GERMAN INFANTRY IN THE 1990s

COLONEL GERO KOCH

From now into the 1990s, the Warsaw Pact will steadily continue not only to strengthen but also to modernize its ground forces. It intends to increase its offensive capabilities by improving quality of performance in command and control, reconnaissance, and electronic operations. In addition to having a larger number of armored weapon systems in its armor, armored infantry, and artillery units, it will further increase its combat helicopter components.

In the event of a conflict, the Pact will try to get around a nuclear escalation by launching, as rapidly as possible, a surprise attack with its entire armored combat strength, penetrating deep into the territory of the Federal Republic of Germany (FRG) to defeat NATO's ground forces, if possible, while they are still being deployed. If—despite strong artillery and air support—the attack of the combat tanks fails, owing to the NATO antitank defense front, the armored infantry carried in armored combat vehicles will then attempt

---

Another version of this article was published in German in Europaische Wehrkunde, *April 1987, pages 213-218.*

to break up the NATO defense by dismounted infantry combat.

The objective of NATO's forward defenses is to defeat the aggressor early and near the border so as to reduce damage to West Germany's population and economic potential. As far as possible, therefore, we want to avoid giving up any terrain. But if that is unavoidable, and we must give up some terrain, we are determined to regain it quickly by way of counterattacks.

Under this strategic concept, a characteristic of the intended conduct of operations by West Germany's ground forces is the employment of highly mobile armored combat forces supported by modern artillery and engineer forces as well as antitank helicopters. We must reject the idea of an "area covering defense" by light forces as an essential factor of defense, or any linear thinking in terms of a "Maginot Line." What is not to be ruled out, however, is the use of depth in the defensive areas for the purpose of mobile and flexible operations; this is absolutely indispensable.

During the past seven years, military experts throughout the world have come to realize that high technology alone—armored weapon systems with an almost 100 percent first-round hit probability, artillery ammunition with homing devices or terminally guided munitions, and smart mines—is not the final solution for victory. They now see the need for an adequate number of fighting men on the ground equipped with light firearms who are capable of joining a battle wherever necessary, even at close or hand-to-hand range, and who can win that battle. In short, the wars in the Falklands and in Lebanon (which are only to a limited extent comparable to a possible war in Central Europe) clearly reveal a trend toward the need for fighting infantrymen.

THREE REASONS

There are three principal reasons why more infantrymen are needed in the German Army:

First, between the Baltic Sea and the European Alps, the Warsaw Pact can send into battle first-echelon infantry forces consisting of 140,000 dismounted fighters. Not all of them, of course, are hard-boiled Siberian sable trappers; in fact, most of them are infantrymen who would dismount only reluctantly from their BMPs (armored infantry fighting vehicles) or their BTRs (armored personnel carriers). They are trained for combat operations in built-up areas and forests, however, and are physically fit. What is worse, they are simply too numerous. The employment of sufficiently strong infantry forces of our own, backed by a great artillery effort, is the only way we can counter such an infantry threat.

Second, some 30 to 40 percent of the territory in the Federal Republic of Germany is generally identified, according to military-geographic publications, as covered terrain that restricts the line of sight. It is expected that the densely wooded regions such as the Harz mountains, the Frankenwald, and the Bayrischer Wald—to mention only the most important ones—will continue to exist in the foreseeable future.

But according to a major terrain examination made in the early 1970s, 20 percent of the area in the eastern part along the borders with the German Democratic Republic and Czechoslovakia is favorable infantry terrain. A typical feature in our country is a mixture of open terrain and restricted and covered terrain. Experts—except for some alternative strategists, perhaps—agree that armored combat forces consisting of a fine blend of main battle tanks and armored infantry fighting vehicles (AIFVs) carrying armored infantrymen (*Panzergrenadier*) and a sufficient number of dismounted fighters, constitutes the most suitable means of operating in such terrain.

Urban areas, though, have grown together to form urban belts, as can be found between Kiel and Luebeck, around Braunschweig and Kassel, and in the greater Nuernberg area. The loss of open terrain, as gradual as it may be, places us under an obligation to develop an improved infantry fighting capability with which to retain at least the key positions on the peripheries of the covered terrain sectors.

The third reason for needing more infantry is that, considering the technological possibilities available even today with our great reconnaissance and target detection capabilities—coupled with more effective ammunition—targets, once identified, will be destroyed rapidly. Saturation fire delivered by artillery weapon systems against armored vehicles will diminish the survivability of those vehicles. Who, then, as a tank commander, will choose to deploy his formations through open terrain, even if friendly forces provide great combat support and smoke screens and electronic counter-countermeasures? Consequently, the scene of combat operations will increasingly be shifted to covered terrain where the attacker and the defender alike must protect their armored weapon systems by deploying dismounted infantry around them.

Infantry, therefore, should always be considered as a part of the force and never in isolation. A planning solution that envisages the accomplishment of all combat force missions with infantry only, or with very few battle tanks, will surely be wrong for Central Europe. Infantry must always be seen in the context of combined arms combat operations. Accordingly, what matters is a proper balance of infantry in the overall structure of the German Army.

ARMORED INFANTRY

To conduct highly mobile operations, and to be able to generate and rapidly shift the main effort, the infantry in our forward-deployed brigades (which have to start combat immediately and close to the border) must be *armored* infantry. Armored infantry is capable of operating either mounted or dismounted, with the main emphasis to be placed on its capability for dismounted combat. It can also carry out combat reconnaissance, covering operations, combat at barriers, and even some antiaircraft and antihelicopter defensive roles.

Given appropriate training, armored infantrymen can also conduct operations in built-up or wooded terrain. They have their AIFVs (*Schuetzenpanzer*) continuously available for direct fire support. Moreover, mounted in AIFVs, they can be shifted rapidly while being protected against infantry fire and artillery shell fragments. The vehicles also offer collective NBC protection and can be used to transport supplies and casualties.

The AIFV for these forces must be capable of moving a rifle squad (*Schuetzentrupp*) rapidly and as safely as possible to the battlefield or to any other location of combat. In addition, the AIFV must carry a main weapon that can defeat the weapon systems of the Warsaw Pact's BMPs at medium ranges. According to all available information, a vehicle-mounted, rapid-fire cannon is best suited for this purpose, now and in the future.

In addition to the AIFV, the armored infantry needs its own armored vehicles carrying weapon systems for antitank defense and high-angle fire. All of these vehicles must have a high degree of tactical mobility so that the infantry units can be immediately concentrated at the enemy's points of main effort.

The weapon systems of the armored infantry must be so designed that they can follow main battle tanks. The AIFV, however, should be capable of keeping pace with the battle tank, even though in terms of protection it will never equal the tank because of its relative weight. The antitank defense weapons and the weapons employed against soft targets should be so designed that they can rapidly open fire and mass firepower. At the same time, armored infantry battalions must be able to operate without being reinforced by tanks, at least in defensive operations.

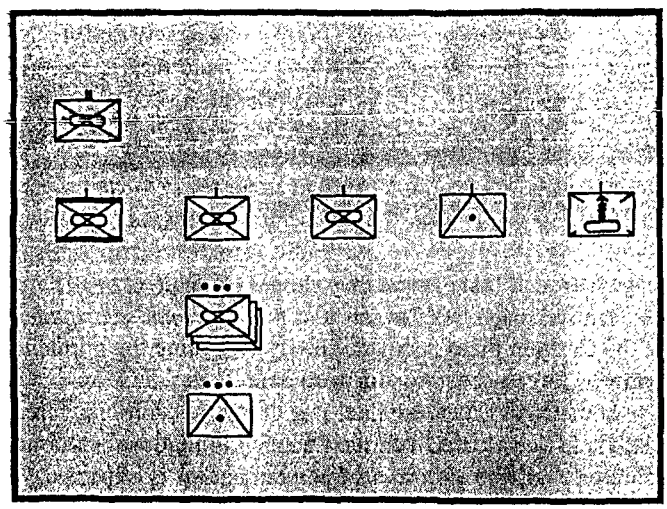


Figure 1. Armored infantry battalion in armored infantry brigade.

In preparation for the 1990s, our present armored infantry units should undergo some changes in organization and equipment. Let me mention two key principles for the armored infantry of the future:

- There should be an organic mixture of armor and armored infantry at battalion level. (See Figures 1, 2, and 3.)
- Today's AIFV Marder should be replaced with two infantry weapon systems—one an AIFV for the rifle squad with a rapid-fire cannon, the other a carrier for a 120mm gun in the antitank role.

It will then be possible to move infantry fighters fast while protecting them in defensive positions, which can offset, to a certain extent, the numerical superiority of the enemy's infantry in his mechanized divisions.

As for light infantry, in addition to the special infantry in the airborne brigades (*Fallschirmjaeger*) and the mountain

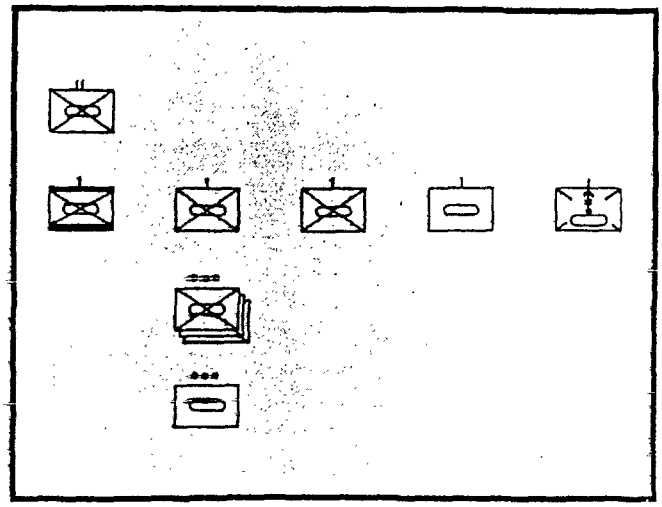


Figure 2. Armored infantry battalion in armor brigade.

brigade (*Gebirgsjaeger*), the German Army has a considerable number of other light infantry elements (*Jaeger*). Most of these units are part of the Territorial Army and are predominantly skeleton units—that is, they are not continuously available in peacetime and are dependent on mobilization, in terms of both personnel and equipment. These are forces that will assume the vital tasks of area defense and vulnerable point protection in the rear combat zone.

But we have some light infantry formations in the Field Army, too, that many overlook—namely, two light infantry battalions (*Jaegerbataillon*) and one security battalion (*Sicherungsbataillon*) per division. Unfortunately, with some minor exceptions, these are also skeleton units that will not be operational and at their divisions' disposal until a few days after the outbreak of a war. As in the case of the Territorial Army formations, the reservists are mostly inadequately trained as infantrymen. In view of the great infantry wartime augmentation requirements, there are not enough active peacetime formations that would be capable of providing genuine specialists suitable for wartime light infantry combat operations.

Moreover, the structural integration of the light infantry bat-

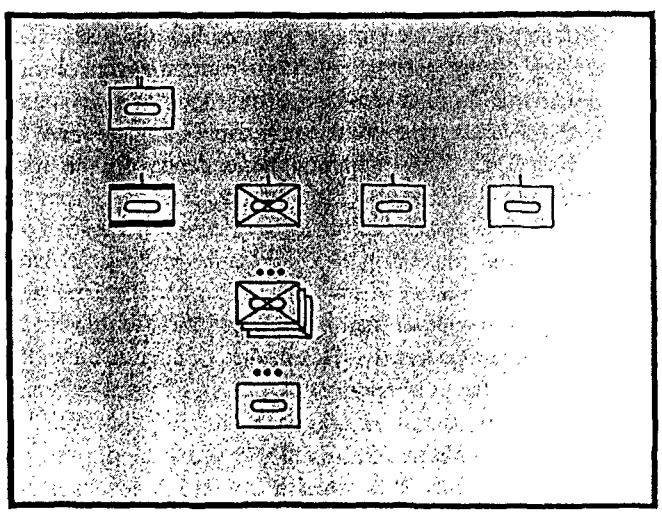


Figure 3. Armor battalion in armored infantry and armor brigades.

Infantry should always be considered as part of the force and never in isolation.

talions as divisional units is unfavorable. What is lacking is a next higher command with an appropriate headquarters to coordinate and control, in a consolidated approach, the light infantry units and their assigned combat support.

Placing light infantry battalions under the command of heavy brigades is not always the best solution either. A light infantry unit as part of a major formation consisting mainly of armored combat forces will always be somewhat alien and may even become a hindrance in the course of mobile operations. Light infantry forces need time to prepare their defenses. That is why they cannot easily be shifted from an assigned mission. Their soft-skinned vehicles permit mounted movements only in those areas where the enemy cannot engage them by direct fire. They have a certain dependence on the road network.

The experiences of the airborne brigades (*Luftlandebrigaden*) and the mountain brigade (*Gebirgsjaegerbrigade*) have shown that light infantry is more effective when used in mass, in an order of magnitude that permits combat missions to be accomplished independently. This means, of course, either the allocation of heavy weaponry or the assignment of reinforcements. Terrain that is unfavorable to armored offensive forces will always be an indispensable prerequisite.

In 1980, with Army Structure 4, the light infantry brigades (*Jaegerbrigaden*) that the German Army formerly had were changed to armored infantry brigades (*Panzergrenadierbrigaden*), and that is what they should continue to be. The 34 mechanized brigades (*Panzer-* and *Panzergrenadierbrigaden*) of the German Field Army definitely constitute the minimum armored force needed for forward defense in the German sectors of the NATO defense line. It is therefore additional forces that are in question. Given the financial limitations and, even more critical, the shortage of personnel that is expected for the 1990s in Germany, these additional infantry forces will have to be formed from the present army structure.

A promising and perhaps necessary approach to putting more infantry forces in the Field Army would be to develop a light infantry regiment (*Jaegerregiment*) for each of several regionally selected divisions. The current light infantry battalions would be the basis for the establishment of the regiments, in terms of both personnel and equipment. (A proposed organization is shown in Figure 4.)

The divisions selected to get a light infantry regiment should be only those defending far forward; the divisions earmarked as reserves would not have them. The regional allocation would be determined by the pre-planned area of operation; that is, the forces would be allocated only if a division's assigned sector was of an appropriate size and favorable for light infantry operations in the defense so that the light infantry regiment could be employed in mass.

In the 1990s the major consideration will not be to retain individual forests or hamlets and villages around which the

battle of armored combat forces is being waged. The important thing will be to conduct a mixture of defensive and raid-type operations in covered and dense terrain sectors that are of operational significance. This presupposes, however, more than a single light infantry unit equipped with heavy weaponry. That formation would have to be in position to fight an operation and display a strength somewhat equivalent to the potential of an airborne brigade committed in a defensive role—a capability that almost corresponds to combined arms operations.

Through the employment of a light infantry regiment in wartime, two major aims could be pursued:

- Brigade-size armored combat forces could be released for other responsibilities as part of the mobile defense operation.
- The regiment could be used as a force breaker against attacking forces and as a cornerstone of its parent unit's own mobile operations.

At the present, a German division conducts its operations by using three maneuver elements (equal to three mechanized brigades), while shifting its main effort by employing divisional artillery and assigned antitank helicopters and by implementing its engineer barrier measures. If the division's armored reconnaissance battalion is employed as a combat unit, it joins the battle as a fourth (smaller) maneuver element.

The art of mobile operations consists first and foremost of breaking maneuver elements away from the aggressor again and again and of actively recommitting them at the enemy's weak points. Division and corps commanders, if they want to retain the initiative, must always endeavor to bring part of their maneuver elements to bear on the enemy. It may even be possible today to have the armored reconnaissance battalion relieve a brigade that is under less severe pressure. In the future, by using a light infantry regiment in a static defense, one mechanized brigade could be immediately and readily available for use as a knight or bishop, as in chess.

In its light infantry battalions, the light infantry regiments would have to have a great number of dismounted fighters as their key element and, in addition, have an adequate number of organic heavy weapons for antitank operations and supporting direct and indirect fire.

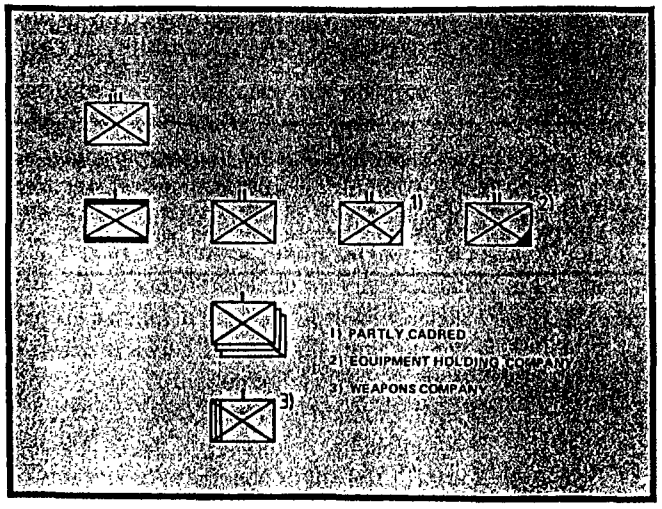


Figure 4. Light infantry regiment in armored infantry and armor divisions.

In the light infantry companies of the regiment, only small arms for infantrymen, including handheld antitank weapons (*Panzerfaust*), should be used but the latter should be available in sufficient quantities. In that way, light infantry reverse slope positions with fields of fire of 300 to 400 meters could be used to best advantage. Organic support elements, such as antitank rockets, rapid fire cannons, and mortars, which would all be mobile and mounted on carrier systems, should be part of the weapons companies.

In addition, the division would have to proivde for the necessary combat support by artillery, engineers, and antiaircraft units. The stronger that support, the more valuable the light infantry regiment would be as a cornerstone and force breaker in defensive operations.

TWO MAIN PURPOSES

As far as the regiment's peacetime duty is concerned, I see again two main purposes:

- The training of conscripts as infantrymen.
- The training of reservists, including "re-training."

It is no secret that we are now lacking infantrymen in our active units, and that they are also the most wanted type of soldier in our alert reserve components. It is quite natural that one shortage is contingent upon the other. Light infantry regiments would be a remedy for that shortage.

In the 1985 White Paper issued by the German Ministry of Defense, it was announced for the 1990s that a great number of reservists would continually undergo training in the army. Some of these soldiers could serve in the light infantry regiments where they would be given further training as infantrymen or re-trained from previous assignments in other arms or services.

I therefore believe that a three-fold structure for the proposed light infantry regiments would be a practicable solution:

- Active companies with personnel doing their basic military service.
- Partly cadred companies with a capacity for training reservists.
- Companies organized as equipment holding units.

It was only quite recently that the commanding general of a German corps stated in public that today's military training is often no longer oriented toward the realities of war and that the burdens of battle as they affect the psychic and physical attitudes of men are often inadequately imparted to our soldiers. In general, this handicap has resulted from the nature of peacetime training, including the necessary safety regulations. But it is precisely in light infantry regiments that the training could be more challenging and conducted under more realistic conditions.

For these reasons, personnel selected either as instructors and recruits or as reservists to be trained, must be physically fit. Physical endurance and sports activities must be placed high on the list of priorities for day to day duty.

A 14-day training exercise for a reservist, in some of its essential parts, could also be a sort of "adventure holiday" including "fitness training." A reservist, who should live in

the vicinity of his garrison, should regard his reserve training not only as a civic duty but also as a useful experience in a community of men where he is expected to display a particularly fine duty performance. In time, a light infantry regiment might grow into a regional "militia-type formation" to which the reservists might feel attached even after their active duty period had ended.

A good model for this proposed light infantry regiment may be the United States' new light infantry division, which our allies expect to consist of determined and iron-willed combat troops capable of engaging in any kind of classical infantry warfare. According to the information available so far, a mass employment of that division in Central Europe is not foreseen, but its major units—employed between brigades of armored combat forces—are expected to control terrain that is favorable for infantry operations. That is precisely my idea of the function of a German light infantry regiment — as an integral part of the mobile operations to be conducted within the framework of our Forward Defense concept.

Another change that needs to be made is in infantry weapons and equipment. In addition to their heavy weapon systems, infantrymen, more than all other soldiers, must be equipped with highly effective handheld weapons for dismounted combat at close ranges. Such weapons might include the following:

- An automatic rifle with a combat range of up to 300 meters that is as light as possible and that could replace both the submachinegun and the pistol. For snipers, a special version of this rifle with a combat range of up to 1,000 meters will again become necessary.
- A machinegun with a combat range of up to 1,000 meters will gain in significance, since rifles are to be lighter and will probably fire smaller-caliber ammunition.
- A grenade weapon that can fire grenades at point targets in defilade at ranges of up to 300 meters. In addition, it should replace the single-blast flamethrower and the signal pistol, and the grenades should also be capable of being thrown as hand grenades.
- A handheld antitank weapon with a combat range of up to 300 meters that can defeat all battle tanks of the 1990s. It will be the ultimate means of self-defense in emergencies if a tank attack cannot be stopped with a unit's heavy antitank weapons.

It is especially important for the infantry to have its own mines (including antitank horizontal mines) and digging equipment, as well as night vision and night sighting equipment.

The personal equipment of the infantryman must be designed to take into account the extremely high physical stress to which he will be exposed. Everything should be lighter and simpler; many sports items or camping and hiking equipment items should be regarded as exemplary for this purpose. Protection against cold and especially wet weather should be given a high priority.

Fragment-proof vests, such as those successfully used by the Israelis in Lebanon, are absolutely essential and must be fielded in the German infantry in the near future. If these vests are to be suitable for the infantryman, they may not offer much protection against rifle bullets but they can reduce shock and repel shell fragments and thus help lessen the number of fatalities.

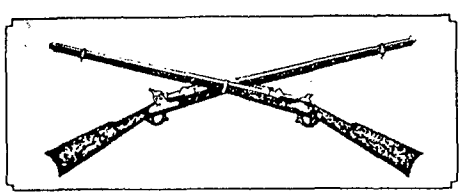
Infantrymen of all types—armored, light, or mountain, as well as airborne—are the classical fighters. They must fight against both men and machines and continue to fight when their own machines (the heavy weapon systems) have failed. They must fight at combat ranges frequently so close that they can see the enemy directly. And they must meet the highest standards of physical fitness and character.

The main infantry role during operations is in overgrown terrain—in built-up areas, in wooded terrain, at river lines, and at field fortifications. Even in open terrain, infantrymen do not become spectators but strongly support the tank battle. Since our terrain consists of a varying mixture of open and overgrown terrain, infantrymen will again and again have to assume the main role in combat.

Only the infantryman will ultimately be able to hold or occupy terrain, to penetrate even into difficult terrain, and to fight practically everywhere at ranges between zero and 2,000 meters.

But he will always need to be supported by direct and indirect fire weapons and combat helicopters. When fighting on foot, he is, in the longer run, too slow, which means that he needs vehicles whose armor considerably improves his survivability. Thus, the various arms not only constantly interact but are also obligated to closely cooperate.

Although the battle tank will maintain its leading role as the decisive weapon system in the land battle, in the future we are also likely to experience a renaissance of the infantry. The bulk of our future infantry should be made up of armored infantry as a part of the German Army's armored combat forces, but light infantry units of regiment size—used in particularly suitable terrain sectors and with specifically tailored missions—would become the pillars of a generally mobile defense.

Increasing the combat elements of the German Army means increasing NATO's conventional defense capability in Central Europe.

Colonel Gero Koch is commander of a German armor brigade (*Panzerbrigade*). Previously he commanded at platoon, company, and battalion levels in armored infantry (*Panzergrenadier*) and light infantry (*Jaeger*) units. He served in several general staff positions and also as a defense attache in Southeast Asia.