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# WARSAW PACT FORCE MODERNIZATION: A CLOSER LOOK

by

RICHARD C. MARTIN

Calculations by Western analysts of the balance of conventional land power between NATO and the Warsaw Pact should include a better understanding of the real capabilities of the non-Soviet Warsaw Pact armies as demonstrated by actual force structure and equipment inventories. This is particularly true because the non-Soviet forces represent an important element in the balance of power in the Central Region. The non-Soviet Pact forces could be particularly significant during the early stages of a European war. In fact, of the 47 Category I tank and mechanized divisions nominally available to the Pact for early employment in Central Europe, eight are Polish; six are East German, and seven are Czechoslovakian. These divisions and the eight Category II and III non-Soviet Warsaw Pact divisions, of necessity, would be required to carry a significant share of the initial combat burden until the arrival of some or all of the 48 Soviet divisions located in the Western Military Districts of the Soviet Union. Even then, the low state of readiness and training of about two-thirds of these Soviet divisions would argue for a continuing key role for the non-Soviet Warsaw Pact forces.<sup>1</sup> Realistically, the Soviets would be hard-pressed to attack Western Europe without the full participation of the non-Soviet forces.

The national armies of Poland and Czechoslovakia are the direct descendants of national units that were formed in the Soviet

Union during World War II. These units participated with the Soviets in the ultimate defeat of the German armies on the Eastern Front and many carry battle streamers and honorifics from such historic operations as the capture of Prague or Berlin. Units or individuals who fought either on the German side or the Allied side in World War II, with the important exception of reindoctrinated German prisoners of war, were excluded from service with the postwar East European national armies. This was true even though, in many cases, they had equal or better claim to continued service than their Soviet-sponsored counterparts.

During the Stalinist years, the national armies were closely controlled by Moscow through a Byzantine network of Soviet advisors, Soviet commanders, communist commanders, elaborate party structures within the armies, political officers, and military and state security services. During these years, purges were frequent and advancement was based on political activism and reliability rather than on military competence. The Soviets enjoyed a degree of control over the national forces in those days that they have not been able to match since. On the other hand, the military viability of those forces was clearly open to question, and not much in the way of force modernization occurred during the Stalinist period.

After the death of Stalin in 1953, the national forces began to reacquire a national

identity. Soviet officers were recalled, national songs and uniforms were reinstated, and other measures were taken to remove some of the most objectionable aspects of Soviet control. In 1955 the Warsaw Pact was formed, and although the early years of the Pact featured more form than substance, it at least provided some rationale and military purpose for the national forces. Modernization began in the early 1960s as a result of Nikita Khrushchev's new emphasis on nuclear battle and mobility as well as a deteriorating international situation that was underscored by a new Berlin crisis and the Cuban missile crisis. Also, there was potential for Soviet defense economies through greater burden-sharing by the Eastern European countries.

The first Warsaw Pact maneuvers were held in 1961, organizational streamlining began in 1962, and mechanization was proceeding rapidly by 1963. Soviet-style tank and motorized rifle divisions became the standard organizations throughout the Warsaw Pact, replacing the World War II era infantry divisions. The early 1960s were the most dramatic period of modernization within the national armies. Since then, modernization and refinements in equipment, doctrine, and organization have been uneven and slow. There have been important differences in the scope and rate of modernization between the Soviet forces committed to the Pact and the East European national forces. This has resulted in significant differences in force capabilities. There are likewise important differences between East European and West European national armies that warrant analysis.

The non-Soviet Warsaw Pact national armies have always been somewhat of an enigma to Western analysts. Overshadowed as they are by the huge Soviet war machine, they are often aggregated with the Soviet forces in Western calculations. Each, however, is a unique military entity and together they represent a significant portion of the Pact's potential military power. To the Soviets the national armies must be viewed as a mixed blessing. On the one hand, they assist the Soviets in presenting a united socialist

front and offer visible evidence that the Eastern European countries stand ready to "defend the gains of socialism." They also represent a major savings in personnel and defense funds that the Soviets would otherwise be required to spend themselves to defend their East European holdings. Because they are aggregated with the Soviet forces in most Western calculations, they greatly increase the deterrent value of the Soviet forces in discouraging Western meddling in Eastern affairs. They provide an internationalist flavor to Soviet invasions or military pressures against their fellow Eastern European countries. This gives at least some degree of socialist legitimacy to what is in reality nothing more than Soviet policing of their imperial holdings. Last, and perhaps most important, they represent an indigenous, if somewhat uncertain, force of last resort to maintain the socialist internal order within their own national borders.

On the other hand, the national armies are in many ways a liability to the Soviets. They are not Soviet forces, and regardless of what measures the Soviets may take to try to make them responsive to Soviet direction, they will most likely remain national forces loyal to national interests and ultimately responsive to national political direction. They are difficult to motivate against "West German irredentism" and "NATO imperialism," although herculean efforts are sustained to prop up these "threats." Few

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Eastern Europeans, however, remain under any illusions as to who might invade them next. The record speaks for itself.

The impact of lagging modernization is that the national armies rapidly are becoming less capable than their Soviet counterparts and less able to execute Soviet combined arms offensive doctrine. Neither the Soviets nor the national governments seem to be willing or able to reverse this trend except in cosmetic terms. The costs each year become more formidable as the economies that must finance modernization become progressively less able to do so. The reliability of these forces in a confrontation with NATO has always been uncertain, and it is a matter of continuing Soviet interest to somehow minimize this uncertainty. The sheer magnitude of political indoctrination conducted relentlessly within these armies indicates the seriousness with which this problem is viewed. Finally, and perhaps most importantly, the reaction of the national forces to future Soviet invasions of their countries is difficult to predict. This factor must have played a major role in Soviet calculations regarding Poland in 1980-81 and weighed heavily in favor of the eventual "Polish solution" to that political quandary.

Any discussion of disparities in modernization within the Pact has to be based on some reasonable standard. Soviet ground combat divisions stationed in Eastern Europe are among the most modern in the entire Soviet force. Their organization and doctrine for employment are well established and are discussed and written about extensively within both the Pact and NATO. The Soviet forces in Eastern Europe lead the way within the Pact in organizational restructuring and modern weaponry. Their standards of training and readiness are among the highest in the Soviet forces. It is reasonable to ask how the non-Soviet Warsaw Pact armies really compare to their Soviet counterparts. Also, the non-Soviet Warsaw Pact armies would have specific roles to play in any confrontation with NATO. They could be expected to be employed in specific geographical areas and thus against specific



NATO opponents, as shown in the accompanying map. These geographic areas and potential combat roles are also generally well known. A second reasonable comparison then would be to assess the ability of these forces to perform their projected wartime missions when committed against their likely NATO opponents.

### THE POLISH PEOPLE'S ARMY

The Polish army is the largest and potentially the most important national army in the Pact. Its 13 armored and mechanized divisions and its highly specialized airborne and sea-landing divisions represent a potential first-echelon front. Polish military doctrine stresses coalition warfare within the Pact and the need to insure that any war is fought on NATO territory. Thus, as part of the Warsaw Pact coalition, the Polish front would play its part in rapidly exporting the war to the West. In this way it would effectively defend Polish national territory and insure that the general destruction that accompanied combat operations took place on

NATO territory. Polish mechanized and armored divisions, like their Soviet counterparts, were organized during the early 1960s to carry out this doctrine. Mechanized divisions, with wartime strengths of around 11,000 men, have three mechanized regiments, a tank regiment, an artillery regiment, and an air defense regiment.<sup>2</sup> Army- and front-level artillery, air defense, and specialized units complete the structure. However, modern equipment is lacking in the Polish force and many actual shortages exist. The massive modernization effort of the 1960s was not continued into the 1970s, and in many ways the Polish army is two generations behind the Soviet forces in Eastern Europe. As an example, the Polish main battle tank remains the aging 1950s-vintage T54/55. Undergunned at 100mm by today's standards and relying exclusively on infrared technology for night movement and fire control, the T54/55 is nowhere near as capable as the T64/72 models currently representing over half the tank inventory of Soviet units in Eastern Europe. There are currently only 50 T72 tanks in the Polish inventory and no T62s. The total number of tanks falls below the current Soviet norm by over 600 tanks (3450; the Soviet norm for a 13-division, three-army front is 4088).<sup>3</sup> Poland is also a generation behind the Leopard I, Centurian, and Leopard II tanks found in the armored formations of the German, Dutch, and Danish forces that the Polish army would face under most scenarios.<sup>4</sup> On the other hand, the Polish army has over three times as many main battle tanks as the Dutch and Danes combined (3450 vs. 1133).

The 800 BMP1 armored infantry vehicles in the current Polish inventory, although an impressive number, represent less than half those required to meet Soviet organizational norms and only 32 percent of the infantry fighting vehicle fleet. The balance of the inventory consists of the Czech-Polish-produced OT64 SKOT, a BTR-60 type vehicle, and the aging and obsolescent

OT62 TOPAZ, a Czech-produced BTR-50 type vehicle. By contrast, there are few, if any, BTR-50s remaining in the Soviet Groups of forces. On the other side of the intra-German border, Dutch mechanized infantry units have been reequipped with the effective YPR 765 armored infantry fighting vehicle. Those vehicles feature a rapid-fire 25mm gun and major mobility and crew-protection improvements over the M113 and YP 408 armored personnel carriers that they replaced.

Polish artillery equipment holdings also appear obsolescent and the artillery organizations out-of-date. The preponderance of weapons is of the towed variety, with few self-propelled weapons currently in the inventory. The Dutch Army, on the other hand, has standardized with modern self-propelled 155mm and eight-inch howitzers of US manufacture. Overall, the Polish People's Army would appear to be short about 1250 artillery weapons, again according to Soviet norms. The Soviet norm for a 13-division, three-army front is approximately 2124 tubes; the Polish Army has 910. By Soviet standards, this represents an organizational shortfall of some 70 battalions.<sup>5</sup> In the key area of division air defense, the Polish army is again well behind its Soviet counterpart. While Soviet divisional air defense regiments in Eastern Europe are equipped with either the SA6 or SA8 guided missile system, the Polish army still relies, for the most part, on obsolescent 57mm radar-directed gun systems for division air defense. This leaves the Poles to contend with a serious shortfall in local air defense that will be only partially compensated for by the SA4 and SA6 regiments at army and front level and the SA9s and ZSU 23/4s at regimental level.

Other units of the Polish ground forces have been likewise neglected. The three air defense missile divisions have equipment holdings that appear barely adequate to the task at hand. The nine regiments are equipped with either the SA2 or SA3 missile systems, and although there are no gun systems remaining in the inventory, there are no SA5s or other modern missiles. This is true even though the air defense divisions are

fully integrated into the Soviet strategic air defense system and Poland's national air defense is managed in a manner similar to a Soviet air defense district within that system. The elite, but brigade-sized, 6th Airborne Division and 7th Amphibious Assault Division are maintained at a high level of preparedness but are more lightly equipped than mechanized or tank divisions and lack the staying power to operate independently for long periods.

Lack of progress in modernization within the Polish army is understandable in light of Poland's dire economic straits, but surprising in view of Poland's potentially key role in any Pact confrontation with NATO. Major shortfalls have been allowed to develop that simply cannot be ignored. Operations against better-equipped German, Dutch, and Danish units would result in, if nothing else, high casualties and losses for the Poles. It is even possible that the Syrian experience of 1973 on the Golan Heights could be repeated in northern Germany, as in many ways the Polish army resembles the Syrian army of 1973 in both organization and equipment holdings. At best, the Polish People's Army would be hard-pressed to keep up with better-organized and better-equipped Soviet forces and could not be expected to do well some of the very important things that the Soviet units could do and that Soviet doctrine requires. The three most critical shortfalls are in the obsolescent tank fleet, in artillery holdings that are clearly inadequate to meet Soviet norms, and in divisional air defense assets where the aging S-60 is inadequate to address the problem of third-generation NATO aircraft.

Based on this lack of progress in modernization, the Polish People's Army may not be destined to fulfill the ambitious role previously envisioned for it. A more realistic assessment might be that the Polish front would be limited to operations to secure objectives along the Baltic coast of West Germany or to operations against Denmark, but not both. Alternatively, and more likely, Polish People's Army units would be used in a second-echelon role following Group of Soviet Forces Germany during the initial

phases of an offensive and held for commitment late in the campaign against deep objectives defended by NATO's national territorial forces. It may well be that the Soviets in fact view the Polish army as a second-echelon force and have never really given the independent Polish front serious consideration. Or, the Soviets may have discarded the idea of a Polish front due to lack of progress in force modernization and perceived reliability problems since 1980-81.

#### **THE CZECHOSLOVAKIAN PEOPLE'S ARMY**

Second in size of the national armies, and important because of its strategic location, is the Czechoslovakian People's Army. Its five motorized divisions and five tank divisions in theory could provide the majority of the forces to a southwestern or Czech front. That front, in the event of a confrontation with NATO, would be called on initially to attack American and West German divisions in Bavaria so that they could not be redeployed to the north to deal with Soviet front main attacks mounted against the Frankfurt area and across the North German Plain. Clearly, modern, well-equipped forces would be required to make headway against some of NATO's most powerful formations.

Prior to 1968, Czechoslovak doctrine embraced, albeit uneasily, the Soviet concepts of coalition warfare within the Warsaw Pact and the concepts of rapid and deep penetrations designed to end the war quickly on favorable terms. It was assumed that the Czech People's Army would provide two first-echelon armies for a southwestern or Czech front. Two additional divisions from the eastern portion of the country would constitute part of a second-echelon army. Additional divisions for this second-echelon army would presumably come from the Carpathian Military District in the Soviet Union. It is clear that the Czechs were never really comfortable with this role. During the "Prague Spring" prior to the Soviet invasion of Czechoslovakia in 1968, there was a considerable drift in the direction of a

Yugoslav-type "defense of national territory" doctrine within the Czech military. This strongly implied a defensive role for the Czech army. Among the driving forces behind this drift toward neutralism were the realizations that Czechoslovakia ran the risk of becoming a major nuclear battleground and that the Czech forces would face NATO forces that were armed with formidable nuclear weapons without either like weapons under their control or any real defense against the NATO weapons.<sup>6</sup> All this was viewed in the context of a fading "West German threat." This drift ended abruptly after the Soviet invasion, and there has been little original Czech doctrinal thought since. Significantly, there has also been only limited force modernization.

Many of the same organizational and equipment shortfalls that plague the Polish People's Army also afflict, to a somewhat lesser degree, the Czechoslovak People's Army. The T54/55 is the standard main battle tank, of which there are some 3400 in the inventory, with only about 100 T72s. In the area of infantry combat vehicles, about 40 percent of the force is BMP-equipped and there is a higher proportion of OT-64s in the remainder of the inventory than is the case of the Polish People's Army. However, a large complement of obsolescent OT-62s remains in the force. Artillery is, in some cases, more modern than in the Polish army and includes the Czech-produced Tatra 152mm truck-mounted howitzer. However, actual artillery holdings fall well below established norms (1015 tubes; Soviet norms call for 1692) and suggest an adherence to Soviet organizational concepts of 20 years ago.<sup>7</sup>

Divisional air defense regiments are armed with the S-60 automatic gun or Czech-produced 30mm automatic guns. This results in the same operational shortfall as in the Polish forces when compared with Soviet divisions and is particularly significant when considering the high air threat that the Czech divisions will face given their most likely NATO opponents. National air defense units are equipped with SA2 and SA3 missile systems and, as in the Polish case, the Czech

air defenses are part of the Soviet air defense system.

There would be similar problems associated with most units of the Czechoslovak People's Army operating as a first-echelon force against American and West German formations. First of all, the bulk of their main battle tanks would be significantly inferior to the M60A3 and Leopard I tanks that they would face, not to mention any M1 or Leopard II tanks that might be encountered. Second, artillery holdings are only 60 percent of what they should be by Soviet standards. This would constitute a particularly difficult operational problem in situations where the Czech army was required to attack the antitank-missile-intensive American or West German forces and unable to adequately suppress these weapons. Major losses could also be anticipated to NATO air attacks as the Czechs attempted to defend divisional assets with the obsolescent S-60s. In short, like the Polish People's Army, the Czech People's Army seems ill structured and ill equipped to perform a first-echelon role. However, unlike the Poles, the Czechs are not geographically located in a secondary area. In the event of a Pact offensive against NATO, if American and West German formations could not be tied down in Bavaria and were able to migrate north and attack the flanks of Soviet penetrations, major disasters could befall the attacking Soviets.

In view of this threat, it is difficult to understand why the Czech People's Army has not enjoyed a higher priority with the Soviets in terms of modernization. The permanent stationing of the five-division Central Group of Soviet Forces in Czechoslovakia after 1968 has of course made the modernization of the Czech People's Army a less pressing issue than it would otherwise be. The Central Group of Soviet Forces maintains a high level of modernization that contrasts sharply with that of most Czech units. It also can constitute a strong army-sized element for employment in the first echelon of a Czech-Soviet front. This would seem to indicate that the Soviets cannot get the Czechs to modernize their forces, perhaps due to

financial constraints, and hence have less confidence in the Czech People's Army than was the case prior to 1968. It seems apparent that the Soviets do not really expect the Czech People's Army to fulfill the role that was envisioned for it in the early 1960s.

### THE EAST GERMAN ARMY

The East German Army, the *National Volksarmee* (NVA), has both a different history and a different relationship with the Soviet military forces than other armies of the Pact. Although considerably smaller in size, it apparently enjoys a higher priority with the Soviets in terms of force modernization. Unlike its Polish and Czech counterparts, the NVA has no World War II or previous history. It was formally organized in 1956 from an already existing paramilitary organization known as the Garrisoned People's Police. From the outset, the units of the NVA were assigned to the Combined Command of the Warsaw Pact and planning for their employment was integrated closely with that of the Group of Soviet Forces Germany. NVA doctrine called for the immediate internationalization (active Soviet involvement) of any European conflict, so that the Soviets would not be able to use East Germany as a bargaining chip to gain advantages elsewhere.

In other words, the NVA was never intended to be able to stand alone without active Soviet assistance. The NVA was also carefully structured and equipped for a first-echelon role as a component of the Group of Soviet Forces Germany. Therefore, no front-level units are found in the NVA. As a completely new army in 1956, it was not encumbered with any already existing organizations, so there are no understrength, ill-equipped Category II and III units as are common throughout the rest of the Pact. The NVA also has a clearer and less ambiguous role to play than either the Polish or Czech armies in a Pact confrontation with NATO. It is small enough so that modernization can be accomplished reasonably quickly and with less expense than elsewhere in the Pact. Currently, there is a greater quantity and

variety of modern equipment on hand in the NVA than in any other non-Soviet Warsaw Pact army. T72 tanks are entering the inventory to replace the T54/55s, although the older tanks still constitute the preponderance of those on hand. Over 65 percent of the infantry combat vehicles in the force are BMPs, with a respectable number of BTR 60s among the aging BTR 50s and 150s, and there are even some modern BTR 70s on hand. Artillery holdings are 70 percent of the requirements of the force structure, and there is a larger complement of modern self-propelled howitzers. SA6 air defense missiles are found in the air defense regiments within the divisions,<sup>8</sup> eliminating a serious shortfall in the NVA that has not been corrected in the Polish People's Army or in the Czech People's Army. On the other hand, Soviet units in East Germany are receiving the newest tanks, infantry combat vehicles, self-propelled artillery, and air defense missiles at a much faster rate than the NVA. It appears that although the NVA enjoys a higher priority than other non-Soviet Warsaw Pact armies and its wartime role would be more significant, it does not enjoy the same priority as Soviet forces.

Organizationally, the NVA is more advanced and conforms more closely to Soviet standards than either the Polish or Czech armies. Motorized rifle divisions have three motorized rifle regiments, a tank regiment, an artillery regiment, and an air defense regiment. The motorized rifle regiments contain a tank battalion, three motorized rifle battalions, and an artillery battery, but lack the artillery battalion found in Soviet motorized rifle and tank regiments. This probably explains the shortfall of 284 122mm howitzers in the NVA artillery inventory.<sup>9</sup> Tank regiments in the two armies also have very similar organizations.

East German artillery holdings correspond more closely to Soviet artillery norms than do those of the other national armies. The East Germans make no attempt to maintain an artillery division, probably because their forces, employed as part of the Group of Soviet Forces Germany, would



utilize the support of the Soviet front artillery division. In short, of the three non-Soviet Warsaw Pact armies opposite NATO's Central Region, the NVA, although smaller, appears to be the most modern in terms of organizational structure and equipment holdings, and these are consistent with its anticipated doctrinal employment.

Internal political reasons may account for the East German government's willingness to spend more money on its ground forces than the other non-Soviet Pact members. Although all three of these East European political regimes depend on a continued Soviet presence and strong indigenous security forces for their political survival, Poland and Czechoslovakia could easily survive as nations with social democratic political systems outside the Soviet orbit, if given the chance. It is difficult to envision East Germany continuing as an independent political entity for very long under like circumstances because of the attraction of German political reunification and the superior economic power and political system of the Federal Republic.

#### THE FUTURE

Projections of trends in the East European national armies are difficult to make. Unexpected events can have unforeseen effects. As an example, the years 1967-68 appear to be key years in the history of modernization within the Pact, as a result of events that could not have been predicted. Arab losses in the 1967 Middle East war provided the Soviets an opportunity to export weapons to the Middle East at a much higher level than previously. The Soviets undertook not only to replace the staggering Arab equipment losses but also went further and provided the vast amounts of equipment required to modernize the Arab forces. Arms transfers to Middle East countries provided the Soviets with two advantages: they were a source of hard currency as well as a lever to allow the Soviets to exert at least some influence on Middle East events. Thus Egypt, Syria, Iraq, and Libya imported large numbers of T-62 tanks, BMPs, and modern

artillery, while the Warsaw Pact national armies made do with earlier equipment. Although Soviet influence in the Middle East has been at best marginal even after years of major arms transfer programs, the Soviets continue to pursue this course, particularly with Syria and Libya. This is at the apparent expense of modernization within the Warsaw Pact national armies.

The Soviet experience in Czechoslovakia in 1968 may well have dampened enthusiasm generally for the national armies. While it is true that East Germany and Poland each contributed two divisions to the invasion, it is also true that this participation was reluctant and that the non-Soviet forces departed Czechoslovakia as soon as practicable. Considerable soul-searching occurred within each national army following the event. The Czech army, which did not oppose the invasion, has yet to recover fully from that trauma. Based on the scope and pace of force modernization since the Czech invasion, it would be reasonable to conclude that the Soviets came to realize that there were limits to the utility of the national armies. They apparently decided to stress intensive modernization of their own forces instead of the national armies even though this would be more expensive in terms of both Soviet money and manpower.

East European economic problems are well known, and there is little chance that these problems will be corrected under the existing political regimes. Thus funds for military modernization will likely remain in short supply, and with the possible exception of indigenously produced equipment such as Czech and Polish T72s and OT64s, there is no reason to expect an influx of large quantities of new equipment into the national forces in the foreseeable future, if ever. It is even quite possible that the bulk of indigenously produced military equipment will be exported in exchange for much-needed hard currency. There are no indications that the Soviets are either willing or able to take on the financial burden of rearming the national armies.

The prognosis, then, is that the national armies will remain at least one generation and probably two generations behind the rapidly

modernizing Soviet forces in both equipment and force structure. This will result in significant differences in combat capability between the national armies and the Soviet forces. East Germany is a possible exception as is, to a very limited extent, Czechoslovakia. Prospects for extensive modernization of the Polish People's Army are extremely slim. An analysis of actual force structure and equipment modernization within the Pact suggests that there have been major changes since 1968 in how the Soviets view the non-Soviet forces and how they visualize their employment. Such analysis also provides an insight into how seriously the national governments view their Warsaw Pact obligations. To assume that because the Soviet forces in Central Europe are modernizing at a rapid rate, the non-Soviet forces are doing likewise, or that the Soviets would want to see complete modernization of these forces, would be incorrect. The non-Soviet Warsaw Pact ground formations should not be equated with Soviet forces stationed in Eastern Europe.

The real question is how NATO analysts and decision-makers should view these forces. Clearly, to overstate their capabilities, which is often inadvertently done when the national forces are aggregated with Soviet forces, is counterproductive, giving the Warsaw Pact more of a perceived military advantage over NATO and thus more political clout than is really merited. It also

fosters needless defense budget squabbles within NATO. Persistent overstatement of Warsaw Pact capabilities could conceivably generate an unwarranted defeatist attitude within the NATO alliance by creating an impression that the Pact is more cohesive and better organized, better equipped, and more motivated than NATO. It is far from clear that such is in fact the case.

#### NOTES

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