING THE WARSAW PACT THREAT AGAINST AFGENT^a

Category	Soviet divisions in E. Ger.,		Soviet divisions in E. Eur.		Soviet divisions in Western USSR		Czech. divisions	E. Ger. divisions	Total immediate threat	Total early intermediate threat	Total long-range threat	
	Poland	Czech.,	in E. Eur.	in 3 WMD	divisions	divisions						
I	20	27	31 ^b	6	6(3) ^c	7	5	6	54	71 ^d	96 ^e	126 ^e
II				17	15(6)	5	3					
III				11	13(6)	3	2					

65

99

^aExcludes so-called artillery divisions.
^bIncludes four Soviet divisions in Hungary assumed not available against AFGENT.
^cNumber of divisions that might be used against the Central Region is shown in parentheses. The three Category I divisions shown as available are all airborne. The others are probably committed to the Northern Front.
^dIncludes the 54 immediate threat divisions plus 9(+4) Soviet Category II divisions in the three WMDs and the eight non-Soviet Category II divisions.
^eIncludes all 85 Category I and II divisions plus the 11 Soviet Category III divisions in the three WMDs.

reunification. In the absence of better information, I have divided Polish and Czech divisions roughly equally, between Category I and the two other readiness categories. This is consistent with a DoD recent publication on Soviet military power;[6] but it seems highly unlikely that the Soviet High Command would use all of these divisions in an assault while leaving crucial supply lines unprotected and at the mercy of potentially hostile satellite populations. At least a third of all Polish and Czech divisions would be necessary for rear area security, as Soviet strategy requires the swift and unimpeded overland movement of reinforcements to the battle area.

From Table 1, the cumulative immediate threat to NATO is about 54 divisions, of which 36 are Soviet. In an attack against NATO, 36 divisions could be used in the first wave with the remaining 18 in a second echelon about 72 hours later. The early threat against NATO (within, say 7 to 14 days following M-day) includes the Category II divisions, and totals 71 divisions, of which 45 are Soviet. If one adds the Category III Soviet divisions from the three WMDs, the intermediate threat (say, 30 to 40 days following M-day) is about 90 divisions. Long-range threats in the range of 120 to 130 divisions are possible by counting all known Pact forces west of the Urals.

In many assessments, comparisons are reported for personnel or combat personnel, tanks, and other major pieces of combat equipment. It is possible to convert numbers of Warsaw Pact divisions into personnel

[6] This implies that about 60 percent of the non-Soviet WP divisions facing the Central Front are Category I, 25 percent are Category II, and the remainder are Category III. These are very close to the percentages appearing in the DoD publication, Soviet Military Power, 1981.

and equipment totals using some approximate factors. For Category I divisions, the best average manpower figure I have been able to find is 17,400. (Some estimates go as high as one thousand more.) This includes personnel not only in the division itself, but its fair share of nondivisional personnel as well. Collins reports the full strength of a Soviet motorized rifle division (MRD) at 12,000, and of an armored division at 9,500, but Erickson reports that Category I MRDs in the GSFG have 13,500 personnel and armored divisions have 11,000.[7] Because the GSFG is about half MRDs and half armored divisions, an average figure of 12,000 is probably close to the mark for divisional personnel only.[8]

Each Category I armored division contains about 325 medium tanks and each MRD about 266 medium tanks. Again larger quantities have been reported for divisions in the GSFG--up to 415 in an armored division and 320 in an MRD. An average figure of 350 tanks per division seems to be fair for all GSFG divisions, about 300 for other Pact Category I divisions, and about 225 tanks for Category II divisions.

Equipment densities do not tell the whole story about the relative combat effectiveness of various formations. In any assessment, one ought to make quality adjustments for dissimilar forces. Ideally, quality adjustments should include factors not only for equipment densities, but for battlefield performance, crew training, sustainability, leadership, and morale. Unfortunately, these are rarely

[7] Collins, John M., U.S./Soviet Military Balance: Concepts and Capabilities 1960-1980, McGraw-Hill, 1980, p. 211; and Erickson, John, "Trends in the Soviet Combined-Arms Concept", Strategic Review, Winter 1977, pp. 38-53.

[8] For manpower in Air Armies, an average figure of 40 to 50 personnel per aircraft is probably a good estimator.

considered in calculating conversion factors.

One recently created quality adjustment factor is the armored division equivalent (ADE). To compute ADEs, one must start with a weighted effectiveness index (WEI). For an individual weapon, a WEI is a composite of firepower, mobility, and vulnerability indexes. These WEIs are multiplied by the respective number of each weapon in a given unit, e.g., a division, to obtain a weighted unit value (WUV). Dividing a unit's WUV by that of a U.S. armored division gives that unit's ADE. Using this methodology, it is my impression that a U.S. heavy division is equivalent to about 1.6 Soviet-type divisions, which is not unexpected given the nominal strength figure for both.[9] But firepower, mobility, and vulnerability are not the only criteria for judging combat effectiveness.

The sustainability of U.S. and Soviet divisions is different. Forward repair is not as good in Soviet divisions, and Soviet logistics difficulties are significant in a longer war. Leadership and morale are important as well. Reports of poor leadership in Soviet units, of a lack of initiative among junior officers and enlisted personnel, and of dissension within the ranks due to racial tensions and poor conditions are easy enough to find.

Assumptions about timing are important in dynamics and pseudo-dynamic assessments. Consider first the complex question of warning

[9] U.S. armored divisions have about 17,200 personnel and mechanized infantry divisions about 18,000, which makes them about 45 to 55 percent larger than their Soviet counterparts. Although the ratio of tanks to personnel is much higher in a Soviet division than in a U.S. division, Anti-tank Guided Missiles (ATGMs) distributed to mechanized infantry units in the latter help to offset the Soviet tank advantage in calculating ADEs.

time. How much time between WP mobilization and NATO's receipt of unambiguous intelligence indicators, and between that and a NATO decision to mobilize can be crucial in assessing the conventional balance.[10] Generally the longer the time between WP and NATO mobilization decisions, the worse NATO looks. Although NATO mobilization is linked to a formal alert system, it is unwieldy and difficult to get the necessary consensus as things stand now. One of the dangerous trends NATO is facing is that many classical indicators of offensive preparations may be present in day-to-day Soviet operations.

How fast mobilization and deployment are assumed to proceed is also an important determinant of the balance. Note too that these are not the same and any assessment should state which is being discussed.

WP EMPLOYMENT AND NATO DEPLOYMENT

The WP threat(s) we postulated earlier would most likely be employed in an echeloned attack along several major axes accompanied by more minor ones. In one surprise attack scenario, WP forces move from garrison across the inter-German border in six hours at 20 to 30 crosspoints in regimental strength. Because even forwardly deployed NATO forces would require four to eight hours to reach their General Defense Plan (GDP) positions, some Pact units could penetrate 30 kms before encountering substantial resistance--that is, they might pass through the CF strip completely unattrited. So even though the Pact would be attacking with little preparation and with no reinforcements,

[10] For details, see Richard K. Betts, "Surprise Attack: NATO's Political Vulnerability", International Security, Spring 1981, pp. 117-149.

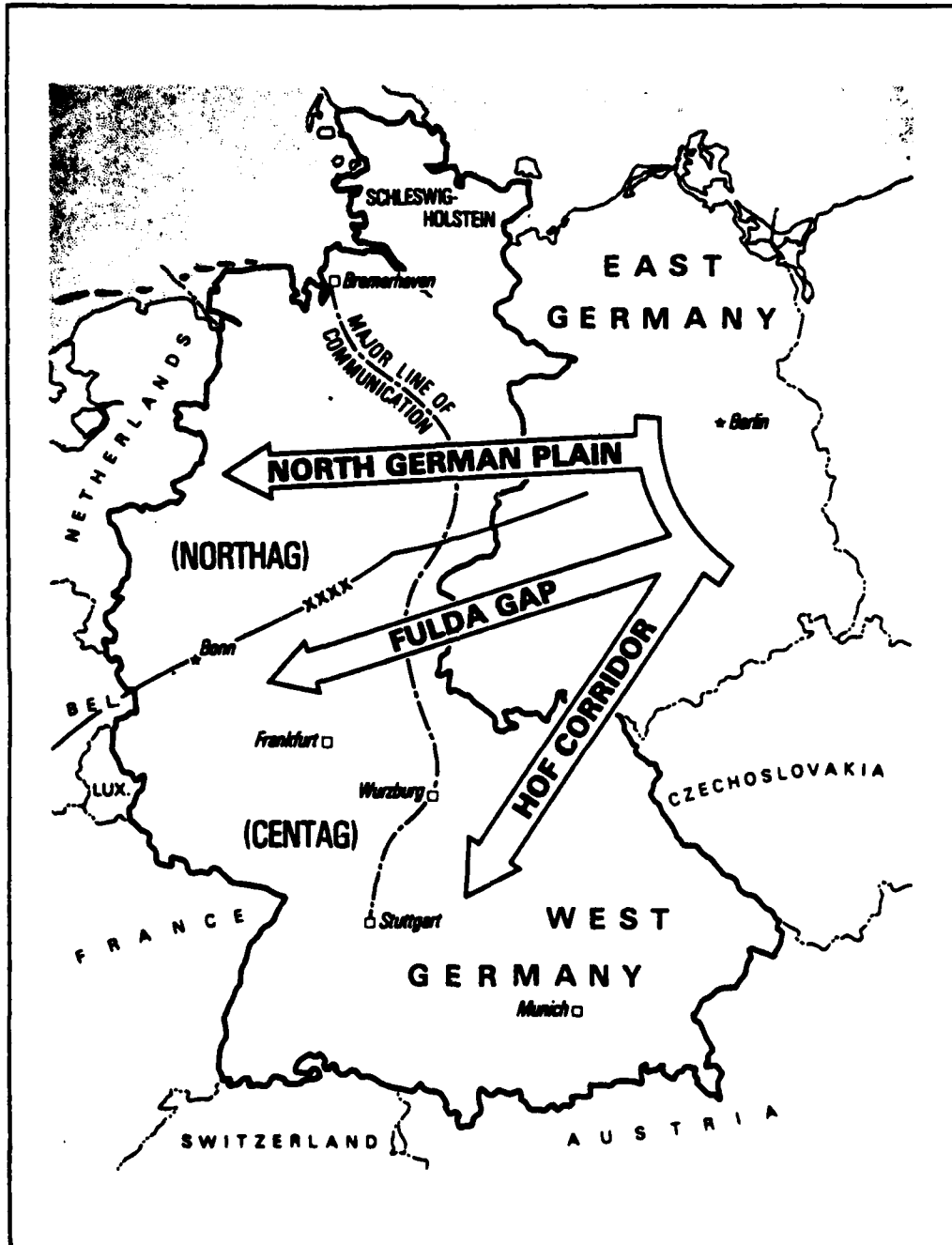
this kind of surprise attack could be the worse case for NATO from an employment perspective.

With 48 hours tactical warning, in which NATO forces could be alerted and moved to their GDP positions, this kind of disaster might be avoided. Even in that case, three main axes of attack are likely to emerge: the North German Plain, the Fulda Gap, and the Hof Corridor.[11] These axes, which are depicted in Fig. 2, are likely because of the terrain and road network at the inter-German border. What NATO forces currently defend these routes? NATO's defense plan divides AFCENT into two Army Group areas. CENTAG, or Central Army Group, consists of two American corps, Vth Corps and VIIth Corps, and two West German corps. NORTHAG, or Northern Army Group, is composed of Dutch, British, West German, and Belgian corps. (See Fig. 3.) These forces are presumably available immediately. However, only a few battalions of Dutch and Belgian troops are actually stationed in West Germany; the bulk of these forces must redeploy from areas inside their respective countries. Even some American and West German units must move considerable distances from their garrison areas to their GDP positions. As mentioned before, a French corps is garrisoned inside West Germany near the French border, but these divisions remain outside of the NATO command structure.

Initial reinforcements for NATO would arrive from the U.K. and the U.S. Within seven days of a deployment decision, an additional division

[11] The North German Plain is considered the most likely main attack axis because its rolling farmland is highly conducive to tank operations, and because it is defended by what many consider to be NATO's weakest forces. The Fulda Gap and Hof Corridors are defended by West German and American units; the terrain is hilly and forested, which is conducive to channelization and ambush.

WARSAW PACT AVENUES OF APPROACH



SOURCE: Adapted from Richard Lawrence and Jeffrey Record, *U.S. Force Structure in NATO* (Washington, D.C.: The Brookings Institution, 1974), p. 31.

Fig. 2

Corps Sectors of Military Responsibility in NATO's Central Region



SOURCE: Adapted from Richard Lawrence and Jeffrey Record, *U.S. Force Structure in NATO* (Washington, D.C.: The Brookings Institution, 1974), p. 31 and also from U.S. Army materials.

^aNORTHAG (Northern Army Group) and CENTAG (Central Army Group) are the two subdivisions of NATO forces in West Germany. The line dividing the two runs from Belgium through West Germany, just south of Bonn, and into East Germany.

Fig. 3

could reinforce the British Army of the Rhine (BAOR), and REFORGER units totaling about one and one-third divisions could be airlifted from the continental U.S. (CONUS). Table 2 summarizes the forces available to AFCENT, both on an immediate basis and within M+7. These are also shown in Soviet ADEs (SADEs) to facilitate comparison with Table 1.

In Table 3, the ratio of WP to NATO SADEs is shown for M-day and M+7. At the latter point in time, two cases are represented. The optimistic case refers to a WP threat of 67 divisions, while the pessimistic case refers to a WP threat of 75 divisions. From the deployment perspective, the worst time for NATO occurs between ten days and two weeks after a Pact decision to mobilize, but not attack.

Table 2
NATO FORCES AVAILABLE TO AFCENT

Country	Immediate		M+7	
	Divisions	SADE	Divisions	SADE
N.S.	5-2/3	9	7	11
F.R.G.	12	18	14	21
U.K.	3-1/3	3-1/3	4-1/3	4-1/3
Belgium	2	2	2	2
Netherlands	3	3	3	3
Canada	1/3	1/3	1/3	1/3
SUBTOTAL	26-1/3	35-2/3	33-2/3	42-2/3
France	3	3	5	5
TOTAL	29-1/3	38-2/3	38-2/3	47-2/3

Table 3
GROUND FORCE RATIO IN AFCENT

	Ratio: WP to NATO (SADE)		
	Immediate	M+7 (approx) ^a	
		Optimistic ^b	Pessimistic ^c
Without France	1.51	1.57	1.76
With France	1.39	1.43	1.57

^aWP mobilizes 3 days before NATO.

^bBased on 67-division threat.

^cBased on 75-division threat.

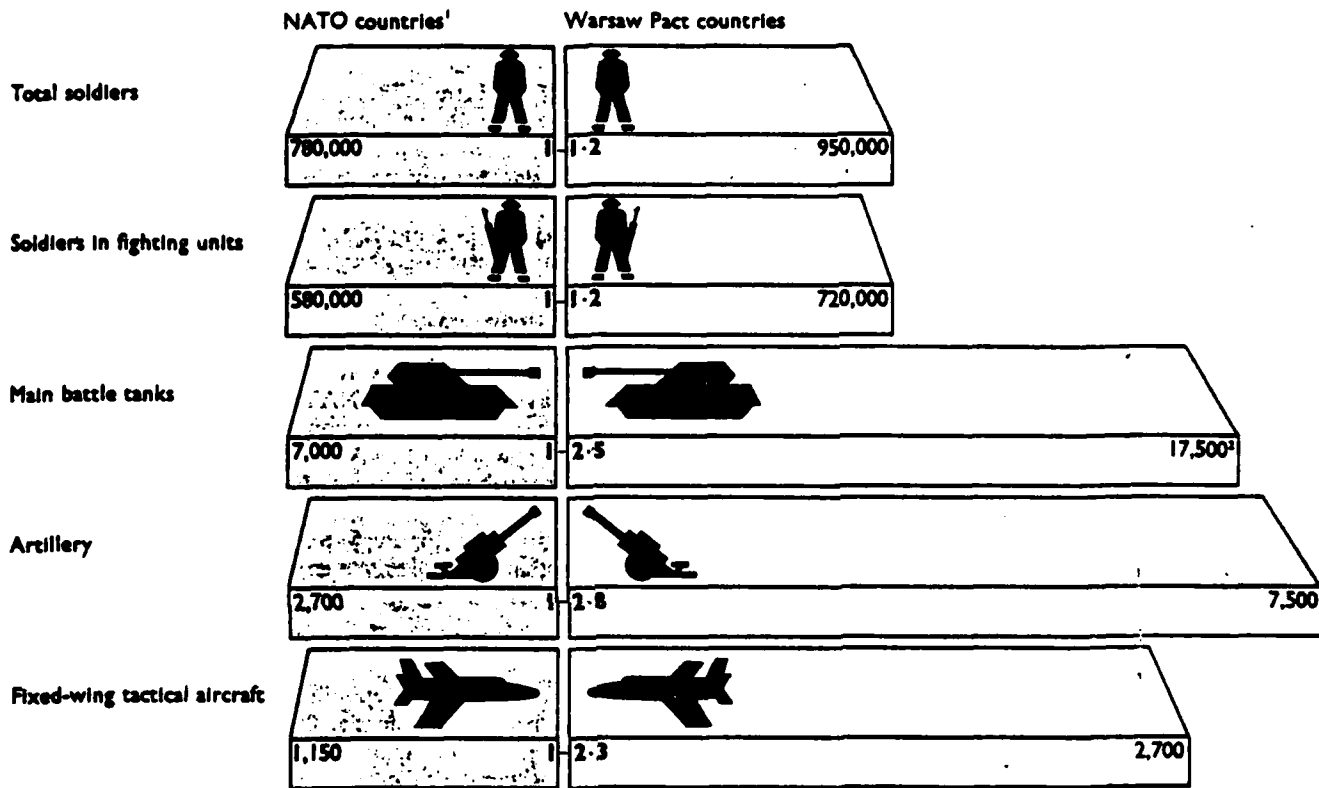
SOME EXAMPLES OF BALANCES

Let us look at one published static balance for the Central Region. Figure 4 comes from the Statement on Defence Estimates 1981, published by the U.K. Ministry of Defence (MoD). Using the personnel strengths and equipment densities for WP divisions proposed earlier, it would appear that the MoD sees a Pact threat roughly similar to what I suggested in Table 1, except that they probably count non-Soviet Pact Category II and III divisions at their peacetime strengths.[12]

The fixed-wing aircraft comparison is harder to break down because aircraft can be moved long distances rather quickly. It would appear that nearly all of the tactical aircraft in the western U.S.S.R. available to support the ground battle were counted. On the NATO side,

[12] It is not clear, however, whether Pact forces in Hungary or the three WMDs of the Soviet Union are counted. My guess is that they are not.

The Current Balance of Forces in Central Europe



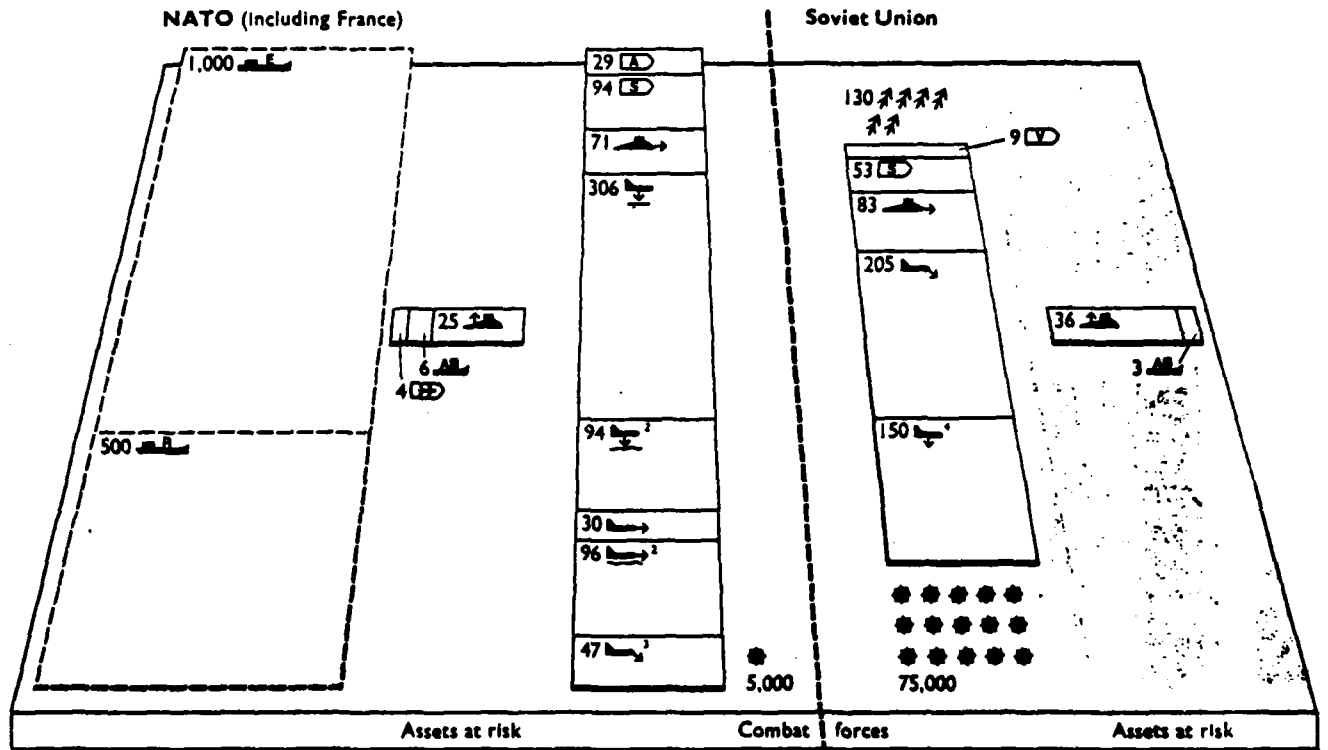
¹Including French forces in the Federal Republic of Germany but excluding the Berlin garrison, which is not declared to NATO

²Includes some Warsaw Pact tanks in training units and storage which would be available for operational use

Fig. 4

aircraft available for deployment from the CONUS on short notice were apparently not counted. A summary of the naval balance in the North Atlantic and English Channel is also difficult because of the wide variety of assets to be protected, ships available, and missions to be performed. Figure 5, which also comes from the Statement, does an admirable job.

The Balance of Maritime Forces and Responsibilities in the North Atlantic and Channel



Key

Surface Warships	Submarines	Weapon Systems	Aircraft	Aircraft Carriers
AAW	Attack	Ship and Submarine	Ship Attack	Amphibious battalions
ASW	Ballistic Nuclear Missile	Launched Anti-Ship Missiles over 200 km range ¹	ASW	Reinforcements/Military Resupply Shipping—per month
ASVW (Anti-Surface Vessel)		Mines	ASW Shore-based fixed-wing or rotary	Economic Resupply Shipping—minimum per month
			ASW Shipborne	
			Air Defence	
			Air Defence Shipborne	

Notes

- ¹ These missiles have no NATO equivalent. Shorter-range missiles are not shown for either side.
- ² Aircraft carriers carry approximately 16 ASW rotary and fixed wing aircraft and 24 air defence aircraft.
- ³ Aircraft-carrier-borne strike/attack aircraft are primarily for use against land targets in support of Allied Command Europe and are therefore not included in the balance.
- ⁴ Fixed wing aircraft and medium helicopters, including those embarked in ships.

Fig. 5

Another view on the balance can be found in a recent Congressional Budget Office (CBO) report.[13] In that document, CBO analyzes the conventional military balance in terms of the force ratio on the Central Front over a 90-day mobilization period. The results of this pseudo-dynamic assessment are shown in Fig. 6. All forces in the study were converted to ADEs before computing the force ratio. As the figure shows, the force ratio rises rapidly in the Pact's favor early in the period, then slowly declines as U.S. reinforcements arrive in the theatre. The

Shifting Warsaw Pact/NATO Force Balance: 90 Days
Following Pact Mobilization

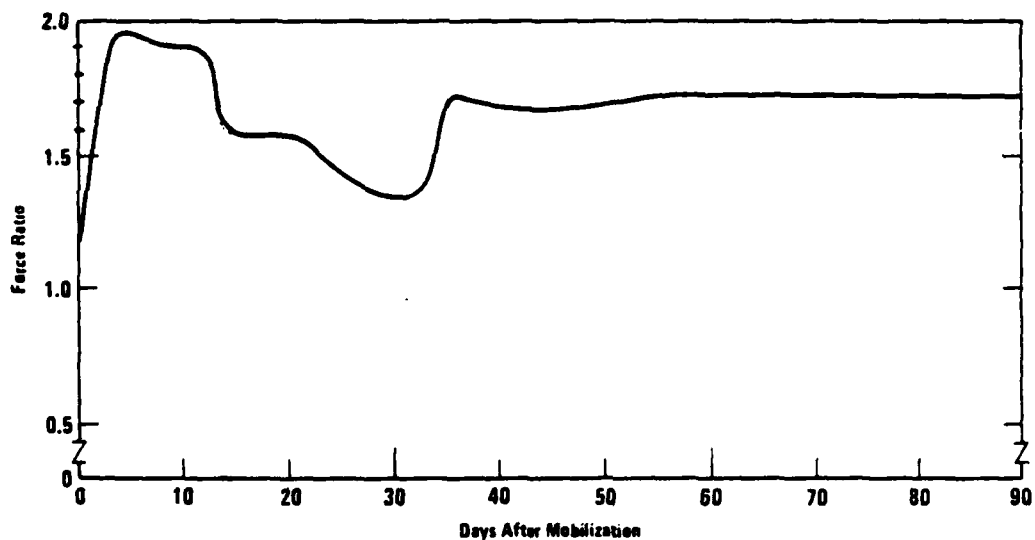


Fig. 6

[13] Congressional Budget Office, U.S. Ground Forces: Design and Cost Alternatives for NATO and Non-NATO Contingencies, December 1980.

ratio rises again after 30 days as Soviet Category III divisions join the "battle." NATO faces the most adverse ratio seven to ten days following Pact mobilization. It is difficult, however, to imagine a mobilization period of 30 days without an attack, much less 90 days. An attack after a few days of mobilization would considerably alter the force ratio curve for at least two reasons. First, forces on both sides would be attrited in battle, and second, attacks on rear areas would diminish the rate at which reinforcements could be brought in.

ISSUES NOT CONSIDERED ENOUGH

In many assessments, there are a number of issues that are treated as if they affect NATO and the Pact more or less equally-- that is, as if the balance is unaltered if one chooses to ignore them. Let me give some examples of issues that ought to be given more attention. First, the relative vulnerability of NATO's rear areas may be greater than the Pact's. Some numbers might illustrate this hypothesis. With approximately 1600 fighter-attack aircraft available to Soviet Frontal Aviation units, about 15,000 sorties could be generated in the first ten days of a war, assuming even a relatively high attrition rate of seven percent per sortie and a relatively leisurely daily sortie rate of 1.5.[14] Although it would be difficult to predict how these available sorties would be used, it is likely that a high proportion will be employed against rear area targets such as POMCUS (Prepositioned Overseas Materiel Configured to Unit Sets) and WRM (War Reserve

[14] The total sorties $S(T)$ flown by an initial force of $A(0)$ aircraft over T days is given by: $[A(0)/a][1 - \exp(-asT)]$, where a is the per sortie attrition rate and s is the sortie rate.

Material) sites, aerial ports of entry for U.S. reinforcements, pumping stations and storage depots for CEPS (Central European Pipeline System), electric power stations, rail hubs, and key bridges. These attacks could significantly disrupt NATO reinforcement and logistics plans. Pact vulnerabilities are asymmetric. In the past, most Pact reinforcements were to be moved by rail over a few routes capable of supporting heavy traffic, but now, a considerable number of divisions can move on roads using organic heavy equipment transporters (HETs). It may be that Soviet planners plan to rely heavily on rail traffic only for resupply after NATO's interdiction capabilities have been degraded. Other logistics improvements have been made in the past few years that will be difficult to attack.

A second consideration is the political reliability of allies and their forces. A third is the growing importance of electronic warfare (EW) and of C³I--that is, command, control, communication, and intelligence. A final consideration, and one that should substantially favor NATO, is the use of European assets that could be "mobilized" from the private sector.

A final comment: A definitive statement of the conventional balance in the Central Europe Region cannot be made because there are too many imponderables and uncertainties. This is not to say, however, one assessment is as good as any other. Clearly that is not the case. The true balance can only be known in combat, and as one brigade commander has told me, should it ever come to that, we shall know quickly.

